NEW RESEARCHES IN
EDUCATION
SCIENCES

Editors

Abdülkadir KABADAYI
Muhammet ÖZCAN

Educational Sciences

LIVRE DE LYON

2024

New Researches in
Education Sciences

Editors

Abdülkadir KABADAYI

Muhammet ÖZCAN

LIVRE DE LYON

Lyon 2024

New Researches in
Education Sciences

Editors

Abdülkadir KABADAYI

Muhammet ÖZCAN

New Researches in Education Sciences

Editors • Prof. Dr. Abdülkadir KABADAYI • ORCID: 0000-0003-4114-5890
Dr. Muhammet ÖZCAN • ORCID: 0000-0003-0433-5206

OPEN ACCESS

LIVRE DE LYON

FOREWORD

In the ever-evolving landscape of education, research stands as the cornerstone, illuminating the path toward progress, innovation, and a deeper understanding of the complex dynamics that shape our educational systems. As we delve into the pages of *"New Researches in Educational Sciences"* we embark on a journey that transcends the traditional boundaries of learning and opens doors to new possibilities.

This volume represents a collective effort to explore the multifaceted dimensions of education through the lens of rigorous inquiry. Each chapter within this book is a testament to the dedication and intellectual curiosity of researchers who have sought to unravel the mysteries of pedagogy, learning outcomes, and the societal impact of education.

The diversity of topics covered within *"New Researches in Educational Sciences"* reflects the richness of the educational landscape. From innovative teaching methodologies to the examination of policies influencing educational systems, the contributors offer a mosaic of insights that contribute to the ongoing dialogue on how to enhance and transform education in the 21st century.

In the spirit of academic inquiry, this compilation does not only present findings but also invites readers to question, challenge, and build upon the research presented. It is a call to educators, policymakers, and researchers alike to engage in a continuous dialogue that propels our understanding of education forward.

As we navigate the challenges and opportunities that lie ahead in the realm of education, this book serves as a beacon, guiding us toward evidence-based practices and informed decision-making. It is a testament to the vital role that research plays in shaping the future of education, ensuring that it remains a dynamic force for positive change.

To the readers, I encourage you to immerse yourselves in the wealth of knowledge encapsulated within these pages. May this collection inspire new avenues of thought, spark collaborations, and fuel the passion for inquiry that propels the field of education ever onward.

Editors
Prof. Dr. Abdülkadir Kabadayı & Dr. Muhammet Özcan

CONTENTS

CAHPTER I

TURNING PAGES, SHAPING MINDS: TEACHERS' INSIGHTS ON CHILDREN'S LITERATURE IN PRESCHOOL DEVELOPMENT

Abdülkadir KABADAYI

(Prof. Dr.), Necmettin Erbakan University
Email: akkabadayi03@gmail.com
ORCID:0000-0003-4114-5890

1. Introduction

The role of children's literature in the development of preschoolers has drawn increasing attention in educational discourse. The study highlights the pivotal role of literature in fostering language acquisition, cognitive growth, socio-emotional development, creativity, and psycho-motor development among preschoolers. Literature has an indisputable place in understanding and interpreting life for adult people. Considering that the individual's development is at a high level in the preschool period, literature for children can be seen as an indispensable tool in helping children develop their perspective on life and become individuals who think positively and are sensitive to the beauties of the world. Children's literature serves as a cornerstone in the developmental journey of preschool children, offering a rich tapestry of stories, characters, and themes that captivate young imaginations and foster holistic growth. From beloved classics to contemporary tales, children's literature holds the power to ignite curiosity, cultivate empathy, and instill lifelong values in young readers. This article explores the multifaceted contribution of children's literature to the development of preschool children, encompassing cognitive, socio-emotional, language, and literacy domains. In the early years of childhood, development plays a crucial role as it casts the anchor for children to be productive independent individuals in the future (Heath et al., 2017; Pulimeno, at all., 2020; Riquelme at all, 2020; Signes, et al, 2017; Thomas at all, 2015; Ninivaggi, 2013, 127)

The studies abound on literature that supports using literature in language classrooms to teach different aspects of language (Galda, at all, 2003; McNair, 2011; Uzuner Yurt, 2014; Goldstone, 1986; Huda, 2023). When language acquisition, socio-emotional understanding, and cognitive development are rapidly evolving, children's literature serves as a vital tool for nurturing these foundational skills and fostering a love of reading. By using storybooks effectively, preschoolers embark on literary adventures that expand their horizons, broaden their perspectives, and shape their identities (Çakmak Güleç & Geçgel, 2006; Güleryüz, 2006; Oğuzkan, 2000; Sever, 2013). The exploration of children's literature in the context of preschool development underscores its profound impact on various aspects of children's lives. From fostering language acquisition and vocabulary development to promoting social skills and emotional resilience, the stories and characters encountered in children's literature play a pivotal role in shaping preschoolers' understanding of themselves, others, and the world around them. Moreover, children's literature serves as a vehicle for promoting cultural awareness, diversity, and inclusivity, exposing preschoolers to a rich tapestry of cultures, traditions, and perspectives. Through exposure to diverse characters and narratives, children develop empathy, appreciation for diversity, and a sense of belonging in an increasingly interconnected world. As educators, parents, and caregivers navigate the complexities of early childhood development, understanding the transformative power of children's literature becomes paramount. By harnessing the potential of storytelling, imaginative play, and interactive reading experiences, adults can cultivate a lifelong love of literature in preschoolers and lay the foundation for future academic success and personal growth. Through a comprehensive exploration of the contribution of children's literature to the development of preschool children, this article aims to illuminate the transformative role of storytelling in shaping young minds, nurturing creativity, and fostering a lifelong passion for learning. By celebrating the magic of children's literature, we empower the next generation to embark on literary journeys filled with wonder, curiosity, and endless possibilities.

The aim of the research is to examine the opinions of teachers in the central districts of Konya regarding the contribution of children's literature to the development areas of preschool children.

2. Research Method

Explaining the opinions of teachers and teacher candidates regarding the contribution of children's literature to the development areas of preschool children, the question "To what extent do you think children's literature series

contribute to the development of children?" was asked to answer as the open-ended question.

2.1. Population and Sample

47 preschool teachers participated in the study in Konya. They were required to answer the open-ended questions. The study reveals that children's literature contributes to the children's cognitive, socio-emotional, creativity, psychomotor, and language domains effectively. The open-ended question was asked to 47 preschool teachers working in Konya. These teachers are İbrahim Yapıcı Primary School, Toki Primary School, Ali Küçüksucu Children's Academy, Private Junior College in Selçuklu district; İhsaniye Primary School, Mehmet Şükriye Sert Primary School, Barbaros Primary School, Marshal Mustafa Kemal Primary School, Mevlana Primary School and Karma Primary School in Karatay District. They work in schools. 18 % of the teachers have 1-5 years of experience, 22 % have 6-10 years of experience, 23% have 11-15 years of experience, 25 % have 16-20 years of experience and 12 % have 21 years or more of experience. 29.78 % of the teachers did not answer the open-ended question while 70.22 % of the teachers answered the open-ended question.

3. Result

Table 1. Frequency distribution of teachers' opinions on the effect of children's literature on the child's "DEVELOPMENT AREAS"

Themes	Teachers
Language Domains	% 51
Socio-emotional Domain	% 21
Cognitive Domain	% 18
Creativity	% 8.5
Psychomotor Domain	% 1.5
Total	% 100

The preschool teachers who participated in the study put forward that children's literature contributed % 51 languages, % 21 socio-emotional, % 18 cognitive, and % 8.5. creativity, % 1.5 psycho-motor development of the preschoolers.

Table 2 Teachers' opinions on the effect of children's literature on the child's "LANGUAGE" development

TEACHER % 51
It helps children's language development. It helps children express themselves and also provides them with empathy skills. Children's vocabulary is expanding. It gives students the ability to use the language effectively and to use Turkish correctly and properly. It allows children to communicate with their peers and creates a communication environment. They perceive and pronounce concepts more easily.

51 percent of the preschool teachers who participated in the study stated that children's literature contributed to the language development of the preschoolers.

Table 3. Teachers' opinions on the effect of children's literature on the child's "SOCIO-EMOTIONAL" development

TEACHER % 21
It helps children get to know their environment, establish good relationships with their environment, and establish friendships. It allows them to develop their empathy skills, realize their own emotions, and express them easily. It allows them to discover their talents. It enables them to understand and respect the feelings of others. The child who can answer the questions given by the teacher after the story is told experiences the feeling of success and a sense of confidence is instilled.

21 percent of the preschool teachers who participated in the study stated that children's literature contributed to the socio-emotional development of the preschoolers.

Table 4. Teachers' opinions on the effect of children's literature on the child's "COGNITIVE" development

TEACHER % 18
Children's literature significantly benefits the child's cognitive development. It improves thinking, perception, and problem-solving skills. Children's literature provides children with experience by exposing them to new situations. It improves children's vocabulary. The child can establish the event pattern. It can also recognize cause-effect relationships between events.

18 percent of the preschool teachers who participated in the study stated that children's literature contributed to the cognitive development of the preschoolers.

Table 5. Teachers' opinions on the effect of children's literature on the child's "CREATIVITY" development

TEACHER % 8.5
Children's literature products contribute to the development of children. It enables them to establish good relationships with their social environment and teaches them new information. It improves their creativity. It enables them to produce new products. Turning stories into drama socializes children and develops their sense of empathy. It enables children to gain knowledge related to their own culture and prevents them from remaining alien to their culture and past.

8.5 percent of the preschool teachers who participated in the study stated that children's literature contributed to the creativity development of the preschoolers.

Table 6. Teachers' opinions on the effect of children's literature on the child's "PSYCHO-MOTOR" development

TEACHER % 1.5
It gives children the opportunity to reveal their talents by dramatizing the stories they read. It helps children's psycho-motor development with preparatory work before the drama and relaxation and relaxation exercises after the drama.

1.5 percent of the preschool teachers who participated in the study stated that children's literature contributed to the psycho-motor development of the preschoolers.

4. Discussion

Children's literature plays a pivotal role in the development of preschool children across cognitive, socio-emotional, language, and literacy domains. Through engaging narratives, vibrant illustrations, and relatable characters, children's literature provides a platform for preschoolers to explore, learn, and grow in a nurturing and supportive environment. The discussion of the contribution of children's literature to preschool development underscores several key themes and implications. Firstly, children's literature catalyzes cognitive development in preschoolers. Exposing children to a diverse range of stories and genres stimulates their imagination, enhances critical thinking skills, and fosters creativity. By navigating the complexities of plotlines, characters, and settings, preschoolers develop problem-solving abilities, expand their vocabulary, and deepen their comprehension skills.

Secondly, children's literature plays a vital role in supporting socio-emotional development in preschool children. Through the exploration of characters' emotions, relationships, and moral dilemmas, children's literature provides opportunities for preschoolers to develop empathy, perspective-taking, and emotional resilience. By identifying with characters and experiencing their triumphs and challenges, preschoolers learn valuable lessons about kindness, compassion, and understanding. Furthermore, children's literature serves as a cornerstone for language and literacy development in preschoolers. Exposure to rich and diverse language patterns, rhymes, and storytelling techniques strengthens language acquisition, phonemic awareness, and emergent literacy skills. Through interactive reading experiences, preschoolers develop a deeper appreciation for language and literacy, laying the foundation for future academic success.

5. Conclusion

Children's literature products contribute to the development of the child in every field. But these works should be prepared according to the characteristics, wishes, and interests of the children. If not taken into consideration, it may do more harm than good. Therefore, these works should be prepared with great care. There should be works that give children the opportunity to express themselves and develop their creativity. Nowadays, children are moving away from reading books. There should be works that will give them the love of books and the habit of reading books. The contribution of children's literature to the development of preschool children is multifaceted and profound. From stimulating cognitive growth to nurturing socio-emotional understanding and fostering language and literacy skills, children's literature enriches the lives of preschoolers in myriad ways. By immersing children in imaginative worlds, introducing them to diverse characters and cultures, and sparking their curiosity and creativity, children's literature ignites a lifelong love of reading and learning. As educators, parents, and caregivers, it is essential to recognize the transformative power of children's literature and prioritize its integration into early childhood experiences. By providing access to high-quality children's literature, creating engaging and interactive reading environments, and fostering meaningful discussions about stories and characters, adults can empower preschoolers to become lifelong readers, critical thinkers, and empathetic individuals. Through the magic of storytelling, children's literature inspires young minds, nurtures hearts, and shapes the future of generations to come.

6. Recommendations

By implementing the recommendations below, educators and caregivers can harness the power of children's literature to enrich preschoolers' development, inspire a love for reading, and lay a strong foundation for lifelong learning.

Diverse and Inclusive Selections: Ensure that the children's literature collection includes a diverse range of characters, cultures, and experiences to reflect the multicultural world children inhabit.

Interactive Storytelling Sessions: Engage preschoolers in interactive storytelling sessions where they can participate actively by asking questions, making predictions, and discussing the story's themes.

Integration with Curriculum Themes: Integrate children's literature into various curriculum themes and subjects to reinforce learning objectives and stimulate curiosity across different domains.

Promotion of Literacy Skills: Use children's literature as a tool to promote early literacy skills such as phonological awareness, vocabulary development, comprehension, and print awareness.

Encouragement of Imaginative Play: Provide opportunities for preschoolers to engage in imaginative play inspired by the stories they read, allowing them to explore creativity, problem-solving, and social skills.

Facilitation of Emotional Development: Select books that address a range of emotions and life experiences, allowing preschoolers to identify and express their feelings in a safe and supportive environment.

Encouragement of Critical Thinking: Encourage critical thinking skills by asking open-ended questions that prompt preschoolers to analyze characters' actions, predict outcomes, and make connections to their own lives.

Parent and Caregiver Involvement: Foster partnerships with parents and caregivers by recommending age-appropriate books for home reading and providing resources and tips for promoting literacy at home.

Creation of Reading Nooks and Spaces: Design inviting reading nooks and spaces within the preschool environment that encourage exploration, relaxation, and a love for reading.

Professional Development for Educators: Provide professional development opportunities for educators to deepen their understanding of children's literature, storytelling techniques, and strategies for promoting literacy and language development in preschoolers.

References

Çakmak Güleç, H., & Geçgel, H. (2006). Çocuk edebiyatı. Ankara: Kök Yayıncılık

Galda, L., & Cullinan, B. E. (2003). Literature for literacy: What research says about the benefits of using trade books in the classroom. In J. F. Hood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.), Handbook of research on teaching the English language arts (pp. 640-648). Mahwah, NJ: Erlbaum.

Goldstone, B. (1986). Views of childhood in children's literature over time. *Language Arts*, 63(8), 791-798

Güleryüz, H. (2006). Yaratıcı çocuk edebiyatı. Ankara: Pegem A Yayıncılık

Heath, M., Smith, K., & Young, E. (2017). Using children's literature to strengthen social and emotional learning. *School Psychology International,* 38(5), 541–561.

Huda, A. (2023) Childrens literature in the new millennium: A review of research, *International Journal of English and Literature* 14(1):1-4

McNair, J. C. (2011). "It was like a book buffet!" Parents and children selecting African American children's literature together. *The Journal of Negro Education, 163-175.*

Ninivaggi, F. (2013). Biomental child development: Perspectives on psychology and parenting. Retrieved from https://www.squ.edu.om/libraries

Oğuzkan, A. F. (2000). Çocuk edebiyatı. Ankara: Anı Yayıncılık.

Pulimeno, M., Piscitelli, P., & Colazzo, S. (2020). Children's literature to promote students' global development and wellbeing. *Health Promotion Perspectives,* 10(1), 13-23. doi:10.15171/hpp.2020.05

Riquelme, E., & Munita, F. (2020). Mediated reading of children's literature as paradigmatic scenario to develop emotional competence. *Psicologia: Teoria e Pesquisa*, 33,1-6.

Sever, S. (2013). Çocuk edebiyatı ve okuma kültürü. İzmir: Tudem.

Signes, M., Kazmierczak, M., Amado, L., Acereda, A., & Bártoli, L. (2017). Children's literature and education in values: Self-esteem as the basis for a resilient attitude. *Edukacja Elementarna w Teorii i Praktyce*, 12,3(45), 13-22. doi:10.14632/eetp.2017.12.45.13

Thomas, L., & Feng, J. (2015, October 16-17). Integrating children's literature in elementary mathematics. Paper presented at Georgia Educational Research Association Annual Conference, Savannah, Georgia

Uzuner Yurt, S. (2014). Çocuk yayınları. İçinde T. Şimşek (Editör). Kuramdan uygulamaya çocuk edebiyatı el kitabı. 3. Baskı (71-80). Ankara: Grafiker Yayınları

TEACHING FRACTIONS IN MIDDLE SCHOOL: THE CASE OF MATHEMATICS TEACHERS' PERCEPTIONS

Savaş BAŞTÜRK

(Prof. Dr.), Sinop University
E-mail: sbasturk@sinop.edu.tr
ORCID: 0000-0003-1978-2682

1. Introduction

As teachers have a primordial role in training future generations, teacher's responsibility to society is great. Therefore, many societies perceive it as a sacred profession. Indeed, the teacher carries out the task of forming and selecting the students given to him on behalf of society and is also supervised by the Ministry of National Education, which is the official representative of the society (Robert et al., 1999).

The impact of the socio-cultural environment on the formation of our knowledge, thought and perception of a subject cannot be denied. Our learning environment, the education system we grow up in, our social environment, and our family environment are the tops of these socio-cultural circles. The influence of these environments is so crucial and has led many thinkers to question the sources of our behavior: ourselves or society. Therefore, it is impossible to learn enough about the teaching of a concept by looking only at teaching programs and textbooks. The personal relationship of teachers and students with the concept is one of the important sources of information on this concept.

1.1 Theoretical Framework of the Study

The theory of didactic transposition put forward by Chevallard and the anthropological theory of the didactic, which is an extension of it, that provides a more systematic approach to didactic transposition, constitute the theoretical frameworks that give us reasons for examining the perspectives of the teachers

about fractions and help us to interpret the findings we have obtained. These will be taken as a summary, and their aspects regarding to the study will be mentioned. In addition, since the results of the studies in which the teaching of fractions and students' misconceptions and difficulties about fractions are studied will be useful for us to understand and interpret our findings, these will also be briefly mentioned.

The word didactic can be used differently in different languages. It can be used to describe or name a style of teaching that is too prone to teaching, annoying, boring, and pedantic, or it can be used to describe something designed or intended to teach people something, as in its positive uses in German and French (Achiam, 2014). Knowledge is not a fixed or real entity, but a result of human effort. Therefore, it is produced, modified, and sometimes eliminated by the people who use it. The movement of information from one environment (or institution) to another within human society involves changes and transformations, just like an animal adapting to the environment it lives in. What Chevallard (1985) means with the term "didactic transposition" is exactly this transformation of knowledge between institutions and the necessary adaptation of this knowledge to new conditions in each institution. As Clément (2000) underlines, this process occurs when the aim is to disseminate or teach someone knowledge from one discipline. Thus, didactic transfer becomes a situation that occurs more in relation to formal schooling situations.

Chevallard (2006) stated that human actions and products are not generally carried out aimlessly, on the contrary, there is a world of meaning behind these actions and mathematics should be evaluated accordingly. In this regard, it is thought that there is a world of meaning behind mathematics teachers' practice in the fraction-teaching process. Thus, the teachers' perspectives of a concept to be taught have a reflection on the teaching of the relevant course in one way or another. In order to detect this reflection, it is necessary to focus on the different processes and transformations that scientific knowledge has undergone until it becomes taught knowledge and its actors. The Didactic Transformation Theory (DTT) put forward by Chevallard (1985) is an important tool for modeling this transformation. Scientific knowledge goes through many stages until it becomes those that is taught in school. Chevallard's (1985) didactic transformation theory describes these stages and their relationships. The actor of the transposition realized in the process of transmitting the knowledge to be taught into the knowledge taught in the classroom is the teacher. This is called internal transposition (i.e. transpositions at school) (Østergaard, 2013). It is called internal because it occurs within the teacher-student relationship and it

constitutes the objectification of the differences in the relationship between them and the formal curriculum (Paun, 2006). The task of the teacher is not to choose the knowledge to be taught. This task has already been done by other elements of the education system in the noosphere. S/he is in charge of organizing the information selected by the noosphere (Chevallard, 1985). At this point, it should not be ignored that the individual differences of the teachers will come into play and have different effects on the students, even if they choose and transmit the same subject. Indeed, the results of Tavignot (1995) revealed that teachers could realize different internal transpositions in classroom practices related to mathematical concepts in the curriculum due to their individual differences.

The teacher has to adapt the concepts to be taught, put them into the information network of the school and organize them within a certain period. On the other hand, the teacher has many variables that can change the structure of teaching. His/her choices have implications for students' learning, the ways in which they perceive knowledge, and the concepts they will create. His/her relationship with the concept to be taught includes his/her difficulties in the teaching of the concept, his/her perspectives on the importance of the concept in terms of present and future learning of the student, and the situations most suitable for the teaching of the concept etc. The reciprocal interaction between the teacher and the student that aims at the knowledge to be taught is the basis of the didactic relationship. Therefore, what the teacher says about the teaching of the concept, as s/he is someone who already knows, and in different forms compared to the other member of this relationship (the student), is very important for the understanding of the relation didactic.

As a natural consequence of the didactic transformation theory, Chevallard put forward the anthropological theory of didactics. This theory allows us to approach doing mathematics as a human behavior more systematically and comprehensively and to examine learning and teaching processes in relation to didactic transformations (Bosch et al., 2006; Bosch & Gascón, 2006; Chevallard, 1997, 1999). The starting point of the theory is the idea that it is possible to question the source and nature of the mathematical knowledge taught at school (Bosch, 2012). It is possible to divide mathematical knowledge in an educational institution into two as mathematical praxeologies and didactic praxeologies (Artigue & Winsløw, 2010; Billington, 2009). While the set of existing praxeologies related to any mathematical knowledge are mathematical praxeologies, when these are used for instructional purposes in a particular institution or integrated into instructional processes, didactic praxeologies emerge (Artigue & Winsløw, 2010). Bosch et al. (2006) state that

didactic praxeologies can be extended from examining a problem to creating mathematical praxeologies and helping students.

Two main components of the anthropological theory of the didactic come to the fore in relation to the current study. These are ecological analysis, which includes questioning the place and function of a subject (or concept) in the curriculum (Chevallard, 1992, 2002; Rajoson, 1988), and praxeological analysis, which deals with the transfer of knowledge from one institution to another, its acquisition, transformation for teaching purposes and how organizations should be (Bosch et al., 2006; Bosch & Gascón, 2006; Chevallard, 2006). The anthropological theory of didactics proposes a theory of human activity based on a fundamental and constitutive concept called *praxeology* (Chevallard, 2006, 2015; see also Bosch & Gascón, 2014). Many dictionaries define the concept of praxeology with references such as "the study of human action and behavior", "the study of practical or productive activity" or "the science of productive action" (Chevallard, Bosch, & Kim, 2015, p. 2615). Chevallard (1992) defines the concept of "institution" here as a structure that has a unique function, logic, and culture that the individuals in it should know and have explicit or implicit rules to follow. Accordingly, every school, every class, every course (mathematics, chemistry, history, etc.) is considered as an institution.

1.2 Ecological Analysis of Fractions

Mathematics curricula can be considered as a living area of the concepts taught in mathematics lessons. Inspired by biology, Chevallard calls it the habitat of concept or knowledge. In other words, the places where the knowledge is found in the program are called its habitat. It is possible to talk about a similar relationship between knowledge, just as there is a life relationship between living things in an ecosystem.

Knowledge is also a part of the ecosystem in which they live, as in living things. Every knowledge must be fed from other knowledge and built on other ones in order to survive in the ecosystem. At the same time, it should contribute to the feeding and construction of other knowledge (Chevallard, 2002; Rajoson, 1988). In other words, it is unthinkable for knowledge to exist in isolation from others. When it comes to the ecological analysis of fractions, it comes to mind to examine the places where fractions are found in the secondary school mathematics program and their functions there. It has been used in many different fields, especially textbook and curriculum analysis, since the emergence of the concept of Ecological Analysis (Erdoğan et al., 2016). Documents such as curricula, textbooks, lecture notes, and application sheets are

some of the frequently used data sources of ecological analysis. We think that examination of the place and function of fractions in teaching programs within the scope of ecological analysis will enable to better understand and interpret teachers' perspectives on fractions that drive their didactic praxeologies and their teaching and see the reflection of institutional constraints and expectations (curriculum) on them.

The teaching of fractions in the 2018 mathematics curriculum starts from the first grade of primary school. In the four-year primary school period, fractions are included at each grade level, while operations with fractions are included in the fourth grade. Again, in the first three years of this level are aimed at teaching awareness about quarter, half and whole fractions and the relations between them. The relationship between part and whole, the definition of fraction terms, the concept of the unit fraction, the relations between the numerator and the denominator are the other topics covered at this period. In the fourth grade, students are expected to be able to recognize and use proper, improper, and mixed fractions, add and subtract fractions, and transform and sort between improper and mixed fractions.

At the secondary school level, students are faced with decimal notation, associating decimal notation with fractions, addition, and subtraction with decimal fractions, associating percent with fractions and decimal notation. In addition, ordering and comparing fractions, performing four operations with fractions, writing a decimal number in their expanded form, and Multiplication and division operations related to these numbers are other learning objectives of this level. In addition, recognition of rational numbers, ordering of rational numbers, four operations and problem solving are expected from the student at this level. On the other hand, modeling fractions with appropriate models is one of the most frequently emphasized issues by the curriculum writers in the learning outcomes.

1.3 Fractions and Their Teaching and Learning

In general, children use natural numbers when they encounter a problem in everyday life. However, natural numbers are insufficient to solve some problems in our daily lives (Baykul, 2005). In this direction, the set of natural numbers is expanded. Thus, the set of integers is generated with an expansion in which subtraction can be performed and that of rational numbers is generated with an expansion in which division can be performed (Albayrak, 2010; Baykul, 2005). Fractions indicate quantities such as whole numbers, but instead of the number of wholes, they refer to the number of parts of a whole (Altun, 2008). In this

respect, fractions are defined as each or some equal parts of a whole (Baykul, 2014).

Fractions are one of the most difficult subjects for primary school students (Charalambous & Pitta-Pantazi, 2007). For this reason, many students have difficulties with fractions (Gunawan et al., 2017). Indeed, the report of the US (National Assessment of Educational Progress [NAEP] (2007) revealed that 60% of 4thgrade students had difficulty in identifying whether 1/4 is greater than 1/5, and half of 8thgrade students failed to select the correct option when ordering three fractions from least to greatest. In addition to having difficulty understanding and accepting fractions as a number, students also face many difficulties in basic operations with fractions such as addition, division and Multiplication (Chinnappan & Desplat, 2012; Gunawan et al., 2017; Rahayu et al., 2017). As it is known, algebra is a gateway to students' STEM professions (Natinal Mathematics Advisory Panel [NMAP], 2008; Siegler et al., 2012), and fractions are an element that helps students be successful in algebra. In addition, developing day-to-day skills such as keeping home economics, calculating mortgage rates, and making home-office repairs also requires a great deal of fraction knowledge. Therefore, a priority should be researching students' difficulties with fractions for educational research, and providing effective fraction knowledge for educational institutions (Alacaci, 2009).

Students who have not fully internalized fractions yet think that the properties of integers apply to fractions as well, and even this is called "integer bias" in the literature (Ni & Zhou, 2005; Siegler et al., 2011). However, gaining the concept of fractions depends on students' understanding that some properties of integers are not valid for fractions when they encounter them. Unfortunately, it is observed that this difference does not fully occur even in many high school and secondary school students (Schneider & Siegler, 2010; Vamvakoussi & Vosniadou, 2010). As unresolved primary school problems are inherited to further education levels, many middle school teachers complain of dealing with this bad inheritance. Unfortunately, this is not a unique issue for secondary school teachers, but high school or university teachers can also experience similar situations. In fact, Ubah and Bansilal's (2018) study revealed that some primary school pre-service teachers need to learn about the basic operations of fractions and can work only in an externally driven manner (action level) on fraction operations.

As a result, there are many misconceptions (student praxeologies) and student difficulties identified in the literature on fractions. The aspect of these that looks at this study is whether the teachers administered to the research are

aware of these and if they are, what kind of didactic praxeologies they develop against them.

1.4 The Significance of the Study

There is a world of meaning behind human behavior. In other words, people do not carry out their actions aimlessly. Behaviors related to mathematics are not independent of this either (Chevallard, 2006). In this context, it is possible to talk about a world of meaning created by secondary school mathematics teachers behind their behavior in teaching fractions. According to Brousseau (1986), the scientific knowledge that is required to be taught in the curriculum becomes the knowledge to be taught to the students as a result of a number of adaptation processes carried out by the teacher. The teacher's function is the opposite of the researcher's, whose function is to isolate knowledge from his/her own personality and subject matter. The teacher creates a small scientific community in the classroom by giving meaning to the knowledge to be taught. The teacher has to design situations that will enable the student to acquire a knowledge that has been formed or is in the process of formation. Therefore, s/he is considered as a person who can create sufficient conditions to ensure the acquisition of knowledge and realize this when the acquisition is realized. The aim of this study is to reveal the perspectives of teachers about teaching fractions guiding their didactic or mathematical praxeologies. As many difficulties arise in their teaching and learning process, the teaching of fractions needs to be studied in a multifaceted way. While teachers teach a concept, determining how they start the subject, what activities, examples, problems or exercises they use, what they think about students' misconceptions and difficulties, and what strategies, methods, and tools they develop against them, provide much information on the teaching of the relevant concept. Although there are many studies with teacher or student teachers on fractions in the literature adopting different perspectives (e.g., Isiksal & Cakiroglu, 2011; Leung & Carbone, 2013; Luo, 2009), this study approaches the subject from the perspective of didactic transformation theory. It can be said that this increases the originality of the study. It is foreseen that the information to be obtained within the scope of the study will make important contributions to the development of the teaching of the concept in the context of teacher, student, curriculum, and teacher training.

2. Method

In this study, qualitative research methods were administered. Qualitative research is a research approach that allows the researcher to be

close or even in the center of the subject or phenomenon s/he is investigating (Denzin & Lincoln, 2005). Examining the meaning of people's lives in their real-world roles, representing the views and perspectives of the people in a study, and participating in and taking into account real-world contextual conditions, are some of the most important features of qualitative research (Yin, 2015).

In this study, since the perspectives of secondary school mathematics teachers on teaching fractions will be studied, in depth, the case study method, one of the qualitative research methods, was used. For various aims such as defining an event in its context, putting forward the questions and hypotheses of future studies or establishing a cause-effect relationship etc., case studies can be preferred by the researchers (Martinson & O'Brien, 2015). A single person or institution such as a teacher, a student, a classroom, a school, or a hospital, can be the subject of a case study, or more than one case study can be conducted to observe the differences between cases. In this study, a multiple case study was adopted to reveal the perspectives of different teachers and to increase the external validity of the study. Ethics committee approval was received for this study from the ethics committee of Sinop University (Date: 17.11.2022, Number: 2022/194)

2.1 The Participants of the Study

The research group comprised of ten middle school math teachers working in various middle schools within the borders of Sinop province in the north of Turkey. Although gender and years of experience were not among the variables we considered in the research, let's share this information in order to get to know the study group better: eight of them were female, and two were male. Teachers graduated from various universities and had different service periods. The arithmetic average of their professional experience years was 11.8, and its distribution was as follows: 2 teachers who had between 1-4 years teaching experience, six teachers who had between 5-15 years teaching experience, and two teachers who had 16 or more than 16 years teaching experience.

Regarding to the distribution of grade-levels the teachers (have) taught, there were seven teachers who taught 5th grade, seven teachers who taught 6th grade, six teachers who taught 7th grade, and seven teachers who taught 8th grade. These results mean that the participant teachers were sufficiently suitable for this study in the context of both their professional experience years and the grade levels they teach.

2.2 Data Collection and Procedures

A semi-structured interview form was used as a data-gathering tool. The interview in qualitative research is one of the main sources of qualitative data in understanding the investigated subject in the study area (Merriam, 2013). Although their preparation, implementation, transcription, and analysis are time-consuming and labor-intensive, effectively conducted semi-structured interviews are data collection tools that are worth all this time and effort in terms of the insight and information gained (Adams, 2015). The interview questions were developed by the researcher from the relevant literature review (Gökkurt et al., 2015; Karaağaç & Köse, 2015; Temur Doğan, 2011; Van de Walle et al., 2010), and the investigation of the secondary school mathematics curriculum. Interview questions were finalized by taking the opinions of two experts with a doctorate in mathematics education in terms of their suitability for the purpose and tested by applying them to two teachers outside the study group in terms of intelligibility. After this pilot study, it was seen that there were no problems regarding clarity and intelligibility.

In the interview form, there were ten open-ended questions. The first question aimed to find out the demographic characteristics of the teachers, such as professional experience year, name of graduated university, teaching for what grade levels etc. In the second question, the teachers were asked to indicate the importance level of fractions in their opinion. The two questions aimed to determine the information on the teachers' didactic praxeologies of fractions such as what kind of activities they start with the teaching of fractions, what they do to embody fractions, and what models they frequently use to teach fractions etc. In two questions, in the context of the ecological analysis approach, the teachers were asked for their opinion about the place of fractions in the curriculum (learning gains, their ordering etc.) and textbooks (activities, examples, exercises, etc.). The other two questions address to the teachers' perspectives with regard to students' difficulties of fractions. While one of them tried to find out the teachers' knowledge related to students' understanding, the other aimed to determine the teachers' knowledge related to students' difficulties and mistakes. In another question, the teachers were asked to give three examples of questions they asked (or will ask) about fractions in the written exam (their expectations from students). The last question aimed to determine what the teachers wanted to add about the subject.

Each participant was interviewed by the same interviewer (at the same time as the researcher) at a different venue on a different date, and the interviews were held at outside of working hours in a place, where they felt comfortable in

order to not be influenced by school-related emotions. The interviewer explained the main goals of the interviews to the participants and informed them that they had the right not to answer the questions they were not comfortable with and were free to leave whenever they wanted. The interviews were tape-recorded and lasted approximately 15-20 minutes. The transcription consists of 20 pages and 635 lines.

Separating categories and then naming (labeling) these categories is one of the most frequently followed ways in qualitative data analysis. These categories are sometimes called codes, nodes, or tags. Codes can be determined beforehand, or they can be determined directly from the data after data collection (Rogers & Goodrick, 2015). In the current study, the second method was preferred, and the categories were determined based on the answers given by the teachers to the semi-structured interview questions. In coding, some answers are coded more than once. The data obtained within the scope of the research were analyzed using content analysis, which is a qualitative analysis method. Teachers' perspectives were first classified and then divided into categories and subcategories among themselves. Common categories were determined by constantly comparing the determined categories with each other (Creswell, 1998). Tables were created by considering the relationships between the determined upper and lower categories. In addition, in order to increase the reliability of this coding and category process in the analysis of the answers, the data and categories were examined by two experts with a doctorate in education. Conflicts encountered were resolved by discussion, and in this way, a high degree of common agreement on coding and category was achieved (Lincoln & Guba, 1985). After all the analysis and interpretation processes were completed, they were shown to the interviewed teachers, and their approval (interviewer approval) was obtained as to whether these comments could be made or not. Thus, the reliability of the analysis and interpretations was tried to be increased.

3. Results

In this section, we present the findings of the analysis of the questions of the semi-structured interview, which aims to define the relationship of teachers to the teaching and learning of the notion of fractions.

3.1 Importance of the topic of Fractions according to Teachers

In order to determine what the teachers thought about the importance of the topic of fractions, we asked them the question "Are fractions important and why?", all of them responded to this question positively. Regarding to their

reasons displayed in Table 1, six of them consider fractions as important because they are used in everyday life. In the opinion of three teachers, fractions are important for understanding the relationship between part and whole. The other three think that fractions help students associate mathematics with other topics, while one teacher thinks that fractions are important because not everything can be expressed by natural numbers, and fractions eliminate this lack of natural numbers. This is supported by the interview quotations, as illustrated below:

Table 1. Teachers' Reasons for The Importance of The Topic of Fractions

Categories	Frequency
Fractions are used in everyday life	6
Associating mathematics with other topics	3
Understanding the relationship between part and whole	3
Not every situation can be expressed by natural numbers	1

Sure, the topic of fractions is important. Because they are used in everyday life. Apart from that, they are also important in mathematics. Students don't encounter fractions only as a topic of mathematics. They encounter them in problems related to other topics and in everyday life situations. For instance, in everyday life, we call half-bread or quarter-bread. In the majority of other topics, fractions are used. For instance, they are used in radical numbers (Teacher 10).

In my opinion, the topic of fractions is definitely important. I will try to explain their importance by moving from general to specific examples. There is a saying among the people, "Societies that are good in mathematics have also a developed understanding of justice.". The foundation of justice is also a little based on fractions. The most basic expression I use when teaching children this topic is a field or inheriting sharing situations. To solve this type of question, students have to understand fractions. In my mathematics lessons, students always ask me what they have learned will serve for what. In fact, fractions serve help to solve our many problems in the daily life (Teacher 7).

You know, fractions are important. Because when students understand the relationship between part and whole, they can produce logic from many things. In fact, I teach fractions by associating them with the topic of probability. In order to explain the importance of the topic of fractions, I can say that they help students to develop a bit of their logical reasoning skills and to relate mathematics to everyday life (Teacher 3).

Yes, they are important. Because students know natural numbers, natural numbers are not enough to express each encountered situation. As known, we

use natural numbers to count the wholes, but we can only express parts of a whole with fractions (Teacher 2).

Fractions are important. As they are used in other lessons and other topics of mathematics, they are very important (Teacher 55).

The first two comments explain the importance of fractions by underlining their role in everyday life situations. One emphasizes the use of half bread and quarter bread, while the other draws attention to the use of fractions in heritage distributions. In the next comment, the teacher indicates that the understanding of fractions is closely linked with that of the concept of part and whole. At the same time, she underlines the relationship between fractions and probability concepts. The third comment states that thanks to the fractions, parts of a whole can be counted, and whole numbers do not allow it. In the last comment, the teacher explains the importance of fractions by revealing their interdisciplinary relationship with other mathematical concepts. As a result, it can be asserted that the fact that fractions are used in daily life and their relationship with other lessons and mathematics topics makes fractions an important issue for teachers.

3.2 Activities Selected by Teachers to Start Teaching Fractions

The different stages of a course require the teacher to demonstrate different skills. The introduction phase is a very important stage in terms of demonstrating the teacher's ability to relate the old and new knowledge, to motivate the student, and to use the new teaching techniques and methods. Therefore, it is necessary to give more carefully consideration to the selected activities of this stage. As seen in Table 2, in parallel with the results presented in the previous section, the vast majority of teachers start to teach fractions by giving examples from everyday life. Drawing shapes and using visual presentations are other important activities selected by the teachers. On the other hand, some of them use the definition of fractions, concrete materials, and folding paper when starting fractions. All this is reflected in the following comments:

Table 2. Activities selected by teachers to start teaching the fractions

Categories	Frequency
Giving examples from everyday life	9
Drawing shapes	4
Visual presentations	3
Folding paper	1
Concrete materials	1
Definition	1

I ask students the following questions: I have a slice of cake and I divide you into two groups, one for three and the other for eight people. Which group do you prefer to be in? They often prefer a group of three people in order to eat more cakes. I bought a bag of chips, you are divided into two groups, one for 5, and the other for eight people. Which group do you prefer to be in? They often prefer the least one. For example, I'm on a diet. In order to eat less, which group should I be in? I give examples by drawing a figure. I'm trying to visualize my teaching by dividing the square or the rectangle. In this way, they make better connections in everyday life (Teacher 1).

(...) Cutting an apple or an orange, I find it simple. Students already do this in primary school. They should come to us by knowing it. My most preferred method is to draw a box and then plot it into pieces (Teacher 4).

I start the topic of fractions by asking students their ideas. I started to teach fractions with the examples such as slicing the bread or the cake. I do not bring concrete material to the course and I want students not to bring them. We make concrete materials in the course ourselves. For example, by folding the paper, I distinguish it into pieces and I show fractions on it (Teacher 5).

Children are taught that a small number is not divided into a large number. The topic of fractions is a challenge to this understanding because we divide the small numbers with large numbers together them. I talk about sharing a bread between two people. I ask students if you will stop eating bread in such situation by saying that one bread cannot be divided into two pieces. What do you do? First, I divide the bread into 2 and share it between 2 people. If you are 3 people, I divide by 3 and I share 3 people. In this way, I am moving by asking children. This is my way of introduction to fractions (Teacher 7).

In the first comment, the teacher starts fractions by proposing a problem of everyday life. The students should choose one between a three- or eight-person group in order to eat a cake or chips more or less depending on the situation. At the same time, the teacher states that she visualizes the subject by drawing geometrical shapes such as squares and rectangles. In the second comment, the teacher says that he found banal the idea of cutting fruits like apples and oranges into pieces in the classroom. She states that this has been experienced by the students before, and she prefers to draw shapes on the blackboard and express the fractions on it. In the next comment, like the previous one, the teacher claims unnecessary to bring concrete materials to the class, but she prefers materials made in class. Folding a paper and distinguishing it into pieces is her preferred activity to start teaching fractions. The last comment highlights a common misconception. Previously, students were said that a small number cannot be

divided by a big number, but now it is difficult for them to accept that this can happen with fractions. This teacher also states that she enters into fractions by giving examples from daily life, such as bread or cake distribution. Based on these results, it can be concluded that the teachers start teaching fractions by cutting some concrete objects or their models or by folding and cutting a paper into smaller parts.

3.3 Indicators that Students Understand the Topic of Fractions

How a teacher decides whether a student understands a subject is very important. Because in line with this decision, s/he gives direction to her/his teaching. The teacher concentrates either on missing points or moves on to another subject by thinking that the subject is understood. This information is also important in terms of showing which concepts the teacher will focus more on while teaching the subject. Table 3 indicates that according to the participant teachers, one of the most important indicators showing that a student understands the subject of fractions is that s/he can perform four operations in fractions (4 teachers) and understand the part-whole relationship (4 teachers). Some teachers believe that if a student is able to express the definition of fractions (2 teachers) or order them from least to greatest (2 teachers), s/he understands the fractions. On the other hand, only one teacher is associated with understanding fractions with problem-solving related to fractions. This is supported by the interview quotations, as illustrated below:

Table 3. Indicators that students understand the topic of fractions

Categories	Frequency
Four operations in fractions	4
Part-whole relation	4
Definition	2
Ordering	2
Problem-solving	1

I think that if the student understood the proper fraction, the improper fraction, and the mixed fraction, then s/he could understand the topic of fractions. The student also understood the concept of fractions if s/he understood that a small number could be divided by a large number. In proper fractions, it is needed to share a whole, but in improper fractions, there is one whole or greater than one whole. If the student understood this difference, we could consider that s/he understood the fractions (Teacher 7).

In order to understand the concept of fractions, I think the student should understand the ordering of fractions. If the student knows to order fractions from least to greatest or vice versa, then that means that s/he has understood the fractions (Teacher 3).

First, the student should know the definition of fractions. If s/he understands that a fraction expresses the co-parts of a whole, then it means that s/he understood the concept of fractions (Teacher 2).

If the student considers the fraction as a fraction but not a rational number if s/he can translate a mixed fraction into an improper fraction, s/he knows that a mixed fraction is the sum of proper fractions, and s/he knows to use it in addition, and subtraction of fractions, and to equalize the denominators and where this equalization is needed, I think the student understood the fractions (Teacher 10).

The first comment links students' understanding of fractions to their understanding of three concepts as follows: types of fractions, divisibility of small numbers by large numbers, and difference between proper fractions and improper fractions. In the next comment, the teacher attributes the mastering of fractions to that of their ordering. The third interpretation links the mastering of fractions to the understanding of their definitions. If the student perceives the fraction as co-parts of a whole, it is assumed that s/he understands the fractions. In the last comment, the teacher relates the understanding of fractions to many concepts such as knowing the difference between fractions and rational numbers, being aware of the relationships between the types of fractions, and being able to equalize the denominators.\par Consequently, we can state that in their teaching of fractions, the teachers will focus more on their definition, their part-whole sub-construct, their type and the relationship between them, and the equalization of denominators in subtraction and addition.

3.4 Teachers Commonly Use Models by Teachers When Teaching Fractions

Models are one of the teaching materials that play an important role in the concretization of abstract concepts. Since mathematics is an abstract course in terms of its structure, the use of models becomes even more important. Regarding the participant teachers' use of models in teaching fractions, as seen in Table 4, it is seen that most of the teachers prefer length (6 teachers) and area (6 teachers) models. Other models preferred by teachers are set (5 teachers) and volume (3 teachers) models. All this is reflected in the following comments:

Table 4. Commonly used models by teachers when teaching fractions

Categories	Frequency
Length	6
Area	6
Set	5
Volume	3

I use the area model. I also use the length, area, and volume model according to the problem type. For example, for a problem that is related to the length of a board, I use the length model, the area model for the garden, and the volume model for the water-filled tank (Teacher 5).

When we teach fractions, we define fractions and then try to find the fraction of a number. For example, I ask students what is 1/3 of 240 or 4/3 of which number is 240? So, I teach fractions through numbers. Of course, the type of problem plays an important role in my fraction teaching way (Teacher 10).

I use length. I don't particularly use it in the 7th grade. Especially getting started in this grade is a problem. I use it according to the grade. I use quadrants and circles. I don't use the areas easily. I don't use circular shapes much. Because children have difficulties in drawing the circle. They cannot divide the circle into equal parts (Teacher 9).

I usually use the number line. For example, under the number line, I draw the rectangle shape of the same size and compare it with the number line (Teacher 2).

In the first comment, the teacher indicates that she uses area, length, and volume according to the type of problem. The second comment also highlights the type of problems in the use of models and states that she firstly uses the set model. In the next comment, we consider that the grade plays a role in the teacher's use of model. The teacher states that the use of models in the early classes of secondary school is problematic due to the lack of some psychomotor skills of the students. The last comment reveals the number line as a model. The teacher first places fractions on the number line, then uses other models such as the rectangle, and later compares these two models with each other. As a result, the type of problem and the level of class are important in teachers' choice of model. In general, length, area, and set models are frequently used by teachers.

3.5 Teachers' Thoughts about the Place of Fractions in the Curriculum

Undoubtedly, one of the most frequently used sources by teachers when planning their courses is the curriculum. Therefore, their ideas about the

place of concepts in the curriculum can provide important clues to overcome the problems encountered in the teaching of the concepts. Regarding the teachers' responses, it is seen that all teachers think positively about the place of fractions in the curriculum i.e., learning objectives, their number, and ordering, etc. This is supported by the interview quotations, as illustrated below:

I think there is no problem in the ordering of topics in the curriculum. First, we give the meaning of the fraction. Then, we show it in the number line. Then we order them from least to greatest or vice versa. We usually do four operations with fractions (Teacher 3).

It is good and enough. Already in the sixth grade, we teach addition, subtraction, multiplication, and division problems. Then, we give rational numbers in 7th grade. We give the same things again. It should be underlined that the difference between the rational number and the fraction is that the rational number is both negative and positive (Teacher 10).

The math curriculum often changes in our country. Therefore, it is very difficult to follow curriculum changes. If we talk about the curriculum that I know, the ordering of topics is such as the meaning of fractions, the types of fractions, ordering them, four operations in the fractions, and problems with fractions. In my opinion, this ordering is not bad (Teacher 6).

The new curriculum is lighter. It is in a way that the students understand better. In 5th class, we teach the unit fraction, proper fraction, improper fraction, and mixed fraction, and in 6th grade, we teach four operations in fractions. In my opinion, the curriculum is correct (Teacher 9).

The first comment expresses that there is no problem with the ordering of topics (learning objectives) in the curriculum. According to the next comment, the curriculum is good and enough. The teacher indicates that after four operations in fractions, the rational numbers are taught, and similar things are repeated in a way. In his opinion, the difference between rational numbers and fractions should be more underlined. The next comment complains of frequent curriculum changes in Turkey. She ironically talks, and she states that it is not bad if the curriculum she knows is in question. The last comment compares the new curriculum to the old one and finds the new one lighter than the old one. In his opinion, there is no problem with the curriculum. As a result, it seems that the teachers are mostly satisfied with the place of fractions in the curriculum.

3.6 Teachers' Thoughts about the Handling of Fractions in Textbooks

Textbooks are the instructional materials on the basis of teachers' course preparations. Although there are many reasons for this, one of the main reasons is that preparing instructional materials is difficult and time-consuming for the teacher. Many teachers tend to refer directly to textbooks without looking at the curriculum because they are prepared according to the curriculum. Because of their importance in teaching, it is thought that teachers' considerations for the presentation of fractions in textbooks will give important ideas about teaching fractions. As it is revealed in Table 5, the teachers believe that there is no problem in ordering educational objectives (10 teachers). However, the vast majority of teachers complain about the limit of the number of questions (example, exercise, and problem) (10 teachers). According to some teachers, the number of activities is also limited (5 teachers). Although their number is few, some teachers think that learning objectives superficially (1 teacher) or intensively (1 teacher) take in textbooks. All this is reflected in the following comments:

Table 5. Teachers' thoughts about the handling of fractions in textbooks

Categories	Frequency
The number of questions is limited (example, exercise and problem)	10
Order of educational objectives is appropriate	10
The number of activities is limited	5
Learning objectives are intensive	1
Learning objectives are superficial	1

No, textbooks are not certainly enough. In general, we need to give many examples in mathematics. To be well understood by the students, it is very good to give more examples. Unfortunately, our textbooks are inadequate, and there are too many mistakes. There were workbooks in previous years. When you did an activity, there were plenty of examples related to this activity. Unfortunately, many exercise types are removed from textbooks, and there are not enough exercises in student books. Therefore, our books are not enough (Teacher 7).

Textbooks are usually not enough. Overall, I say it for all of them. Activities and exercises are also less. Therefore, if using supplementary resources is not wanted by the Ministry of National Education, textbooks must be richer in activities and exercises. It needs to be many multiple-choice questions; it needs to be too many activities. In summary, it can be said that textbooks are not

enough. We are not allowed to use different resources from textbooks, but I use them (Teacher 3).

I do not use the textbook. However, I give its exercises to children as homework. I have several sourcebooks. I use them. Textbooks are not enough, and the number of questions is limited. Children need to solve many questions. As for the event, there are actually nice activities in the textbook, but we do not have time to do them (Teacher 8).

It is not possible to say that there are enough examples for any subject in textbooks. I think the topics are taught as superficial. They are completely left to the teachers to take the initiative. There is not enough sample available for learning objectives (Teacher 9).

The first comment expresses that in order to understand a topic well by students, they need to solve or see many examples, however, textbooks are very limited in this regard. On the other hand, textbooks also contain many mistakes, and it is no longer possible to find some types of exercise in new textbooks. In the second comment, the teacher also thinks that textbooks are inadequate in terms of examples and exercises. This leads her to refer to resources not recommended by the ministry. In her opinion, textbooks should also include multiple-choice questions. In the next comment, the teacher indicates that students need to solve many questions about a topic, therefore she prefers to use other sources than textbooks because of the lack of exercises. However, in her opinion, there are very good activities related to the topics in the textbooks, but there is not enough time to apply them. The last comment, like the previous ones, highlights the lack of examples and indicates that the topics are presented superficially.

As a result, the most criticized shortcomings of the teachers in textbooks are that they do not include enough exercises, questions, problems, and activities, and they present topics superficially. This encourages teachers to use sources other than textbooks.

3.7 Students' Common Difficulties and Mistakes in Fractions

The effect of students' difficulties and misconceptions on teacher's teaching behaviors cannot be denied. What is expected from an effective teacher is to be aware of them, and to develop appropriate strategies in order to overcome them. Table 6 indicates that, according to the teachers, students have more difficulties in addition/subtraction (5 teachers) and division/Multiplication (4 teachers) of fractions. Solving fraction problems and ordering fractions are other difficulties for students (respectively, four teachers and three teachers). In addition to these difficulties, it is seen that there are students who have difficulty in showing

fractions on the number line (2 teachers) and simplifying (1 teacher). The following quotations from the interview transcript reinforce these results:

Table 6. Students' common difficulties and mistakes in fractions

Categories	Frequency
Addition and subtraction of fractions	5
Division and Multiplication of fractions	4
Solving problems of fractions	4
Ordering fractions	3
Representing fractions on the number line	2
Simplification	1

Students usually have difficulty in adding and subtracting fractions at later times. Students also have difficulty in adding unlike fractions because they do not know simplification and how to find the least common multiple of the two denominators. Multiplication is not too much trouble. However, I have a hard time teaching the division. Students can place fractions on the number line, but weak students cannot. Students also have difficulty in ordering unlike fractions. Because they do not know whether to find the least common multiple of the denominator or that of the numerator. On the number line, they can represent fractions, but they do not understand the logic. I give extra activities. I solve examples of visual presentations (Teacher 9).

When showing fractions, students do not draw shapes as equal parts. As such, they cannot make comparisons. There is a visual mistake here. If there is a formula to apply, they do not have too many problems. They directly do Multiplication, division, addition, and subtraction of fractions without any difficulties. However, they have difficulties in doing these operations in problem situations (Teacher 1).

Students have the most difficulty in equalizing the denominators. They experience difficulty in showing fractions on the number line. For example, the number 2/5 is a number between 0 and 1. To be placed this fraction on the number line, we need to divide the interval four times to have four pieces. However, children divide five times. To prevent this mistake, we try to make them understand that I obtain five pieces when I tear a paper four times (Teacher 5).

In the first comment, the teacher expresses many difficulties faced by students. Adding, subtracting and ordering fractions are major challenges for them. The main reason for this is the difficulty in converting fractions to

equivalent fractions with a common denominator or numerator. Another difficulty is that students can place fractions on the number line, but they cannot explain why they do so. In the face of these difficulties, the teacher states that he mostly solves extra exercises and uses visual objects. The second comment reveals two very important situations. The first one refers to a very common misconception in which students are unaware that the parts must be equal in a fraction. The second one is that students cannot repeat their success in simple exercises when they faced problems that require to take some decisions before applying the rules. Similar to the first comment, the last comment also underlines the difficulty in finding the least common multiple of the two denominators. In her opinion, showing fractions on the number line correctly is another challenge for students. When representing a fraction on the number line, students divide the space between two consecutive numbers into more parts than necessary. The teacher states that she developed a paper-folding strategy against this mistake. As a result, student difficulties and mistakes in fractions are numerous and varied. Situations requiring finding the least common denominator, and to showing fractions on the number line are often at the center of difficulties and mistakes faced by students.

3.8 Teachers' Strategies to Overcome These Difficulties and Mistakes

Unquestionable teachers' professional development depends on their understanding of the events they face in the classroom and the ability to interpret the effects of their teaching on students. A teacher cannot be satisfied with only being aware of student difficulties and mistakes. S/he needs to develop effective strategies to overcome them. Regarding the strategies developed by the participant teachers, Table 7 reveals that solving many questions by the teacher (in the classroom) or the student (at home) is the most preferred strategy against difficulties and mistakes (6 teachers). Concretizing and repeating the topic are other frequently preferred strategies (respectively, four teachers and three teachers). There is only one teacher who prefers to propose new activities to students. All this is reflected in the following comments:

Table 7. Teachers' strategies to overcome these difficulties and mistakes

Categories	Frequency
Solving many questions	6
Concretizing	4
Repeating the subject	3
Proposing new activities to students	1

(...) The student should solve more questions to overcome these mistakes. There is no other way. Students already have to memorize some rules (Teacher 10).

(...) We try to overcome this by including visual materials and solving many questions. In mathematics, concretization is important (Teacher 2).

(...) I have plenty of examples to overcome these mistakes. I give a lot of homework (Teacher 3).

(...) I give extra activities. I present examples of these in visual representations (Teacher 9).

(...) I reteach the topic all the time (Teacher 4).

In the first three comments, the teachers propose solving many exercises as a strategy. The first of them indicates that to overcome the difficulties, there is no other way than to solve questions by students. In his opinion, solving many questions also helps to memorize the rules that need to be memorized. The second comment involves visual material in addition to solving many questions. As the reason for this, the teacher suggests that concretization is important in mathematics. The third comment states that the many question-solving strategy is implemented by the student at home, and the teacher in the classroom. In the fourth comment, the teacher states that he follows a strategy aimed at giving extra activities that highlight visual representations of fractions. The strategy mentioned in the last comment is reteaching the topic until the difficulty disappears. As a result, the most important strategy developed by the teachers against difficulties or mistakes is to solve many questions in the classroom or to make students solve many questions through homework at home. On the other hand, there are teachers who propose concretization, showing fractions with visual objects, and repeating the subject as a strategy.

4. Discussion

In this study, by adopting the hypothesis that they shape the didactic and mathematical praxeologies of teachers, we investigated the secondary school mathematics teachers' perspectives of fractions. In this way, we wanted to approach the teaching of the concept of fraction in the context of teachers.

The results of the study revealed that the participant teachers are aware of the importance of fractions and emphasized that it is frequently used in everyday life. We can indicate that the fact that fractions are used in daily life (Hannich, 2009), and their relationship with other lessons and mathematics topics (Gabriel, 2016) makes fractions an important issue for teachers. Parallel to these results,

the teachers start to teach fractions by giving examples from the daily life, and drawing shapes, and by benefiting visual presentations. In their teaching of fractions, the teachers focus more on their definition, their part-whole sub-construct, their type, and the relationship between them, and finding the least common multiple of the two denominators where necessary such as subtraction, addition, comparing, and ordering fractions. At the same time, they often used length, area, set, and occasional volume models to teach fractions. The type of problem and the level of class are important in teachers' choice of model. The use of some models in the early classes of secondary school can be problematic due to the lack of some psychomotor skills in the students.

On the other hand, the employment of these models was often shaped around the part-whole sub-construct. Although we do not have data on their practices in the classroom, it is understood that they focus only on the part-whole and division sub-constructs based only on what the teachers said. However, as underlined by Hackenberg et al. (2016) students understand fractions better when fractions are taught in different ways. Furthermore, multiple fraction representations contribute to the student's understanding (Wyberg et al., 2012), and the use of multiple representations in the teaching of mathematics helps the students understand and improve their problem-solving skills (Kara & Incikabi, 2018).

The prominence of these fraction sub-constructs compared to the others can be attributed to the two following reasons. The part-whole sub-construct is an effective starting point in forming the meaning of fractions (Cramer & Whitney, 2010), and therefore, textbook authors and teachers prefer to focus on it (Van de Walle et al., 2010). This trend in teachers and textbook authors is also reflected in students' performance. Indeed, there are studies in the literature supporting these comments. For instance, Novillis-Larson (1980) revealed that locating proper fractions on the number line was more difficult for elementary school children than identifying the same proper fraction with part-whole (area) and part-group (set) representations. These results are also supported by recent studies. Thus, Tunç-Pekkan (2015) found that students showed greater performance in circle and rectangle items that required using part-whole fractional reasoning than on the items with number line graphical representation. Similarly, in their study conducted with Turkish students, Kara and Incikabi (2018) reported that the students tend to fail in representations such as the number line and perform better in other representations. The participant teachers are mostly satisfied with the ecology of fractions (i.e., the place of fractions) in the curriculum. In their opinion, there is no problem with the ordering of topics (learning objectives) in the curriculum. On the other hand, some of them complain that the difference

between fractions and rational numbers is not expressed clearly enough by the curriculum. Moreover, frequent curriculum changes in Turkey are criticized by some teachers.

As for the evaluations of textbooks by teachers, the most criticized shortcomings in textbooks are that they do not include enough exercises, questions, problems, and activities and present topics superficially. This leads them to use other sources than textbooks. The teachers' finding that the textbooks are insufficient in this regard has been interpreted as the pressure of the national entrance exams in the Turkish education system on them. Preparation for national exams made to enter the limited number of high schools heavily favored by the society requires solving many questions of a similar type (Baştürk, 2011). In Turkey's present conditions, this type of exam has become a very cruel competition (Baştürk, 2010). These have significant psychological effects on both families and students (Ergene & Yıldırım, 2004; Günay et al., 2008). According to the results of a recent study, the majority of students consider the entrance exam to high schools as a "difficulty" and "discomfort" (Ulusoy, 2020). As a result, an understanding of success based on solving a large number of questions or exercises similar to exam questions, rather than understanding the meaning of the subjects taught, is becoming increasingly common among all stakeholders of education (teacher, student, parent, etc.). So, all these force teachers to focus on operational learning rather than conceptual learning. This is also a significant example of how effective the external components of education or its social environment ("noosfer" in terms of Chevallard (1985)) are on the educational process in schools.

In the opinion of the teachers, student difficulties and mistakes in fractions are numerous and varied. Situations requiring to find the least common denominator and to showing fractions on the number line are often at the center of difficulties and mistakes faced by students. On the other hand, students mostly have difficulty in understanding the relationship part-whole, four operations with fractions and ordering fractions from least to greatest or vice versa. These difficulties mentioned by the teachers are also among the difficulties commonly reported in the literature, such as comparing fractions (National Assessment of Educational Progress [NAEP], 2007; Yang & Tsai, 2010), basic operations of fractions such as addition (Gunawan et al., 2017), division (Chinnappan & Desplat, 2012), Multiplication and division of fractions smaller than the unit (Siegler & Lortie-Forgues, 2015), finding the least common denominator (Choy, 2014; Rahayu et al., 2017). Although their professional experience is limited, pre-service teachers also draw attention to similar difficulties. In his

study conducted with pre-service teachers (Baştürk, 2016) reported that they consider equivalent fractions, comparing fractions, and operations of fractions as students' crucial obstacles and difficulties in fractions. On the other hand, the most important strategy developed by teachers against difficulties or mistakes is to solve a lot of questions in the classroom or to make students solve them through homework at home. On the other hand, there are the teachers who propose concretization, showing fractions with visual objects, and re-teaching the subject as a strategy.

We really think that what lies behind the strategy of encouraging lots of question-solving put forward by teachers should be emphasized and that this will also give important clues about the quality of the teaching given. As you know from the literature, student difficulties and misconceptions about fractions often show a conceptual nature to a large extent. Many students want to apply their knowledge of integers and natural numbers directly to this new set of numbers (Ni & Zhou, 2005; Siegler et al., 2011; Vamvakoussi & Vosniadou, 2010). It seems difficult to eliminate such misconceptions by asking students to solve many similar exercises. So why is this strategy so popular and accepted among teachers? We attribute this situation to imitative reasoning or learning style which can be described as a type of reasoning built on copying exercise solutions, for example, by looking at a teacher's solution on the board, a textbook, or course notes through a remembering solution algorithm (Bergqvist, 2007). There are studies that reported that this way of reasoning is frequently used by students at all levels, even higher education, students concentrate on procedures rather than content, even for tasks that require using higher-order thinking skills such as proof (Baker, 1996; Baştürk, 2010; Moore, 1994). This issue is open-ended and needs to be investigated in depth by the upcoming research.

5. Conclusion and Recommendations

In conclusion, the interviewed teachers were aware of the importance of the subject of fractions and emphasized that they are frequently used in everyday life. Therefore, they indicated that they started to teach fractions by giving samples of everyday life, drawing shapes, and making use of visual presentations. In their opinion, students have more difficulties in four operations in fractions, equalizing denominators, determining denominators and nominators, ordering fractions from least to greatest or vice versa, problem solving with fractions, and so on. To overcome these difficulties, the teachers expressed that they used some methods such as solving a lot of questions and embodying and re-teaching the subject.

In the context of the above-mentioned results, the following recommendations can be developed:

• Fractions teaching should not be limited to activities based only on their part-whole and division sub-constructs but also on their measurement and proportion sub-constructs. This will enrich conceptual learning. Students should solve not only questions, exercises, or problems that develop operational skills but also those that develop both operational and conceptual skills. Teachers' approach to misconceptions or mistakes should be diversified, and teachers should be made aware that only strategies based on more exercise solving are not sufficient for conceptual understanding.

• The teachers participating in the study generally prefer traditional teaching methods and do not include new technologies in their classrooms. Besides traditional teaching methods, new technologies can also be used in teaching mathematics. There is many specialized software available to enrich students' understanding of mathematical concepts. Sure, some obstacles, such as students' computer knowledge level, classroom size, teaching time etc., should be overcome in order to implement a new technology-based teaching in the classroom. However, despite all these difficulties, with the software, making applications involving many models of fractions such as pies, area, and the other objects that students often encounter in their daily lives is possible. To enrich the teaching of fractions, it is considered important that teachers are trained or encouraged to include new technologies in their classes.

• Although the current research seems to provide general results due to the way it was designed, it provided important data on the teaching of fractions at the secondary school level, in particular to reveal teachers' perspectives shaping their mathematical and didactical praxeologies. With new research that will be designed in a different way, for example, what praxeologies revealed by these perspectives can be investigated through the praxeologies of teachers in the classroom environment, and the findings to be obtained can be compared with the results of this study. Thus, the different aspects regarding the teaching of fractions can be revealed in more detail.

References

Achiam, M. (2014). Didactic Transposition: From theoretical notion to research program. *Paper presented at ESERA*, Nevşehir, Turkey.

Adams, W. C. (2015). Conducting semi-structured interviews. In *Handbook of practical program evaluation* (pp. 492–505). John Wiley & Sons.

Alacaci, C. (2009). Öğrencilerin kesirler konusundaki kavram yanılgıları [Misconceptions of students about fractions]. In E. Bingölbali & M. F. Özmantar (Eds.), *İlköğretimde karşılaşılan matematiksel zorluklar ve çözüm önerileri*. Pegem Akademi Yayınları.

Albayrak, M. (2010). *Eğitim fakülteleri ve sınıf öğretmenleri için ilköğretimde matematik ve öğretimi-I [Mathematics and teaching in primary education for education faculty and classroom teachers-I]* (3rd ed.). Mega Ofset Matbaacılık.

Altun, M. (2008). *İlköğretim ikinci kademe (6, 7 ve 8. sınıflarda) matematik öğretimi [Mathematics teaching in the second level of primary education (6th, 7th and 8th grade)]* (5th ed.). Aktuel Yayıncılık.

Artigue, M., & Winsløw, C. (2010). International comparative studies on mathematics education: A viewpoint from the anthropological theory of didactics. *Recherches En Didactique Des Mathématiques*, *30*(1), 47–82.

Baker, J. D. (1996). Students' difficulties with proof by mathematical induction. *Paper Presented at the Annual Meeting of the American Educational Research Association*.

Baştürk, S. (2010). First-year secondary school mathematics students' conceptions of mathematical proofs and proving. *Educational Studies*, *36*(January 2015), 283–298. https://doi.org/10.1080/03055690903424964

Baştürk, S. (2011). Pourquoi une preparation specifique au concours d'entree a l'universite est-elle necessaire en Turquie? [Why is a specific preparation for the university entrance examination necessary in Turkey?] *International Journal for Studies in Mathematics Education*, *4*(1), 62-79.

Baştürk, S. (2016). Primary student teachers' perspectives of the teaching of fractions. *Acta Didactica Napocensia*, *9*(1), 35–44.

Baykul, Y. (2005). *İlköğretimde matematik öğretimi (1-5 sınıflar) [Mathematics teaching in primary education (1-5 classes)]*. Pegem Yayıncılık.

Baykul, Y. (2014). *Ortaokulda matematik öğretimi (5-8 sınıflar) [Teaching mathematics in middle school (5-8 classes)]* (2nd ed.). Pegem Yayıncılık.

Bergqvist, E. (2007). Types of reasoning required in university exams in mathematics. *Journal of Mathematical Behavior*, *26*(4), 348–370.

Billington, M. (2009). Establishing didactical praxeologies: teachers using digital tools in upper secondary mathematics classrooms. *Paper Presented at the WG9, Cerme 6 Conference*.

Bosch, M. (2012). Doing research within the anthropological theory of the didactic: The case of school algebra. *Paper Presented at the ICMI 12*, Seul.

Bosch, M., Chevallard, Y., & Gascón, J. (2006). Science of magic? The use of models and theories in didactics of mathematics. *Paper Presented at the Proceedings of the 4th Conference of the European Research in Mathematics Education (February 17 - 21, 20.*

Bosch, M., & Gascón, J. (2006). Twenty-five years of the didactic transposition. *ICMI Bulletin*, *58*, 51–63.

Bosch, M., & Gascón, J. (2014). Introduction to the Anthropological Theory of the Didactic (ATD). In A. BiknerAhsbahs & S. Prediger (Eds.), *Networking of Theories as a Research Practice in Mathematics Education* (pp. 67–83). Dordrecht, The Netherlands: Springer.

Brousseau, G. (1986). Fondements et methodes de la didactique [Foundations and methods of didactics]. *Recherches en Didactique des Mathematiques*, *7* (2), 33-115.

Charalambous, C. Y., & Pitta-Pantazi, D. (2007). Drawing on a theoretical model to study students' understandings of fractions. *Educational Studies in Mathematics*, *64*(3), 293–316. https://doi.org/doi:10.1007/s10649-006-9036-2

Chevallard, Y. (1985). *La transpotion didactique du savoir savant au savoir enseigné [The didactic transposition of scholarly knowledge to the knowledge taught]*. La Pensée Sauvage.

Chevallard, Y. (1992). A theoretical approach to curricula. *Journal Für Mathematik- Didaktik*, *13*(2–3), 215–230.

Chevallard, Y. (1997). Familière et problématique, la figure du professeur. *Recherches En Didactique Des Mathématiques*, *17*(3), 17–54.

Chevallard, Y. (1999). L'analyse des pratiques enseignantes en théorie anthropologique du didactique. *Recherches En Didactique Des Mathématiques*, *19*(2), 221–266.

Chevallard, Y. (2002). Organiser l'étude. 3. Écologie regulation. In J. D. Dorier, M. Artaud, M. Artigue, R. Berthelot, & R. Floris (Eds.), *Actes de la 11e École d'Été de didactique des mathématiques* (pp. 41–56). La Pensée Sauvage.

Chevallard, Y. (2006). Steps towards a new epistemology in mathematics education. *Paper Presented at the Proceedings of the Fourth Congress of the European Society for Research in Mathematics Education*, Bercelona.

Chevallard, Y. (2015). Teaching mathematics in tomorrow's society: A case for an oncoming counterparadigm. In S. J. Cho (Ed.), *The Proceedings of the 12th International Congress on Mathematical Education: Intellectual and attitudinal challenges* (pp. 173–188). Cham, Switzerland: Springer

Chevallard, Y., Bosch, M., & Kim, S. (2015). What is a theory according to the anthropological theory of the didactic? *CERME 9 - Ninth Congress of*

the European Society for Research in Mathematics Education (pp. 2614–2620), Prague: Charles University and ERME.

Chinnappan, M., & Desplat, B. (2012). Contextualization of fractions: Teachers' pedagogical and mathematical content knowledge for teaching. *Journal of Science and Mathematics*, *35*(1), 43–59.

Choy, B. H. (2014). Teachers' productive mathematical noticing during lesson preparation. In C. Nicol, P. Liljedahl, S. Oesterle, & D. Allan (Eds.), *Proceedings of the Joint Meeting of PME 38 and PME-NA 36 (Vol. 2)* (pp. 297–304). Vancouver, Canada:PME.

Clément, P. (2000). La recherche en didactique de la biologie [Research in the didactics of biology]. In P. Clément, H.-R. Dahmani & F. Khammar (Eds.), Didactique de la biologie. Recherches, innovations, formations (pp. 11-28). Blida, Algérie: Ecole Nationale Supérieure de l'Hydraulique.

Cramer, K., & Whitney, S. (2010). Learning rational number concepts and skills in elementary school classrooms. In D. V Lambdin & F. K. J. Lester (Eds.), *Teaching and learning mathematics: Translating research for elementary school teachers* (pp. 15–22).

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Sage.

Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (3rd ed.). Thousand Oaks: Sage.

Erdoğan, A., Eşmen, E., & Fındık, S. (2016). Ortaokul matematik ders kitaplarında matematik tarihinin yeri: Ekolojik bir analiz. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, *42*(42), 239–259. https://doi.org/https://doi.org/10.15285/ebd.67242

Ergene, T., & Yıldırım, İ. (2004). Üniversite adaylarınındepresyon düzeyleri. *Psikiyatri Psikoloji VePsikofarmakoloji Dergisi*, *12*(2), 91–100.

Gabriel, F. (2016). Understanding magnitudes to understand fractions. *Australian Primary Mathematics Classroom*, *21*(2), 36-40.

Gökkurt, B., Soylu, Y., & Demir, Ö. (2015). Examining the opinions of secondary mathematics teachers on teaching fractions. *Necatibey Eğitim Fakültesi Elektronik Fen ve Matematik Eğitimi Dergisi*, *9*(2), 230–251.

Gunawan, M. S., Putri, R. I. I., & Zulkardi, M. (2017). Learning fractions through swimming context for elementary school students. *Advances in Social Science, Education and Humanities Research 100*, 61–65. https://doi.org/doi:10.2991/seadric- 17.2017.14

Günay, O., Öncel, Ü. N., Erdağan, Ü., Güneri, E., Tendoğan, M., Uğur, A., & Başaran, O. U. (2008). Lise son sınıf öğrencilerinde durumluluk ve sürekli anksiyete düzeyini etkileyen faktörler. *Sağlık Bilimleri Dergisi*, *17*(2), 77–85.

Hackenberg, A. J., Creager, M., Eker, A., & Lee, M. L. (2016). Understanding how to differentiate instruction for middle school students. *Paper Presented at the Annual Research Conference of the National Council of Teachers of Mathematics, San Francisco, CA*.

Hannich, L. (2009). Why are fractions so important. *International Learning Coorporation*. Available: https://www.svsd.“net/cms/lib/PA01001234/Centricity/Domain/1/theparentpage/articles2/161.pdf.

Isiksal, M., & Cakiroglu, E. (2011). The nature of prospective mathematics teachers' pedagogical content knowledge: the case of multiplication of fraction. *Journal Mathematics Teacher Education*, *14*, 213-230.

Kara, F., & Incikabi, L. (2018). Sixth grade students' skills of using multiple representations in addition and subtraction operations in fractions. *International Electronic Journal of Elementary Education*, *10*(4), 463–474. https://doi.org/doi:10.26822/iejee.2018438137.

Karaağaç, M. K., & Köse, L. (2015). Öğretmen ve öğretmen adaylarının öğrencilerin kesirler konusundaki kavram yanılgıları ile ilgili bilgilerinin incelenmesi [Examination of pre-service and in-service teachers 'knowledge of students' misconceptions on the topic of fractions]. *Sakarya Üniversitesi Eğitim Fakültesi Dergisi*, *30*, 72–92.

Leung, I. K. C., & Carbone, R. E. (2013). Pre-service teachers' knowledge about fraction division reflected through problem posing. *The Mathematics Educator, 14*, 80-92.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills: Sage.

Luo, F. (2009). Evaluating the effectiveness and insights of pre-service elementary teachers' abilities to construct word problems for fraction multiplication. *Journal of Mathematics Education*, *2*(1), 83-98.

Martinson, K., & O'Brien, C. (2015). Conducting case studies. In K. E. Newcomer, H. P. Hatry, & J. S. Wholey (Eds.), *Handbook of practical program evaluation* (pp. 177–196). Jossey-Bass, A Wiley imprint. https://doi.org/10.1002/9781119171386.ch8

Merriam, S. B. (2013). Nitel vaka çalışması (Çev: E. Karadağ). In S. Turan (Ed.), *Nitel araştırma desen ve uygulama için bir rehber* (3rd ed.). Nobel Akademik Yayıncılık.

Moore, R. C. (1994). Making the transition to formal proof. *Educational Studies in Mathematics*, *27*(3), 249–266.

National Assessment of Educational Progress [NAEP]. (2007). *Nations report card: Mathematics*. http://nces.ed.gov

Ni, Y., & Zhou, Y. D. (2005). Teaching and learning fraction and rational numbers: The origins and implications ofwhole number bias. *Educational Psychologist*, *40*(1), 27–52. https://doi.org/doi:10.1207/s15326985ep40013

NMAP. (2008). *Foundations for success: The final report of the National Mathematics Advisory Panel*.

Novillis-Larson, C. (1980). Locating proper fractions. *School Science and Mathematics*, *53*(5), 423–428.

Østergaard, K. (2013). Theory and practice in mathematics teacher education. *Paper Presented at the IVe Congrès International Sur La TAD*, Toulouse.

Paun, E. (2006). Transposition didactique : un processus de construction du savoir scolaire. *Carrefours de l'Education*, *22*(2), 3–13. https://doi.org/ https://doi.org/10.3917/cdle.022.0003

Rahayu, C., Putri, R. I. I., & Zulkardi, M. (2017). Multiplication of fraction with natural number by using hurdles. *Advances in Social Science, Education and Humanities Research 100*, 43–47. https://doi.org/doi:10.2991/ seadric-17.2017.10

Rajoson, L. (1988). L'analyse écologique des conditions et des contraintes dans l'étude des phénomènes de transposition didactique: trois études de cas. *Universite d'Aix- Marseille II, Faculte Des Sciences de Luminy*.

Robert, A., Lattuati, M., & Penninckx, J. (1999). *L'enseignement des mathématiques au lycée: un point de vue didactique*. Ellipses.

Rogers, P. J., & Goodrick, D. (2015). Qualitative data analysis. In *Handbook of practical program evaluation* (pp. 429–453). John Wiley & Sons.

Schneider, M., & Siegler, R. S. (2010). Representations of the magnitudes of fractions. *Journal of Experimental Psychology. Human Perception and Performance*, *36*(5), 1227–1238. https://doi.org/10.1037/a0018170

Siegler, R. S., Duncan, G. J., Davis-Kean, P. E., Duckworth, K., Claessens, A., & Engel, M. (2012). Early predictors of high school mathematics achievement. *Psychological Science*, *23*(7), 691–697. https://doi. org/10.1177/0956797612440101

Siegler, R. S., & Lortie-Forgues, H. (2015). Conceptual knowledge of fraction arithmetic. *Journal of Educational Psychology*, *107*(3), 909–918. https://doi.org/doi:10.1037/edu0000025.

Siegler, R. S., Thompson, C. A., & Schneider, M. (2011). An integrated theory of whole number and fractions development. *Cognitive Psychology*, *62*(4), 273–296. https://doi.org/10.1016/j.cogpsych.2011.03.001

Tavignot, P. (1995). À propos de la transposition didactique en didactique des mathématiques. *Spirale–Revue de Recherches En Éducation*, *15*, 31–60.

Temur Doğan, Ö. (2011). Dördüncü ve beşinci sınıf öğretmenlerinin kesir öğretimine ilişkin görüşleri: fenomenografik araştırma [Opinions of teachers of fourth and fifth grade about teaching fractions: A phenomenograhic research]. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, *29*, 203–212.

Tunç-Pekkan, Z. (2015). An analysis of elementary school children's fractional knowledge depicted with circle, rectangle, and number line representations. *Educational Studies in Mathematics*, *89*(3), 419–441. https://doi.org/10.1007/s10649-015-9606-2

Ubah, I. J. A., & Bansilal, S. (2018). Pre-service primary mathematics teachers' understanding of fractions: An action–process–object–schema perspective. *South African Journal of Childhood Education*, *8*(2), 1–12. https://files.eric.ed.gov/fulltext/EJ1198847.pdf%0A

Ulusoy, B. (2020). 8. Sınıf öğrencilerinin liselere geçiş sınavı'na (LGS) ilişkin algılarının metaforlar aracılığıyla incelenmesi. *Necmettin Erbakan Üniversitesi Ereğli Eğitim Fakültesi Dergisi*, *2*(2), 186–202.

Vamvakoussi, X., & Vosniadou, S. (2010). Howmany decimals are there between two fractions? Aspects of secondary school students' reasoning about rational numbers and their notation. *Cognition and Instruction*, *28*(2), 181–209.

Van de Walle, J. A., Karp, K. S., & Williams, J. M. B. (2010). *Elementary and middle school mathematics. Teaching development* (7th ed.). Pearson.

Wyberg, T., Whitney, S. R., Cramer, K. A., Monson, D. S., & Leavitt, S. (2012). Unfolding fraction multiplication. *Mathematics Teaching in the Middle School*, *17*(5), 288–294. https://doi.org/doi:10.5951/mathteacmiddscho.17.5.0288.

Yang, D. C., & Tsai, Y. F. (2010). Promoting sixth graders' number sense and learning attitudes via technology-based environment. *Journal of Educational Technology & Society*, *13*(4), 112–125.

Yin, R. K. (2015). *Qualitative research from start to finish* (2nd ed.). Guilford publications.

THE ROLE OF MEDIA AND DIGITAL LEARNING TOOLS IN EDUCATION

Mücahid TAŞPINAR

(Graduate Student), Necmettin Erbakan University,
Department of Basic Education
E-mail: mucahidtaspinar@gmail.com
ORCID:0009-0006-1065-2231

1. Introduction

Educational technology is a discipline based on applied scientific research and data, where theory and practice converge, continuously evolving educational activities. It coordinates human-machine interactions, personnel, and the use of instructional materials during the organization of learning-teaching activities aimed at achieving more enduring and effective learning. It dominantly controls environmental stimuli with dynamic sensitivity inherent in its structure (Alkan, 1994, s. 340). Educational technology is a complex and interconnected process that involves individuals, strategies, ideas, tools, and coordination in examiningevents and addressing issues related to learning.

At this point, there abound some studies about technology integration to the education especially in preschool settings (Kabadayı, 2001; Kabadayı, 2002; Kabadayı, 2005; Kabadayı, 2006a; Kabadayı, 2006b; Demir & Kabadayı, 2008; Kabadayı, 2019; Kabadayı & Doğan Kirişçigil, 2021).

Considering education as an integral part of instruction, instructional technology can be defined as follows: It is a complex and integrated process that ensures the coordination of human, methodological, conceptual, and instrumental elements by conducting solution-oriented analyses in problems related to the development of methods and materials for effectively utilizing learning situations in controlled studies aimed at enhancing the sustainability and effectiveness of teaching activities for enduring and efficient learning (Ergin,

1991, s. 372). Based on these definitions and statements, a comprehensive interpretation of the tools and resources utilized for achieving more effective learning in educational technology can be elucidated. Educational technology, with its rapidly changing and evolving nature, holds an indispensable value in the contemporary understanding of education, contributing significantly to the coordinated operation of all materials, methods, and theories employed for enhancing the effectiveness of instructional activities. As such, it plays a vital role in the ever-evolving landscape of education, representing an essential asset for modern educational practices

2. Media

The media serves as a platform that caters to various needs of individuals, including information acquisition, communication, and entertainment. However, in contemporary times, media organizations have evolved into large-scale commercial entities, forming massive conglomerates known as communication holdings through activities such as mergers and acquisitions.

These holdings, by engaging with international and diverse media industries, wield significant economic and symbolic power concerning information and content production, as well as global distribution.

Media not only facilitates the flow of information and entertainment but also operates under the control and management of large-scale corporations. Communication holdings, by encompassing different branches of media, facilitate not only the production of information and content but also their dissemination on a global scale. This phenomenon leads to their becoming significant influencers in the flow of information and symbolic content on a large scale (Akt.Avşar, 2013, s. 6).The media, strengthened by the rapid dissemination of communication technologies, has established a powerful sphere of influence by transforming individuals' lifestyles, entertain ment preferences, and cultural values. Possessing both political and societal directing capabilities, the media also holds critical attributes such as informing and educating the public. For instance, the mass movements known as the Arab Spring vividly demonstrated the power of communication tools. Through the media, these movements brought the struggles of Arab peoples for democracy, freedom, and human rights to the global agenda. However, despite the media's influential role, it is essential for individuals not to remain passive consumers but to approach media products with a critical perspective. The concept of 'media literacy' gains significance in this regard. Media literacy empowers individuals to be conscious consumers of media content, encouraging them to

move away from passivity and consume media more actively and consciously. It is imperative for individuals to adopt an active approach towards media products, question their contents, and develop skills to understand various media formats (Avşar, 2013, s. 6).

3. The Benefits of Media in Education for Individuals

When considering the primary opportunities and benefits created by educational technology and media as emerging disciplines, areas of inquiry, and novel methods and approaches in education, it is evident that:

1— Equal opportunity,
2— Mass education,
3— Individualized education,
4— Enriching educational experiences,
5— High quality,
6— Economy,
7— Elimination of time and space constraints,
8— Increased utilization of existing human and material resources
9— Creativity,
10— Access to primary sources of information,
11— Reproducible and scalable systems,
12— Acceleration of learning pace,

However, despite all these positive aspects, it should not be forgotten that the negative impacts of media usage in technology and education on instruction necessitate the exploration of solutions (Alkan, 1994, s. 343).

3.1. Equal Opportunity

Education forms the cornerstone of equal opportunity, with media and digital learning tools playing a significant role in this domain. These tools can enhance access to education and equality for disadvantaged groups of students, thereby promoting equal opportunities.

3.2. Mass Education

The media contributes significantly to mass education by providing information and content to wide audiences through its power to reach them. Through platforms such as television, the internet, and newspapers, it enhances people's knowledge through educational programs, documentaries, and news.

These tools offer education in various fields such as language learning, cultural awareness, history, and science, thereby raising the overall awareness level of students and society. Additionally, the media creates awareness about societal issues, reaching large audiences with information about social problems and solutions, thereby contributing to social change.

The role of media in education is highly important, as it facilitates access to information and enhances the overall knowledge level of society by providing educational content..

3.3. Individualized Education

The media makes significant contributions to individuals' personal education. Content delivered through the internet, television, podcasts, and other digital platforms allows individuals to learn at their own pace and in their preferred subjects.

Particularly, online educational platforms offer a wide range of content in areas such as language learning, professional development, and hobby acquisition, aiding individuals in enhancing their skills.

Additionally, the media can serve as a guidance resource for personal development; through self-help videos, motivational content, and expert opinions, it facilitates individuals in improving themselves, discovering new interests, and expanding their knowledge base. By supporting individuals' learning processes, the media helps shape their own learning journeys and assists them in expressing themselves better.

3.4. Enriching Educational Experiences

The media enriches educational experiences by adding diversity and depth to learning encounters. Lessons supported by visual and auditory content make learning more comprehensible by rendering abstract concepts tangible. Through documentaries, students can explore various cultures around the world, while science-related videos allow them to delve into complex concepts. Additionally, media introduces interactivity and participation into educational experiences; technologies such as online discussion forums, interactive learning platforms, and virtual reality enable students to experience a more interactive learning environment.

This diversity makes the educational process more engaging by enabling students to find content tailored to their interests and learning styles. Moreover, the media not only delivers information but also enables students to experience their learning processes more effectively, enjoyable, and diversely.

3.5-6. High Quality and Economy,

The contributions of media to the economy and quality of education are quite diverse. Firstly, digital educational tools and online resources are generally more cost-effective and convenient compared to traditional teaching methods. This results in savings in expenses such as textbooks, materials, or physical classroom infrastructure, allowing for repeated use.

Additionally, media tools provide students with time and location independence, enabling distance learning opportunities. This reduces expenses related to travel or accommodation and offers a more comfortable, high-quality educational opportunity. With the transition of educational materials to digital platforms, the same content can be delivered to wider audiences at a lower cost, promoting more efficient resource utilization. Media also supports various teaching methods; instructional videos, interactive applications, and online learning platforms can enhance teaching processes. In this way, media promotes economic efficiency in education by facilitating more efficient resource utilization and reaching wider audiences.

3.7. Elimination of Time and Space Constraints

Media tools make learning flexible by eliminating time and space constraints in education. While traditional teaching methods occur at specific locations and times, media tools allow students to learn from anywhere and at any time they prefer. Media tools such as online learning platforms, e-books, and distance education systems provide students with the opportunity to progress at their own pace.

This personalized learning approach enables the adjustment of the learning process to meet the needs of each student. Additionally, media tools enable students from different geographical regions to access the same resources, democratizing access to information and making educational opportunities more accessible to wider audiences. The flexibility afforded by media tools allows students to balance learning with work, family, or other commitments, while also providing flexibility for teachers and educational institutions to interact with students and deliver content. As a result, media tools make the learning process more accessible, flexible, and customizable, overcoming time and space barriers to extend educational opportunities to wider audiences.

3.8. Increased Utilization of Existing Human and Material Resources

Particularly in education, media tools facilitate reaching wider audiences and effective utilization of resources. In terms of financial resources, media tools

are generally more cost-effective compared to traditional educational methods. Students can access a vast pool of information for free or at a low cost through media tools such as online learning platforms, digital books, or free educational content.

3.9. Creativity

Media significantly contributes to the development of creativity. Particularly, content offered through various platforms helps individuals to develop their ideas, gain new perspectives, and stimulate creative thinking. Media content in visual arts, literature, music, and other creative fields allows individuals to express themselves, convey their emotions, and use their imagination. Additionally, media tools support users' freedom to reinterpret, modify, or create new content.

Digital tools such as video editing and photo manipulation enable individuals to create their own works and share them with wide audiences. Media also encourages collaborative work; interactive environments such as online platforms for exchanging ideas, sharing content, and developing projects together nurture creative thinking. Consequently, media enables individuals to enhance their creativity, express their ideas, and discover new things through various contents, thus facilitating the emergence of a broad creative potential.

3.10. Access to Primary Sources of Information

In traditional education, students typically access information through in-class lectures or textbooks, whereas media tools provide direct access to a vast pool of information. Students can access the expertise of professionals, academics, or competent individuals in their field directly through sources such as the internet, documentaries, podcasts containing expert opinions, or online learning platforms. This affords students the opportunity to experience different perspectives, expertise, and a variety of sources firsthand. Additionally, media provides instant access to current information; obtaining immediate information about current events, new discoveries, or emerging fields makes the educational process more contemporary and dynamic for students. Thus, media tools enrich students' learning experiences by enabling them to access information directly from diverse primary sources and allowing them to view knowledge from a broader perspective.

3.11. Reproducible and Scalable Systems

The use of visual, auditory, and interactive content enhances learning and facilitates rapid assimilation of knowledge. Video lessons, interactive

simulations, online learning platforms, and other media tools enable students to grasp complex concepts more quickly and easily.

These tools not only move learning away from being solely text-based but also allow students to utilize different sensory channels, thus aiding in the retention of information. Additionally, media tools provide students with personalized learning experiences; they can progress at their own pace, have the freedom to review specific topics or advance to more advanced materials. This flexibility not only makes students' learning processes more efficient but also makes the learning experience more enjoyable and engaging.

Consequently, media tools enhance learning speed in education, enabling students to acquire knowledge more quickly and effectively. The impact of media on education is not limited to these aspects. The relationship between digital learning tools and media transforms and expands learning processes. Media provides students with opportunities to access content tailored to their interests and learning styles by offering different learning methods.

Through interactive and visual media tools, students have the opportunity to deepen their learning, develop collaborative skills, and foster original thinking. With digital learning tools, students gain easy access to information, interactive materials, and real-world connected learning experiences, while the diversity and accessibility of media contribute to creating a more effective and participatory atmosphere in education. So, what is the relationship between digitization and education in the digital world?Formun Üstü

4. Digital Transformation

The term "Digitization" is defined as the process of converting analog material into digital format for storage on a computer. Digitization profoundly transforms human existence and daily life. Core concepts such as time, space, identity, communication, consumption, and production are reshaped in conjunction with the digitization process. Portable, fixed, and wearable technologies are increasingly influential across all facets of daily life. These technologies become prominently visible not only in tangible activities but also in social and cognitive endeavors. Networks based on information and communication organize daily life into a structured framework.

The impact of information-based digitization is progressively widespread in various sectors, including government and private sector organizations, home-based work arrangements, healthcare services, education, social services, and the entertainment industry (Karakaş, 2019, s. 54).

5. Digitalization in Education

The 21st century is a period dominated by the trend of digitalization, accompanied by the effects of technology. In the past, challenges such as transportation or access were experienced while conducting business, hindering equal opportunities among individuals of differing socio-economic statuses. However, nowadays, as technology advances, these barriers seem to have been largely overcome, and there is an increased dependency on technology. With the help of digital technologies, tasks become more autonomous, enabling the accomplishment of the same tasks with less labor. While everything used to be done manually in the past, digitalization now offers the opportunity to perform tasks more efficiently and effectively (Bozkurt, 2019, s. 5). Information and communication technologies (ICTs) are among the primary factors that increase the value of information in today's world. The decrease in software costs plays a significant role in the widespread adoption of technology. The qualities that ICTs offer, such as easy storage of large amounts of data, occupying less space, and being reliable, provide compelling reasons for their increased use in education through digital environments and materials.

With the continued advancement of information communication technology, accessing stored information from anywhere in the world and the ability to integrate and analyze large amounts of data enable the generation of new, valuable information that others may not possess.

In today's context, education has evolved into a new era, leaving behind its traditional structure with the innovations brought about by digitization. This transformation also entails a differentiation in the roles and responsibilities of teachers.

Education is no longer confined to the school environment but can extend into homes as well. Digitization expands the concept of space, liberating education from these constraints. While education was previously defined solely by school or university classrooms, it can now take place wherever the individual is situated. Face-to-face education has started to host digital platforms. However, for digital transformation to occur, it must be acknowledged that learning is not limited to school or class time but is a lifelong process.

6. The Digital Learning Tools Used in Education

Today, students and educators increasingly rely on digital learning and teaching tools in their daily lives. Over the past few years, many educators

have focused on preparing future generations by using digital tools in learning and teaching processes to develop the skills required by the digital age of the 21st century (Akt.Atan & Kocasaraç, 2022, s. 3)

"In the current century, the experiences required by the labor market, particularly with the growth of globalization and technology-based economies, differ from those of previous centuries. Many existing education systems fail to adequately prepare learners for the use of technology in all aspects of their educational lives.

Therefore, it is important for the new generation of learners to be aware of and use digital learning and teaching tools in order to succeed in their learning and teaching processes. In this study, widely used learning and teaching tools worldwide, as shown in Figure 1, have been examined." (Atan & Kocasaraç, 2022, s. 3)

7. The Use of Digital Learning and Teaching Tools in Lessons

Digital learning tools have become indispensable teaching aids in education due to the impact of evolving technology, characterized by features such as the ease of processing, storing, and occupying less space for information, along with high reliability and accessibility anytime and anywhere. These tools enable individuals to achieve a more permanent and effective learning experience, possessing the competence and capacity to do so. Digital tools are actively utilized in many educational settings as they appeal to multiple sensory areas simultaneously, including visual, auditory, and emotional, facilitating more efficient learning processes. Below, I have compiled some of these learning and teaching tools for your reference.

7.1. Google Earth

This learning and teaching tool provides an opportunity to explore the world step by step through a virtual globe while also enabling learning. It is possible to view satellite images, maps, terrains, 3D buildings, and more (Google Earth Studio, 2024). This learning and teaching tool is widely known and commonly used in many fields worldwide. From an educational perspective, acquiring information about an unfamiliar location in geography and cartography classes enables students to achieve more lasting learning through the provision of visual materials. Additionally, it allows educators to offer high-value gains at lower temporal and financial costs.

7.2. Google Scholar

This digital tool encompasses conferences conducted in all fields, articles published in journals, research papers, reviews, theses, academic books, preprints, abstracts, technical reports, and similar scientific literature.

Alongside numerous academic resources available on this digital learning platform, it is possible to find studies and research from specialized individuals in the field, as well as from university archives (*Google Akademik Arama İpuçları*, 2024). Google Scholar is actively utilized by academics, students, and researchers, particularly in academic endeavors. It stands as a primary contributor to numerous studies owing to its extensive database.

7.3. Manga High

In the American curriculum, mathematics education is structured according to age groups, delineating topics accordingly. To provide education tailored to these age ranges and to foster a love for mathematics and facilitate lasting learning through games, various activities and applications are offered by this learning tool, which is actively employed by many schools (Magna High, 2024). Thanks to this platform that offers blended mathematics education, mathematics has become more enjoyable, leading to a more enduring learning experience for individuals. Individuals can learn at their own pace and receive immediate feedback related to their learning.

7.4. Padlet

Padlet, an effective media tool used in creating virtual walls, provides an online learning environment by simultaneously granting access to all users through its numerous ready-made backgrounds. It serves as an ideal tool for supporting collaborative work in project-based learning approaches in entrepreneurship classes. Additionally, it can be utilized to engage students actively in the learning and teaching processes. Thus, it can be used in various subjects and stages of lessons (Akt.Atan & Kocasaraç, 2022, s. 6).

7.5. Piktochart

It is an artificial intelligence-powered infographic generator. This application, used to create posters or banners on any topic, aids in creating visuals desired during lesson presentations, thus enhancing learning effectiveness. It is a versatile tool that can be utilized in nearly every subject (*Infographic Maker Trusted By Piktochart*, 2024)

7.6. Poll Everywhere

It is a versatile program that allows for online polls, tests, questionnaires, word clouds, and various other activities. It contains subsections for icebreaker activities and brainstorming sessions (*Poll Everywhere*, 2024). It can be utilized during class to engage students and assess their prior knowledge. Through this tool, students actively participate in the lesson while enjoying the learning process.

ABCya.com it is a web tool that provides educational and instructional games and activities for school-aged children (Aras & Kocasaraç, 2022, s. 119)**.** Although the language used is English, the games offered are quite simple and understandable.

The application includes educational games in mathematics and Turkish, some of which require skill and strategy. With its aspects that require creativity and attention, the application stands out and is actively used by many schools, serving as a useful tool in various lessons.

AnswerGarden, the application serves as an effective tool for collecting brief feedback from students. It can also be referred to as a digital brainstorming application on this site (Aras & Kocasaraç, 2022, s. 120). The tool provided as homework during or after the lesson enables participants to access and express their ideas online from virtually anywhere.

It can be effectively utilized in almost every class where students are expected to have prior knowledge or brainstorm on the topic.

Blendspace, it is a platform where students can create multimedia lessons by accessing it through any internet application (Lin & Hwang, 2019, s. 1011). In online classes created by teachers, learners, guided by codes provided by teachers, engage in a virtual classroom environment, enabling them to achieve lasting and effective learning through increased opportunities and diversity. In these classes, teachers can intervene to change the flow of the lesson, ensuring the dynamism of the classroom. Particularly for educators who adopt education progressing from home lessons to school assignments using the flipped classroom model, it is a highly useful digital learning tool.

ClassDojo, it is an online classroom management application and tool through which teachers can monitor students' actions, make educational activities and classroom events accessible, regulate students' academic skills, and facilitate healthy interaction at home after school (Marouf & Brown, 2021, ss. 441-448). With this feature, the platform, which is seamlessly integrated with modern technology, is effectively utilized for the compensation and continuity of education in situations where face-to-face instruction is not possible. During

the Covid-19 pandemic, its effectiveness and popularity have increased, and this tool is highly useful in facilitating the teaching process across all subjects due to the convenience it provides.

EdPuzzle, it can be described as a virtual classroom environment where teachers and students participate. The platform allows the integration of video, audio, and music, enabling the creation of instructional materials. The prepared videos can be viewed both online and within the virtual classroom.

Content creation is possible for almost every subject. It is a highly useful application as it facilitates easy monitoring of students' progress(*Muğla Sıtkı Koçman Üniversitesi*, 2024)

MobyMax, It is an online learning platform where various tests tailored to the level of each individual can be prepared, fostering interactive engagement. Activities are conducted on a blank board, encompassing exercises aimed at enhancing attention and motivation. It adheres to educational standards, offering activities focused on mathematics skills, literacy, and science (Faber, 2021). Certainly, it is well known that in the evolving world of technology, digital learning tools are not limited to these. Every passing day, and even every passing hour, a new web 0.2 tool is being developed and made available to people, while another application is disappearing due to its failure to keep up with the demands of the age. It is an undeniable fact that widely used tools in education facilitate our work in almost every field.

Following the identification of the current situation, education systems, methods, and learning-teaching tools worldwide should be analyzed in detail, particularly those of countries with successful education systems. Subsequently, the focus should be on the question of "which strategies, methods, techniques, tools, and materials can be effective in our country's education system in the 21st century." Digital learning-teaching tools in line with the requirements of the era should be identified, and these tools should be integrated into the education system. Teachers should be provided with both face-to-face and distance education, and the curricula of education faculties should be updated. Teacher candidates should be equipped with 21st-century methods and techniques relevant to their fields. Finally, the examined digital tools and similar materials should be rapidly adopted by teachers and students. This will enable a transformation in education that is in line with the requirements of the era.

8. Conclusion

In conclusion, the role of media and digital learning tools in education is undeniably transformative, offering boundless opportunities for enhancing

teaching and learning experiences. As we navigate the ever-evolving digital landscape, it is clear that media platforms and digital tools have the potential to revolutionize education by fostering engagement, personalization, and collaboration among learners. However, to fully harness the benefits of these technologies, it is essential for educators to approach their integration thoughtfully, with a focus on pedagogical goals, digital citizenship, and equitable access. By embracing innovation and adapting to emerging technologies, educators can empower students to thrive in an increasingly interconnected and digitized world, equipping them with the skills and knowledge needed to succeed in the 21st century.

References

Alkan, C. (1994). Eğitim teknolojisi. *Ankara Universitesi Egitim Bilimleri Fakultesi Dergisi*, 339-344. https://doi.org/10.1501/Egifak_0000000403

Aras, K. S., & Kocasaraç, H. (2022). Eğitimin Dijital Boyutunda Öğrenme-Öğretme Araçları. *Uluslararası Karamanoğlu Mehmetbey Eğitim Araştırmaları Dergisi*, *4*(2), 117-134. https://doi.org/10.47770/ukmead.1120930

Atan, F., & Kocasaraç, H. (2022). *Dijital Öğrenme-Öğretme Araçları*. *6*(2), 1-17.

Avşar, Z. (2013). *Medya Okuryazarlığı*. *2*, 6-17.

Bozkurt, A. (2019). *Türkiye' De E-Devlet Uygulamaları Ve Dijitalleşme*. Hatay Mustafa Kemal ÜniversiteSİ Fen Bilimleri Enstitüsü.

Demir, N., & Kabadayı, A. (2008). Erken yaşta renk kavramının kazandırılmasın bilgisayar destekli ve geleneksel öğretim yöntemlerinin karşılaştırılması. Uluslararası İnsan Bilimleri Dergisi, 5(1), 1-18.

Ergin, A. (1991). Eğitim teknolojisinin kısa tarihçesi. *Ankara Universitesi Egitim Bilimleri Fakultesi Dergisi*, 001-015. https://doi.org/10.1501/Egifak_0000000686

Faber, B. (2021). *Action Research Project: Using MobyMax to Increase Student's Fact Fluency*.

Google Akademik Arama İpuçları. (2024). https://web.archive.org/web/20160923214505/https://scholar.google.com/intl/us/scholar/help.html#coverage

Google Earth Studio. (2024). *FAQ*. Google Earth Studio. https://www.google.com/intl/tr/earth/studio/faq/

Infographic Maker Trusted By Piktochart. (2024). Piktochart. https://piktochart.com/

Kabadayı, A. (2001). İlköğretim öğrencilere yabancı dil öğretiminde teknolojik araçların daha etkin biçimde kullanılması yöntemleri ve öneriler. Language Journal, 100, 40-50.

Kabadayı, A. (2002). Bebeğin, duyumotor, dil ve zihinsel gelişiminde çevre ve yetişkinin rolü ve önemi. Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, (8), 215-234.

Kabadayı, A. (2005). A suggested computer-based model for using Nasreddin Hodja's anecdotes in preschool education. Journal of Human Sciences, 2(2).

Kabadayı (2006a) Analysing the types of TV programmes viewed by children from different   socio-economic strata based on their self-report in the Turkish context, Educational Media International, 43:2, 147-164, DOI: 10.1080/09523980600641189

Kabadayı, A. (2006b). Analyzing pre-school student teachers' and their cooperating teachers' attitudes towards the use of educational technology. Turkish Online Journal of Educational Technology-TOJET, 5(4), 3-10.

Kabadayı, A. (2019). Contributions of the Fairy Tales to the Children on the Basis of the Teachers" Views. American Journal of Education and Learning, 4(2): 222-233

Kabadayı, A., & Doğan Kirişçigil, F. (2021). Comparison of the humanistic a technological (e-book) methods ın teachıng the faıry tales to the preschoolers. International Journal of Quality in Education, 5(1), 76-91.

Karakaş, Y. (2019). *Dijitalleşmenin Modern Gündelik Hayata Yansımaları ve Hikikomori Örneği*.

Lin, H.-C., & Hwang, G.-J. (2019). Research trends of flipped classroom studies for medical courses: A review of journal publications from 2008 to 2017 based on the technology-enhanced learning model. *Interactive Learning Environments*, *27*(8), 1011-1027. https://doi.org/10.1080/10494820.2018.1467462

Magna High. (2024). *Magna High*. https://www.mangahigh.com/en/

Marouf, R., & Brown, J. (2021). *A Review on the Contribution of ClassDojo as Point System Gamification in Education* (ss. 441-448). https://doi.org/10.1007/978-3-030-89394-1_37

Muğla Sıtkı Koçman Üniversitesi. (2024). http://www.mu.edu.tr

Poll Everywhere. (2024). https://www.polleverywhere.com

SUPERVISEES' DISCLOSURE IN CLINICAL SUPERVISION[1]

Betül MEYDAN[1] & Aslıhan KAHRAMAN[2]

[1](Assoc. Prof.), Ege University Faculty of Education
Department of Educational Sciences
Guidance and Counseling Division
E-mail: betul.meydan@ege.edu.tr
ORCID: 0000-0002-9978-6255

[2](Counselor), Ege University Institute of Educational Sciences
Guidance and Counseling Division
E-mail: asliihankahraman24@gmail.com
ORCID: 0009-0003-5819-2033

1. Introduction

Supervision is a variety of interventions provided by an experienced member of a professional group to a less experienced colleague (Bernard & Goodyear, 2019). At this point, supervision constitutes the most important part of counselor education to contribute to the professional and personal development of counselor trainees (Pisani, 2005). According to studies (e.g. Knox, 2015; Ladany, Hill, Corbett, & Null, 1996; Mehr, Ladany, & Caskie, 2010; Yourman & Farber, 1996), one of the most important factors determining the quality of the supervision process is the supervisee and supervisor disclosure in clinical supervision. Disclosure of both the supervisor and the supervisee is very important for an effective supervision process within a strong supervision relationship (e.g. Clevinger, Albert, & Raiche, 2019; Knox, Edwards, Hess, & Hill, 2011; Ladany et al., 1996; Mehr, Ladany, & Caskie, 2010). Therefore, it

---

is stated that self-disclosure is at the center of the supervision process (Knox, 2015; Ladany et al., 1996; Pisani, 2005).

In the literature (e.g. Clevinger et al., 2019; Davidson, 2011; Knox, Edwards, Hess, & Hill, 2011; Ladany & Lehrman-Waterman, 1999), there are various studies on supervisor self-disclosure as a supervisor intervention. At the same time, there are various studies on the subjects on which the supervisees disclose themselves (e.g. Hess et al., 2008; Knox, 2015; Ladany et al., 1996; Mehr et al., 2015 Pisani, 2005; Sweeney & Creaner, 2014), which factors are effective in the supervisee disclosure (e.g. Gunn & Pistole, 2012; Knox, 2015; Ladany, Mori, & Mehr, 2013; Mehr et al, 2015; Pisani, 2005; Spence et al., 2014; Sweeney & Creaner, 2014; Yourman, 2003), and the effects of the supervisee disclosure (e.g. Hess et al., 2008; Hess-Holden, 2019; Ladany et al., 1996; Sweeney & Creaner, 2014).

In the supervision literature in Turkey, although studies on supervision have increased in recent years (e.g. Aladağ, 2014; Meydan, 2019; Meydan & Koçyiğit-Özyiğit, 2016; Meydan & Kağnıcı, 2018), there are still a limited number of studies on the supervisee disclosure (e.g. Meydan, 2020; Meydan & Sağkal, 2023). Accordingly, in this study, firstly, it was explained in which subjects the supervisees disclose themselves and in which subjects they did not disclose themselves. Then, it was emphasized which factors were effective for the supervisee disclosure. At the same time, it was emphasized what the effects of the supervisee disclosure were. Finally, a general framework was presented about the supervisor interventions that facilitate the supervisee disclosure.

2. Topics That the Supervisee Disclosure and Nondisclosure in Clinical Supervision

The supervisee disclosure is very important for effective supervision process, personal and professional development of the supervisee, and learning processes (Hess-Holden, 2019). Therefore, in supervision, the supervisee is expected to share about the supervision process and counseling experiences (Mehr et al., 2010; Pisani, 2005). Disclosure in supervision is defined as the willing and voluntary expression of both the supervisee and the supervisor's personal information about themselves, their feelings, thoughts, opinions, and experiences regarding the supervision and counseling process (Boyle & Kenny, 2020; Knox, 2015; Ladany et al., 1996; Mehr, Ladany, & Caskie, 2015).

According to Ladany et al. (1996), supervisees disclose themselves in a limited way because they want to leave a positive impression on their supervisors. The results of the studies on the topics on which supervises disclose themselves

support this view. For example, according to the study conducted by Yourman and Farber (1996), supervisees mostly open themselves to their supervisors about the counseling process and their relationship with the client. Similarly, Pisani (2005) reported that supervisees were more likely to share information about their counseling experiences. According to Mehr et al. (2010), supervisees tend to share more about the counseling process and their experiences related to the process with their supervisors. In addition, Meydan (2020) found that first-time supervisees were most likely to open themselves up about their supervision needs (e.g., managing sessions and effective counseling skills). In conclusion, the common finding of the studies is that supervisees tend to share their experiences regarding the counseling process with their supervisor more comfortably.

Supervisees are very careful and selective about what and how much to share to receive positive evaluations and feedback about their professional development and competencies during the supervision process (Sweeney & Creaner, 2014). For this reason, although supervisees often share about their counseling experiences, they tend to consciously hide, distort, and not share most of the information (Yourman & Faber, 1996). The supervisee disclosure in supervision includes any important or unimportant issue that supervisees do not share with their supervisor (Nielson et al., 2009). Ladany et al. (1996) found that 97.2% of the supervisees did not disclose themselves in supervision. In a similar study, Yourman and Farber (1996) found that almost 40% of the supervisees did not disclose themselves to their supervisor. In another study, Mehr et al. (2010) found that 84.3% of the supervisees did not disclose themselves to their supervisor.

Supervisees do not open themselves up about many issues during the supervision process. First, supervisees tend not to share their feelings and thoughts about their supervision experiences (Ladany et al., 1996; Mehr et al., 2010; Pisani, 2005). According to Ladany et al. (1996), supervisees do not share their concerns, anxieties, and dissatisfaction with the supervision process. According to Pisani (2005), supervisees avoid sharing their concerns about the supervision process, their concerns about being evaluated in the process, and their negative feelings and thoughts about the supervision relationship. In the study (Mehr et al., 2010), they found that 37% of the supervisees did not open themselves about their negative feelings about the supervision relationship. According to these studies, sharing feelings and thoughts about supervision experiences is one of the most challenging issues for supervisees. For this reason, some studies (e.g., Hess et al., 2008; Ladany et al., 1996; Pisani, 2005) have sought answers to the question of why supervisees are reluctant to share information about the supervision process with their supervisors. Thus, some

reasons affecting the supervisees' sharing the necessary information about the supervision process with their supervisors were revealed.

First, the indecision of supervisees about how much and on which subject they should open themselves during the supervision process significantly affects their sharing about the process (Hess et al., 2008). At the same time, supervisees tend to hide some information because they want to feel that they are in control during supervision (Ladany et al., 1996). In addition, their personal beliefs that their supervisors will show a punitive and harsh attitude when they share in supervision cause them to avoid opening about their supervision experiences (Pisani, 2005).

Secondly, supervisees tend not to share some of their negative feelings towards their supervisor (Ladany et al., 1996; Mehr et al., 2010; Pisani, 2005; Sweeney & Creaner, 2014). Ladany et al. (1996) found that 90% of the supervisees did not express their negative feelings about their supervisor during the supervision process. Similarly, Mehr et al. (2010) found that 24% of the supervisees did not share their negative feelings towards their supervisor. According to some studies (Ladany et al., 1996; Pisani, 2005; Sweeney & Creaner, 2014), one of the feelings that supervisees avoid revealing themselves in supervision is the sexual attraction they feel towards their supervisor. Ladany et al. (1996) stated that the main reason why supervisees do not disclose this issue to their supervisors is that the supervisees see it as an unimportant issue that may harm the counseling process. At the same time, according to Sweeney and Creaner (2014), supervisees tend to hide their feelings because they think that talking about their sexual attraction to their supervisor during the supervision process negatively affects their professional identity. Similarly, Ladany et al. (1997) found that almost half of the supervisees were reluctant to disclose themselves because they had concerns that they would not be adequately supported by their supervisors when they shared their sexual attraction and negative feelings towards their supervisors and because they had personal beliefs that this issue was not important enough to require self-disclosure during the supervision process.

Thirdly, supervisees avoid sharing their negative reactions and countertransference elements regarding their clients' behaviors, thoughts, and attitudes with their supervisors (Ladany et al., 1996; Mehr et al., 2010). Ladany et al. (1996) reported that 36% of the supervisees did not share their negative feelings about their clients and 25% did not share their interest in the client during the supervision process. At the same time, Mehr et al. (2010) found that 20% of the supervisees did not share their negative perceptions about the client

with their supervisor. The reason for not sharing negative feelings and thoughts about the client is that the supervisee usually thinks that the supervisor has a different perspective on the client and that the supervisee has some personal beliefs that when the supervisee shares negative feelings, these shares will change the agenda of the supervision (Mehr et al., 2010).

Fourthly, another issue that supervisees are reluctant to share with their supervisors during the supervision process is the mistakes they make regarding the intervention techniques and skills in counseling sessions (Yourman & Faber, 1996). According to the study by Ladany et al. (1996), 44% of the supervisees and according to the study by Mehr et al. (2010), 10% of the supervisees do not disclose themselves to their supervisor about a mistake they made in the counseling process. The reasons for not disclosing a mistake made by the supervisee in the counseling process include concerns about appearing professionally competent in front of the supervisor (Mehr et al., 2010), doubts about the theoretical knowledge and skills of the supervisee (Nielson et al., 2009), personal beliefs that the supervisor is not competent (Ladany et al., 1996), and the difficulty of communicating the counseling process to the supervisor (Knox, 2015).

Finally, supervisees do not open themselves to their supervisors about some of their personal problems (e.g. perfectionism, romantic relationships) (Ladany et al., 1996; Mehr et al., 2010). Ladany et al. (1996) found that 60% of the supervisees did not share their personal problems with their supervisors. Similarly, Mehr et al. (2010) found that 30% of the supervisees did not disclose their personal problems to their supervisors. Supervisees are reluctant to share their personal problems in supervision because they think that their personal problems are too personal to share in supervision, they consider them irrelevant or unimportant to the supervision process, and they want to avoid possible feelings of shame and embarrassment that they may experience when they share their personal information (Mehr et al., 2010; Reichelt et al., 2009; Sweeney & Creaner, 2014; Yourman & Farber, 1996).

In summary, supervisees are generally more comfortable sharing information about their counseling experiences with their supervisors. On the other hand, they are reluctant to share information about their supervision experiences, negative feelings about their supervisors, negative feelings about their clients, personal problems and mistakes made in the counseling process. At the same time, they avoid disclosing themselves for various reasons such as not having enough information about how much they should disclose themselves in supervision, thinking that some information is irrelevant and unimportant to the supervision process, fearing the possible negative effects of

self-disclosure, and personal beliefs that it will harm the supervision process and their professionalism. It is very important to know on which topics the supervisees do or do not open themselves, to be aware of the reasons that prevent them from opening themselves and to understand on which topics and why the supervisees do not open themselves to contribute to the development of an effective supervision process.

3. Factors Affecting the Supervisee Disclosure in Supervision

According to many studies on the supervisee disclosure; supervisory working alliance (Ladany et al., 1996; Ladany et al., 2013; Mehr et al., 2015; Spence et al., 2014; Yourman, 2003; Walsh, Gillespie, Greer, & Eanes, 2003), supervision relationship (Gunn & Pistole, 2012; Knox, 2015; Pisani, 2005; Sweeney & Creaner, 2014), supervisory satisfaction (Hess et al, 2008; Ladany et al., 1996; Meydan & Sağkal, 2023), supervisor styles (Ladany et al., 1996; Ladany et al., 2013; Li, 2019; Walsh et al., 2003), and counseling self-efficacy (Mehr et al., 2015; Hess-Holden, 2019) are among the factors affecting the supervisee disclosure.

According to studies (e.g. Ladany et al., 1996; Ladany et al., 2013; Mehr et al., 2015; Spence et al., 2014; Yourman, 2003; Walsh et al., 2003), supervisory working alliance is the most important factor that directly affects the level of the supervisee disclosure. Supervisory working alliance is the most fundamental element that ensures the establishment and development of the relationship between the supervisor and the supervisee and the continuity of the supervision relationship (Bordin, 1983). According to Bordin (1983), supervisory working alliance is a collaborative relationship between the supervisor and the supervisee in the supervision process in which there is mutual understanding, common tasks, and a strong bond that includes feelings of trust and caring. Accordingly, when a working environment is developed in which mutual goals and responsibilities are determined, a strong bond is established, supervisees tend to open themselves more because they feel themselves in a safer supervision environment (Ladany et al., 1996). Studies on supervisory working alliance and the supervisee disclosure also reveal that a strong working alliance helps the supervisee to share more in supervision (e.g. Gun & Pistole, 2012; Li et al., 2020; Mehr et al., 2015; Walsh et al., 2003). For example, Gunn and Pistole (2012) found that the supervision process in which secure attachment is formed with strong working alliance between the supervisee and his/her supervisor increases the self-disclosure tendencies of the supervisees. Similarly, in another study (Walsh et al., 2003), it was concluded that the strong working alliance developed in the

supervision process contributed to the counseling and supervision experiences of the supervisees and their disclosure about the mistakes made in the counseling process. According to these findings, it is possible to say that the supervisory working alliance developed with a strong bond and sense of trust between the supervisee and the supervisor in the supervision process helps the supervisees to express themselves more comfortably.

Another important factor affecting the supervisee disclosure is the supervision relationship (Gunn & Pistole, 2012; Knox, 2015; Pisani, 2005; Sweeney & Creaner, 2014). The supervision relationship starts from the first contact/meeting between the supervisee and the supervisor, and the quality of the relationship is of great importance for meeting supervision needs (Grant, 1999). At this point, the quality of the supervision relationship can facilitate or hinder the willingness of the supervisees to open themselves (Sweeney & Creaner, 2014). For example, according to the study by Gray, Ladany, Walker, and Ancis (2001), supervisees tend to disclose less when they think that there is a weak relationship between them and their supervisor in supervision. Therefore, a strong supervision relationship also helps the supervisee to open more comfortably in supervision (Gunn & Pistole, 2012). In another study (Sweeney & Creaner, 2014), it was concluded that the quality of the supervision relationship strongly influenced self-disclosure. According to this study, supervisees who experienced a positive supervision relationship stated that they felt freer while sharing, while those who had a negative supervision relationship reported that the negative supervision relationship prevented them from sharing enough about themselves.

Furthermore, supervisor styles are another important factor affecting the supervisee disclosure (Ladany et al., 1996; Ladany et al., 2013; Li, 2019). In a study (Walsh et al., 2003), 87% of the supervisees reported that supervisor styles were effective in sharing the mistakes made during the counseling process with their supervisors. According to this statement, supervision styles and supervisees' disclosure are very important factors. According to Friendlander and Ward (1984), supervisor style is the unique characteristics of the supervisor in approaching the supervisee, giving feedback, and managing the supervision process. According to this definition, supervisor styles are classified into three types: attractive (e.g. open, flexible, warm, supportive), interpersonally sensitive (e.g. intuitive, relationship-oriented) and task-oriented (e.g. concrete, prescriptive, comprehensive) (Friendlander & Ward, 1984). According to various studies examining the effect of supervisor styles on the supervisee disclosure, all three supervisor styles are very important for disclosure (e.g. Ladany et

al., 1996; Ladany et al., 2013; Li, 2019). According to Ladany et al. (1996), if the supervisor is not affirming and supportive, insensitive, and unresponsive to interpersonal relationships, and does not structure the supervision process comprehensively, supervisees tend to be reluctant to share in supervision. In a similar study, Ladany and colleagues (2013) stated that a supervisor who balances attractive, interpersonally sensitive, and task-oriented supervisor styles may be more effective for the supervisee disclosure. For example, Li (2019) examined the effects of supervisor style and working alliance on the supervisee disclosure and found that all supervisor styles (attractive, interpersonally sensitive, and task-oriented) contributed to a strong working alliance and thus helped the supervisee to disclose.

Supervision satisfaction is another very important factor in the supervisee disclosure (Hess et al., 2008; Ladany et al., 1996; Meydan & Sağkal, 2023). Supervision satisfaction refers to the supervisee's reaction to the personal characteristics and performance perceived by their supervisors, their judgment of their own behavior in supervision, and their comfort level in expressing their own ideas in supervision (Ladany, 1992). According to Ladany and colleagues (1996), supervisees tend to disclose themselves less when they have a low level of satisfaction with the supervision process. At this point, supervisees whose supervision needs are not met and who are not satisfied with the process have more difficulties in dealing with difficult client problems (Ladany et al., 1996). According to another statement, when the supervisee is highly satisfied with the supervision process, he/she tends to open himself/herself more. For example, Meydan and Sağkal (2023) found that supervisee self-disclosure has a mediating role between supervisory working alliance and supervision satisfaction. According to this statement, the supervisee's sharing in the supervision process helps to have a strong supervisory working alliance and increase satisfaction with supervision.

Finally, according to some studies (e.g. Mehr et al., 2015; Hess-Holden, 2019), counseling self-efficacy is also considered as an important factor affecting the supervisee disclosure in supervision. According to Bandura (1978), self-efficacy is feeling confident and competent about one's behaviors towards a goal. Counseling self-efficacy is defined as the ability of counselor trainees to conduct counseling sessions effectively with their clients, to use counseling skills, to cope with challenging client skills, to be aware of their own values and prejudices, to improve themselves in professional matters and to be confident (Larson et al., 1992). Mehr et al. (2015) found that counseling self-efficacy indirectly helps the supervisee to alleviate the anxiety of the supervisee

regarding the process and helps the supervisee to open herself/himself. At the same time, in another study (Hess-Holden, 2019) examining the extent to which supervisory working alliance, supervisor style and supervisee's self-efficacy level predict the supervisee disclosure, it was concluded that supervisee self-efficacy significantly predicted supervisee disclosure to their supervisors.

In conclusion, according to the studies, supervisory working alliance, supervision relationship, supervision satisfaction, supervisor styles and self-efficacy are the most important factors affecting the supervisee disclosure in supervision. Supervisory working alliance is the most influential factor in the supervisee disclosure in supervision. According to this statement, the strong supervisory working alliance helps the supervisee to share in supervision. At the same time, the qualified supervision relationship and the supervisee's satisfaction with the supervision positively affect the supervisee's sharing in supervision. The balance among attractive, interpersonally sensitive, and task-oriented supervisor styles is also a factor that facilitates the supervisee disclosure in supervision. In addition to this, the self-efficacy of the supervisee is another important factor that helps the supervisee to feel less anxiety about supervision and to feel more helpful in supervision.

4. Effects of the Supervisee Disclosure in Supervision

The supervisee disclosure in supervision has some important consequences. According to the studies, the supervisee disclosure has some consequences on the supervision process (Ladany et al., 1996; Ladany et al., 1997; Spence et al., 2014; Sweeney & Creaner, 2014) and the supervisee (Hess et al., 2008; Hess-Holden, 2019; Ladany et al., 1996; Sweeney & Creaner, 2014) and the counseling process (Hess et al., 2008; Knox, 2015; Yourman & Farber, 1996).

First, the supervisee disclosure has important effects on the supervision relationship. Some studies (e.g. Ladany et al., 1997; Spence et al., 2014) indicated that the supervisee disclosure during the supervision process strengthens the supervision relationship. For example, in the study, Ladany et al. (1997) found that self-disclosure strengthened the supervision relationship positively because some supervisees felt understood and supported because of the reactions of their supervisors when they shared the sexual attraction they felt to their clients in supervision. In another study, Spence et al. (2014) stated that because of the self-disclosure of the supervisees during the supervision process, they developed a positive supervision relationship with their supervisors by developing a sense of trust and that this positive relationship helped to deepen the sharing of self-disclosures in supervision. At the same time, Meydan (2020) found that first

time supervisees were satisfied with the supervision process when they shared in supervision. Accordingly, because of the supervisee disclosure, the relationship with the supervisor is strengthened and the satisfaction with the supervision increases.

At the same time, the supervisee disclosure in supervision has some effects on the supervisee (Hess et al., 2008; Ladany et al., 1996; Sweeney & Creaner, 2014; Yourman & Farber, 1996). According to Sweeney and Creaner (2014), when supervisees open themselves sufficiently during the supervision process, they develop themselves better professionally. In other words, according to Ladany et al. (1996), when the supervisee does not open himself/ herself sufficiently in the supervision, it becomes difficult for the supervisor to predict which subjects the supervisee needs to improve and learn. Therefore, when supervisees do not share enough in supervision, they are exposed to less of the learning processes required for professional development (Yourman & Farber, 1996). At this point, it is possible to say that the supervisee disclosure in supervision contributes positively to their professional development and learning processes of intervention techniques and skills used in the counseling process. On the other hand, a limited number of studies (e.g. Hess et al., 2008) revealed that supervisees feel some negative feelings because of sharing in supervision. For example, Hess et al. (2008) found that supervisees felt loss of trust, shame, and guilt after they opened themselves to their supervisors. At the same time, supervisees reported that they felt more anxious during the counseling process. As a result, while sharing in supervision has some positive consequences on the supervisee, it may also have some negative consequences on the supervisee.

Finally, the supervisee disclosure in supervision has some effects on the counseling process (Hess et al., 2008; Knox, 2015; Yourman & Farber, 1996). An effective counseling process can be realized to the extent that the supervisee shares a critical event experienced in the counseling process or the interventions and techniques he/she applies with his/her supervisor (Hess et al., 2008; Knox, 2015; Yourman & Farber, 1996). In other words, Knox (2015) stated that when the supervisee does not share with the supervisor an intervention that may jeopardize the supervisee's relationship with the client, it becomes difficult for the supervisee to have information about how to proceed and thus the counseling process and the client's well-being will be jeopardized. At this point, the more the supervisee opens himself/herself to his/her supervisor about the counseling process in supervision, the more he/she can learn about an effective counseling process and the more he/she can help increase the client's well-being in the counseling process (Hess et al., 2008; Knox, 2015; Yourman & Farber, 1996).

5. Supervisor Interventions to Facilitate Supervisee Disclosure in Supervision

It is largely the responsibility of the supervisor to create a supervision environment that will help the supervisee disclosure. For this reason, supervisors need to use some interventions and strategies to facilitate the supervisee disclosure (Hess-Holen, 2019; Knox, 2015; Sweeney & Creaner, 2014). First, supervisors should pay attention to whether the supervisees are open about the feelings, thoughts, and behaviors they share in supervision (Yourman, 2003). Thus, supervisors should develop a supervision environment in which supervision expectations are discussed, a safe and collaborative supervision relationship and high supervisory working alliance (Knox, 2015; Mehr et al., 2015) for supervisees disclosure about the necessary information about themselves.

At the same time, supervisors need to create a discussion environment where anxieties and fears about being evaluated in supervision can be discussed (Yourman & Farber, 1996). This is because supervision is an evaluative process that takes place in a certain period and includes several supervisor interventions aiming to improve the professional competencies of the supervisee (Bernard & Goodyear, 2019). The evaluative feature of supervision prevents supervisees from having intense feelings of anxiety and worry and from opening themselves (Mehr et al., 2010; Sweeney, Creaner, 2014). For this reason, supervisors' emphasizing that the mistakes made during the supervision process are a natural outcome of the learning process alleviates the anxiety of the supervisees and facilitates their self-disclosure (Sweeney & Creaner, 2014). Similarly, Yourman and Farber (1996) state that when the supervisee reports a mistake made by the supervisor in the counseling process, the supervisor clearly emphasizes that the mistake made is an expected, useful, and instructive element in the training process without minimizing the mistake too much, which positively affects the supervisee disclosure in supervision. In addition, the fact that the supervisor is in the position of evaluating the supervisee in the supervision relationship causes a power difference in the relationship. Since the supervisee has less power than the supervisor, he/she is reluctant to open himself/herself. For this reason, supervisors should provide an environment where they can openly discuss the power differential during the supervision process and encourage supervisees to discover and develop their strengths. Furthermore, the supervisor should emphasize the supervisee's strengths to strengthen the supervisee's sense of self-efficacy and help the supervisee discover the areas in which he/she is good at counseling. Thus, it should be emphasized that the supervision process is a suitable environment for discussing all kinds of personal issues that may affect

the supervision process, the relationship, the supervisory working alliance, and the counseling process (Mehr et al., 2010).

One of the supervisor interventions that facilitate the supervisee disclosure is the effective structuring of the supervision process by the supervisor (Mehr et al., 2010). It is very important for supervisors to present the evaluation criteria for the supervision process to the supervisees in a clear framework (Ladany et al., 1996). For example, according to Bernard and Goodyear (2019), before the supervision process begins, an informed consent form in which the main purpose of the supervision is to contribute to the professional development of the supervisee and the information that the personal information shared will be kept confidential clearly helps the supervisee to open. The fact that the supervisor clearly informs the supervisee about the criteria according to which he/she will evaluate the supervisee at the beginning of the process and discusses the evaluation criteria by including the supervisees in the process helps the supervisee to reduce the existing concerns about supervision and to open himself/herself better (Ladany et al., 1996; Mehr et al., 2010). In addition to this, Ladany et al. (1996) emphasize that in supervision, supervisors should teach the supervisees how much they should open up and which topics are important for the supervision process. Thus, when the supervisees have the necessary information about how much they should open themselves, they tend to open themselves more.

Another important intervention that helps the supervisees to open themselves is for the supervisors to show the supervisees that they are open and willing to talk about the issues related to the supervision process to help explain the negative experiences in the supervision process (Mehr et al., 2010; Meydan, 2020; Yourman, 2003). Emphasizing that they are open to feedback and change in the process will help the supervisees to open themselves more easily (Mehr et al., 2010). They should be supported to express their ideas, criticisms, and suggestions about the supervision process (Yourman, 2003). The supervisor should allow the supervisees to think from different perspectives and support the sharing of these differences in the supervision environment. He/she should emphasize that discussing and talking about the differences in the thoughts of the supervisees in a comfortable way contributes positively to the supervision process. Similarly, Meydan (2020) stated that the facilitative attitude of the supervisor towards receiving feedback from the supervisee is a critical step that initiates the supervisees to open themselves.

Finally, according to the studies (e.g. Farber, 2006; Hess et al., 2008; Ladany & Walker, 2003; Ladany et al., 2013; Sweeney & Creaner, 2014), one of the most important supervisor interventions that facilitates the supervisee disclosure is the

supervisor disclosure. The supervisor serves as a role model for the supervisee as both a trainer and an experienced member of the profession (Meydan, 2020). For this reason, the supervisor who uses the self-disclosure strategy in the supervision process also helps the supervisee to learn how to effectively disclose himself/herself (Farber, 2006; Knox, 2015). According to Ladany and Walker (2003), supervisor disclosure under five sub-headings: personal issues, counseling experiences, professional experiences, interventions of the supervisee towards the client, and supervision experiences. The supervisor disclosure helps the supervisee to normalize the difficulties and negative emotions experienced by the supervisee, to create realistic expectations about the supervision process, to learn how to cope with challenging events in the counseling process, and thus facilitates the supervisee disclosure (Farber, 2006; Hess et al., 2008; Ladany & Lehrman-Waterman, 1999; Sweeney & Craner, 2014). For example, according to Ladany and Walker (2003), supervisor disclosure is directly related to supervisory working alliance, supervision process and supervisee disclosure, and supervisor disclosure facilitates supervisee disclosure. According to another study (Knox, Edwards, Hess, & Hill, 2011), because of the supervisor disclosure, supervisees' anxiety decreased, they experienced a strong supervision relationship, and they shared much more information about themselves in supervision. In a similar study, Clevinger et al. (2019) found that the supervisor disclosure facilitated the supervisee disclosure and at the same time contributed to the professional development of the supervisee and contributed to a problem experienced in the counseling process in a healthy way.

As a result, the supervisor should first create a clear, open, safe, and accepting supervision environment where expectations about supervision and concerns about evaluation can be easily expressed. In addition, structuring the supervision with an informed consent form that presents the criteria according to which the supervisee will be evaluated, what the supervisor's expectations are, and the general framework of the supervision process is an effective intervention method that helps the supervisees to reduce their concerns about the process. At the same time, the fact that the supervisor is a role model for the supervisee by opening himself/herself in supervision is the most important supervisor intervention that facilitates the supervisee disclosure.

6. Conclusion

In this study, it was aimed to explain in depth the issues that the supervisee discloses and does not disclose herself/himself in supervision, the factors affecting the supervisee disclosure, the effects of the supervisee disclosure in supervision,

and the supervisor interventions that facilitated the supervisee disclosure. In line with this purpose, the following are suggested to the supervisors:

a) Supervisees tend to open more about their counseling experiences. In addition, they generally do not share their supervision experiences, their feelings and thoughts towards their supervisor and clients, mistakes made in the counseling process and their personal problems during the supervision process. At this point, first, supervisors need to have awareness and detailed information about the topics in which the supervisees open themselves and do not open themselves (Knox, 2015; Ladany et al., 1996; Mehr et al., 2010; Pisani, 2005; Yourman & Farber, 1996).

b) Since supervisees are reluctant to share their positive or negative feelings about the supervision process and their supervisors, the supervisor should create a discussion environment in which the supervisee respects and understands the supervisee's sharing and clearly express his/her willingness to listen to the supervisee's sharing (Knox, 2015; Mehr et al., 2015; Sweeney & Creaner, 2014; Yourman & Farber, 1996).

c) To reduce the feelings of anxiety and uncertainty experienced by supervisees due to the evaluative nature of the supervision process, it is recommended that supervisors structure supervision by clearly presenting their expectations and evaluation criteria in the process (Bernard & Goodyear, 2019; Ladany et al., 1996; Mehr et al., 2010).

d) The most important factors on the supervisee disclosure are the supervisory working alliance and the supervision relationship. It is very important for supervisors to make various interventions to strengthen the working alliance. Therefore, it is recommended that the supervisor should use the self-disclosure intervention especially related to counseling experiences to strengthen the supervisory working alliance (Farber, 2006; Hess et al., 2008; Ladany & Walker, 2003; Ladany et al., 2013; Sweeney & Creaner, 2014).

e) The supervisee disclosure has various consequences on the supervision relationship, the supervisee's professional development and counseling processes. Supervisors should be more sensitive to the possible consequences of self-disclosure, especially since the supervisee disclosure is directly related to learning processes and an effective counseling process that helps the client's well-being (Hess et al., 2008; Hess-Holden, 2019; Ladany et al., 1996; Ladany et al., 1997; Spence et al., 2014; Sweeney & Creaner, 2014).

f) Finally, since there is a limited number of studies on the supervisee disclosure in supervision in Turkey, it is recommended that more qualitative/

quantitative studies should be conducted on the supervisee disclosure (Meydan, 2020; Meydan & Sağkal, 2023).

References

Aladağ, M. (2014). Psikolojik danışman eğitiminin farklı düzeylerinde bireyle psikolojik danışma uygulaması süpervizyonunda kritik olaylar. *Ege Eğitim Dergisi, 15*(2), 428–475. doi:10.12984/eed.74105

Bandura, A. (1978). The self-system inreciprocal determinism. *American Psychologist, 33*(4), 344-358. doi:10.1037/0003-066X.33.4.344

Bernard, J. M. ve Goodyear, R. K. (2019). *Fundamentals of clinical supervision* (6th ed.) MA: Pearson.

Bordin, E. S. (1983). A working alliance-based model of supervision. *The Counseling Psychologist, 11*(1), 35- 42. doi:10.1177/0011000083111007

Boyle, S. L., & Kenny, T. E. (2020). To disclose or not to disclose: Examining supervisor actions related to self-disclosure in supervision. *Journal of Psychotherapy Integration, 30*(1), 36–43. doi:10.1037/int0000181

Clevinger, K., Albert, E., & Raiche, E. (2019). Supervisor self-disclosure: Supervisees' perceptions of positive supervision experiences. *Training and Education in Professional Psychology, 13*(3), 222–226. doi: 10.1037/tep0000236

Davidson, C. (2011). The relation between supervisor self-disclosure and the working alliance among social work students in field placement. *Journal of Teaching in Social Work, 31*(3), 265–277. doi:10.1080/08841233.2011.58 0248

Friedlander, M. L., & Ward, L. G. (1984). Development and validation of the Supervisory Styles Inventory. *Journal of Counseling Psychology, 31*(4), 541–557. doi: 10.1037/00220167.31.4.541

Gunn, J. E., & Pistole, M. C. (2012). Trainee supervisor attachment: Explaining the alliance and disclosure in supervision. *Training and Education in Professional Psychology, 6*(4), 229–237. doi:10.1037/a0030805

Grant, P. (1999). Supervision and racial issues. M. Carroll & E. Holoway. (Ed.) *Counselling supervision in context. In* (s. 7-23). Sage Publications

Gray, L. A., Ladany, N., Walker, J. A., & Ancis, J. R. (2001). Psychotherapy trainees' experience of counterproductive events in supervision. *Journal of Counseling Psychology, 48*(4), 371–383. doi: 10.1037/0022-0167.48.4.371

Hess, S. A., Knox, S., Schultz, J. M., Hill, C. E., Sloan, L., Brandt, S., Kelley, F., & Hoffman, M. A. (2008). Predoctoral interns' nondisclosure in supervision. *Psychotherapy Research, 18*(4), 400–411. doi: 10.1080/10503300701697505

Hess-Holden, C. (2019) Predictors of supervisee self-disclosure within the supervisory relationship, *Journal of Counseling Research and Practice*. *4*(1). 68-85. doi:10.56702/UCKX8598/jcrp0401.5

Knox, S., Edwards, L. M., Hess, S. A., & Hill, C. E. (2011). Supervisor self-disclosure: Supervisees' experiences and perspectives. *Psychotherapy, 48*(4), 336–341. doi:10.1037/a0022067

Knox, S. (2015). Disclosure—and lack thereof—in individual supervision. *The Clinical Supervisor, 34*(2), 151–163. doi:10.1080/0732522 3.2015.1086462

Ladany, N. (1992). *The supervisory working alliance: Its relation to trainee self-efficacy and satisfaction with supervision.* (Unpublished doctoral dissertation). State University of New York

Ladany, N., Hill, C. E., Corbett, M. M., & Nutt, E. A. (1996). Nature, extent, and importance of what psychotherapy trainees do not disclose to their supervisors. *Journal of Counseling Psychology, 43*(1), 10–24. doi: 10.1037/0022-0167.43.1.10

Ladany, N. & Lehrman-Waterman, D. E. (1999). The content and frequency of supervisor self-disclosures and their relationship to supervisor style and the supervisory working alliance. *Counselor Education and Supervision, 38(3).* 143-160. doi:10.1002/j.1556978.1999.tb00567.x

Ladany, N., & Walker, J. A. (2003). Supervision self-disclosure: Balancing the uncontrollable narcissist with the indomitable altruist. *Journal of Clinical Psychology, 59*(5), 611–621. doi:10.1002/jclp.10164

Ladany, N., Mori, Y., & Mehr, K. E. (2013). Effective and ineffective supervision. *The Counseling Psychologist, 41*(1), 28–47.

Larson, L. M., Suzuki, L. A., Gillespie, K. N., Potenza, M. T., Bechtel, M. A., & Toulouse, A. L. (1992). Development and validation of the Counseling Self-Estimate Inventory. *Journal of Counseling Psychology, 39*(1), 105–120. doi:10.1037/0022-0167.39.1.105

Li, C. (2019). *The effects of supervisory style and supervisory working alliance on supervisee disclosure in supervision: A moderated mediation analysis.* (Doctoral dissertation.) Old Dominion University.

Li, C., Kemer, G., & Henson, J. M. (2020). Development and validation of the supervisee disclosure in supervision scale. *Counselor Education and Supervision, 59*(2), 145–159. doi: 10.1002/ceas.12172

Mehr, K. E., Ladany, N., & Caskie, G. I. L. (2010). Trainee nondisclosure in supervision: What are they not telling you? *Counselling & Psychotherapy Research, 10*(2), 103–113. doi:10.1080/14733141003712301

Mehr, K. E., Ladany, N., & Caskie, G. I. L. (2015). Factors influencing trainee willingness to disclose in supervision. *Training and Education in Professional Psychology, 9*(1), 44–51. doi:10.1037/tep0000028

Meydan, B., & Koçyiğit-Özyiğit, M. (2016). Süpervizyon ilişkisi: Psikolojik danışma süpervizyonunda kritik bir öğe. *Ege Eğitim Dergisi, 17*(1), 225-257. doi: 10.12984/eed.74105

Meydan, B. ve Kağnıcı, D. Y. (2018). Çokkültürlü süpervizyon ilişkisinin kurulması. *Türk Psikolojik Danışma ve Rehberlik Dergisi,* 8(51), 2–28.

Meydan, B. (2019). Facilitative and hindering factors regarding the supervisory relationship based on supervisors' and undergraduate supervisees' opinions. *Pegem Education and Training Journal, 9*(1), 171-208. doi:10.14527/pegegog.2019.007

Meydan, B. (2020). Turkish first-time supervisees' disclosure and nondisclosure in clinical supervision. *Qualitative Research in Education*, *9*(1), 1–31. doi: 10.17583/qre.2020.4304

Meydan, B. & Sağkal, A. S. (2023). Unraveling the direct and indirect effects of supervisory working alliance on supervisory satisfaction: The mediating role of supervisee disclosure in supervision. *International Journal of Psychology and Educational Studies, 10*(2), 291-300. doi:10.52380/ijpes.2023.10.2.869

Nielsen, G. H., Skjerve, J., Jacobsen, C. H., Gullestad, S. E., Hansen, B. R., Reichelt, S.,Rønnestad, M. H., & Torgersen, A. M. (2009). Mutual assumptions and facts about nondisclosure among clinical supervisors and students in group supervision: A comparative analysis. *Nordic Psychology, 61*(4), 49-58. doi:10.1027/19012276.61.4.49

Pisani, A. (2005). Talk to me: supervisee disclosure in supervision. *Smith College Studies in Social Work, 75*(1), 29–47. doi:10.1300/J497v75n01_03

Reichelt, S., Gullestad, S. E., Hansen, B. R., Rønnestad, M. H., Torgersen, A. M., Jacobsen, C. H., Nielsen, G. H., & Skjerve, J. (2009). Nondisclosure in psychotherapy group supervision: The supervisee perspective. *Nordic Psychology, 61*(4), 5–27. doi:10.1027/1901-2276.61.4.5

Spence, N., Fox, J. R. E., Golding, L., & Daiches, A. (2014). Supervisee self-disclosure: A clinical psychology perspective. *Clinical Psychology & Psychotherapy*, *21*(2), 178– 192. doi: 10.1002/cpp.1829

Sweeney, J., & Creaner, M. (2014). What's not being said? Recollections of nondisclosure in clinical supervision while in training. *British Journal of Guidance & Counselling, 42*(2), 211–224. doi: 10.1080/03069885.2013.872223

Yourman, D. B., & Farber, B. A. (1996). Nondisclosure and distortion in psychotherapy supervison. *Psychotherapy: Theory, Research, Practice, Training, 33*(4), 567–575. doi:10.1037/0033-3204.33.4.567

Yourman, D. B. (2003). Trainee disclosure in psychotherapy supervision: The impact of shame. *Journal of Clinical Psychology, 59*(5), 601–609. doi: 10.1002/jclp.10162

Walsh, B. B., Gillespie, C. K., Greer, J. M., & Eanes, B. E. (2003). Influence of dyadic mutuality on counselor trainee willingness to self-disclose clinical mistakes to supervisors. *The Clinical Supervisor, 21*(2), 83–98. doi: 10.1300/J001v21n02_06

LEADERSHIP SKILLS AND IT'S IMPACTS ON DEVELOPMENT OF CHILDREN IN EARLY CHILDHOOD PERIOD

Mustafa DAMAR

(Assoc. Prof.), Health Sciences University
E-mail: mustafa.damar@sbu.edu.tr
ORCID: 0000-0002-1435-5975

1. Introduction

Early childhood is the period when the foundations are laid within the scope of developmental areas and many skill areas begin to be acquired. It is an important period with future-oriented reflections for the individual. It is a critical period in which individuals' basic personality traits, values and behaviors are shaped. Preschool period is the In line with scientific developments, the early childhood context is constantly changing and becoming more complex. The preschool period stands as a magical time in a child's life, marked by rapid growth, exploration, and development across various domains. From cognitive and language skills to social and emotional awareness, these formative years lay the groundwork for a child's future success and well-being. Preschoolers are like sponges, eagerly absorbing new experiences, knowledge, and skills as they navigate the world around them. It is during this period that caregivers and educators play a crucial role in nurturing and supporting children's holistic development, fostering a love for learning, and providing a safe and stimulating environment for exploration and discovery. In this context, understanding the unique characteristics and needs of preschoolers is essential for promoting their optimal growth and development across all domains as it is called as the magic years of the children in respect of developmental domains such as cognitive, socio-emotional, physical, language,and moral (Kabadayı, 2005; Kabadayı, 2007; Kabadayı, 2009; Kabadayı, 2014; Kabadayı, 2017; Kabadayı & Doğan Kirişçigil, 2021). In this process, according to Fasoli et al. (2007), roles and

problems are changing and expanding. It is not always possible to solve the problems encountered in the old ways. This change requires people to acquire new and advanced leadership skills that will facilitate and support them to face and cope with change rather than simply reacting to it.

Although leadership skills are often associated with adulthood, early childhood is an important and critical period in which basic leadership skills are developed and shaped in children. Leadership skills in early childhood emerge as a result of children's social, emotional and cognitive development. In this period, children begin to acquire basic leadership skills such as effective communication, cooperation, empathy, problem solving and decision making. At the same time, values such as self-confidence, self-control, respect for others and taking responsibility, which are considered to be leadership traits, begin to take shape during this period. Research on leadership development has focused almost exclusively on adult leadership and there is a lack of literature on child leadership and how child leaders should be raised. Due to the importance of the topic, parents, teachers and environmental factors are of great importance to support leadership skills in early childhood. Parents can provide various opportunities to instill self-confidence in children, support them in responsibility and self-control, and encourage the development of emotional intelligence. Educational institutions through educators are the first formal organization where children gain leadership experiences. All actors and the environment are involved in testing children's leadership skills.

From past to present, scientists have defined and explained leadership in various ways, tried to reveal the qualities of leaders by conducting scientific studies on the subject and tried to make suggestions for the development of leadership in individuals. In addition, in these studies, it has been discussed whether leadership is an innate or an acquired skill, and leadership characteristics have been revealed by determining criteria related to leadership. Den Hartog & Koopamn (2001) in various studies, scientists have attributed different meanings to the concept of leadership. These differences can be listed as personality traits, cognitive and/or emotional characteristics, adaptation to teamwork, etc. These differences are also descriptive or normative.

In daily life, we encounter many situations related to child leadership. For example, in learning groups, under certain conditions, children may emerge as group leaders, and in sports groups, some children may emerge as team leaders. Again, in play groups, some children emerge as leaders who direct the games. Leadership has been one of the most popular topics in group research. The

effect of leadership on group success (Chemers et all. 2000; Yamaguchi, 2001), leadership and group cohesion (Yamaguchi, 2001) are some of the studies on leadership.

Leadership has been defined in various meanings, such as the basic component of social interaction (Trawick-Smith, 1988); social influence, in which one successfully obtains the help and support of others to achieve a common goal (Murphy & Johnson, 2011); a collection of traits attributed to a leader that successfully influences people (Türetgen et all. 2004); directing two or more people through power and influence (Çelik, 2000); and the ability to influence others and move them to action for specific purposes (Şişman, 2011). Leadership is often regarded as a complex, multi-component developed skill rather than a fixed personality trait. Within this definition, leadership is considered a dynamic process that can be developed through appropriate methods and interventions (Sisk, 1993). Leadership is an important quality of the child and this quality is sociability, the ability to communicate well with other children and to be confident in a team. Children with leadership skills are self-motivated children, able to attract other children with their ideas and thoughts (Abdigapbarova et all. 2016). Leadership is the process of an individual influencing and directing the activities of others to achieve individual or group goals under certain conditions (Koçel, 2010).

Leadership is a multidimensional social concept that encompasses all areas of life and all individuals. In developed countries, it is known that leadership skills are taught to children starting from preschool education through various practices in school and community life (Maxcy, 1981). Leadership potential can be identified at an early age (Bean, 2010). Child leaders contribute to group work, provide task-oriented feedback to participants, efficiently maintain task demands from the group, and help their younger or less talented peers (Wilcox, 2003). Leadership is a trait that should be encouraged and children should be raised as leaders. Leadership education in early childhood helps to form and shape children's basic attitudes and beliefs, and this education has a lifelong impact (Vendetti, 2010).

Waiting until adulthood for leadership development is too late. Although adults are capable of change and development, children have a higher level of flexibility and openness to learning than adults. Supporting leadership in early childhood is a critical foundation for leadership performance and development in adulthood. By providing children with a supportive environment for leadership practices, the foundation for adult leadership development and experiences is laid (Reichard & Pack, 2011).

2. Development of Leadership Skills in Children

Various views have been put forward on whether leadership is innate or acquired. Cherry (2022) states that an individual is not born a leader, but can learn to be a leader; Johnson and Johnson (1982) state that leadership is not an innate trait, but a learned skill; Parker and Begnaud (2004) state that leadership is not an innate trait and that there is no evidence to support this. Arvey et all. (2006); Ilies et all. (2004) in various studies, it was determined that genetic factors have an effect of 30% and environmental factors have an effect of 70% in the emergence of leadership skills and leadership style. Covey (2004) stated that leaders are not born leaders, they are only trained or educated. All people have leadership potential (Ricketts & Rudd, 2002), and leadership can be learned (Vendetti, 2010). According to Gardner (1990), many skills that enable people to be effective leaders are learned. Komives et al. (1998) leadership, like other skills, must be learned and practiced. Wren & Arthur (1995) stated that leadership should be understood and practiced by everyone. Leadership is a skill that can be strengthened and learned through practice (Karnes & Chauvin, 1985). Vendetti (2010) stated that leadership can be learned by each of us at any stage of our lives. Research has shown that leadership skills and concepts can be learned. When families, those who care for children, and educators observe the early signs of leadership potential, they can also observe that children can learn leadership skills and concepts (Clapp, 2011). It is a known fact that individuals are not born with leadership qualities, but they are born with the capacity and competence to learn different leadership skills (Rodd, 2013). Leadership skills can be developed with necessary work. For these studies, educational activities can be used in every period of life. The most important years of life for acquiring and maximizing leadership skills are early childhood.

In early childhood, children begin to acquire leadership skills from an early age with their participation in educational environments, their upbringing in accordance with the content of educational programs, their social interactions with their peers, and especially with the support of parents. Education and environmental factors are of great importance to support children's leadership skills during this period. Educators can teach children leadership values and behaviors by modeling them. At the same time, organizing interactive games and activities where children participate in different experiences and assume various roles can contribute positively to the development of leadership skills. In addition, providing leadership opportunities to their children can increase their self-confidence and support their leadership potential. According to Ahnert et al. (2013), once children start school, the learning environment and the teacher

are the most important guides in children's lives outside the family. Therefore, teachers can play a vital role in developing leadership skills in children along with different skills. According to Sergiovanni (2000), schools are places that prepare children for life in leadership and learning, providing them with the developmental growth, intellectual knowledge, practical skills, exercises of the mind, and character traits they need. Kousez & Poster (2006) school is a great incubator for learning to be a leader.

Murphy (2012) notes that children of all ages can assume leadership roles. Research on leadership development has focused almost exclusively on adult leadership and there is a gap in the literature on how we should develop young leaders. School is the first formal organization where children gain experience. Children spend the most formative years of their lives in school as an organization. According to Abdigapbarova et all. (2016) the main task of the parent and teacher should be to develop the child's sense of self-efficacy: "I want to!", "I can!", "I will!", "I can!" In order to achieve this, the child should be provided with skills that develop agility, precision, speed, accuracy and speed of reproducing information. In contrast, in their study (Hailey & Fazio-Brunson (2020)), parents reported that they consciously tried to develop their children's traits and dispositions to help them become good citizens, but they did not do so to develop their children's leadership skills. Leithwood (2005) found that the contributions of teachers and school administrators to children's leadership skills have a noticeably greater impact than contributions from other sources.

Shin et all. (2004) found that early social relationships of children aged five years and younger, especially their relationships with peers, contribute significantly to their social, emotional and cognitive development and leadership skills. Fu (1979) argues that in early childhood, children influence their peers through social interaction and are themselves influenced by them. In environments where children are usually guided by others, a few leader children may emerge who give orders to these children and guide them. In studies on leadership, it is thought that most of the leadership traits are acquired early in life (Sorcher & Brant, 2002). In the literature, some researchers have stated that leadership skills are observed at the age of 4 (Adcock & Segal, 1983; Lee et all. 2005), some at the age of 5 (Maxcy, 1991; Perez et all. 1982), and some at the age of 6 (Fukada et all. 1997; Maxcy, 1991). Çağdaş and Seçer (2002) stated that leadership is a skill that emerges between the ages of 3-6. The leader initiates the action in games or other activities and the other children follow his/her lead.

Children can learn and develop leadership skills through their experiences, just as they learn other skills appropriate to their level. Most developmental

psychologists support the developmental importance of experiential learning (Popper & Mayseless, 2003). Through interactional activities in schools, children learn to regulate their interpersonal relationships and cooperate with each other, while at the same time demonstrating a sense of personal courtesy and responsibility. These activities reveal and support the role of social factors in child leadership behavior (Shahidi, 2015).

Children have more ability for development in early childhood. Since personality and skills are more flexible at a young age than in adulthood, it is possible for development to take place more easily in childhood and adolescence than in adulthood (Avolio & Vogelgesang, 2011; Gardner, 2011). Likewise, leadership development is self-reinforcing. For example, the more a child engages in leadership activities or demonstrates the ability to lead a group, the more likely that child is to participate in leadership experiences, leading to an increase in the child's leadership skills (Hannah et all., 2008).

In the literature, early childhood leadership has been discussed within two perspectives: social dominance and prosocial and diplomatic leadership. Social dominance leadership explains the coercive dimension of peer influence, that is, the establishment of leadership through verbal and physical pressure within the group by using aggression, bullying and force. In this dimension, negative behaviors are observed and it is based on the forced submission of peers (Strayer & Trudel, 1984; Trawick-Smith, 1988; Williams & Schaller, 1993). Prosocial leadership, on the other hand, explains the positive leadership behaviors of early childhood children, which can be explained as helping another individual or a group without expecting any reward, or directing, ordering, demanding, and persuading in actions that will benefit them in any way (Recchia, 2011; Nelson et all., 2005).

Covey (2013) suggests that the Real Kids Alberta Student Scale (2012) can provide a framework for leadership skills in children. This scale was developed based on the seven habits of the 'I am a leader' process and can encourage and measure the development of personal leadership and responsibility in children. Yankah & Aggleton (2008) suggest that these skills, known as the seven habits of a leader, are highly aligned with life skills, including social and emotional learning. Ferland et al. (2015) describe the seven leadership skills in children as follows: 1. Ability to take initiative, make good choices without being asked and take responsibility for the results, 2. Ability to set goals and plan for the future, 3. Ability to prioritize tasks according to importance, 4. Ability to make mutually beneficial decisions and resolve conflicts by seeking alternative solutions, 5. Ability to listen to other perspectives and empathize with others,

6. Ability to work well as a team using everyone's strengths, 7. Ability to make healthy lifestyle choices by eating right, exercising and getting enough sleep.

3. Characteristics of Leader Children

Studies on children leaders have focused more on the individual characteristics of children. The characteristics of children who are leaders have been identified as advanced social and cognitive developmental characteristics such as high level verbal skills, drama skills, creativity, imagination and independence. In this context, it was also stated that leader children exhibit behaviors such as play-making, presenting new and interesting ideas, and being sensitive to the feelings of others (Lee et all., 2005). Leader children have organizational skills and can easily play their role in any play situation and make the right decision quickly (Abdigapbarova et all., 2016). Children who are sought after by others, communicate easily, have high self-confidence, are able to work in teams, direct others and are sensitive to others' feelings, generate new and different ideas, and offer solutions to problems have leadership potential (Karnes & Strong, 1978). Some studies have examined issues such as peer acceptance, popularity, aggression, social competence and social adjustment in children and linked them to leadership traits (Fukada et all., 1997; McClellan & Katz, 2001). Perez et al. (1982) found that preschool children with leadership skills have good verbal skills, easily share their thoughts and feelings, guide other children, and are sensitive to other children's needs and concerns.

Kitano (1983) emphasized that children who are leaders in the preschool period are often sought by their peers for friendship, ideas and decisions, can easily interact with peers and adults, and can easily adapt to new situations. Özel (2013) emphasized that language, which has an important place in every aspect of an individual's life, is an important feature that leaders should possess. Language mediates all the relations he/she will realize with his/her environment. Thus, it gives him/her superiority by providing social relations and interaction with those around him/her. According to Berkelaar et al. (2009), good verbal language skills are an important characteristic and criterion for a leader. Bolden et al. (2003) argue that leaders can influence others with their verbal language skills more than anything else.

Sisk & Rosselli (1996) reported the characteristics of leader children as independent, responsible and self-confident. Abdigapbarova et al. (2016) found that preschool children's leadership skills include honesty, fairness and consistency, ability to attract others' attention and generate new solutions in play activity, self-confidence, courage and determination, ability to communicate

quickly with other children, effectiveness, sociability, etc. Trawick-Smith (1988) suggests that children who are leaders use more friendly, soft and flexible diplomatic tactics to get their ideas accepted, rather than forcefully asking for change. Cohen et al. (2011) stated that the roots of leadership characteristics originate from the personalities of the leaders, leadership; They stated that it includes personal characteristics such as self-awareness, developing confidence when collaborating with others, being able to effectively communicate one's vision to others, and being aware of one's leadership strengths.

Some examples of studies that emphasize the importance of children's individual characteristics related to leadership and obtain similar results are social and cognitive skills (Bisland, 2004), verbal language skills (Hensel, 1991; Kemple, 1991; Perez et all., 1982), dramatic skills (Bisland, 2004), imagination (Hensel, 1991), independence (Perez et all., 1982), sensitivity to others' feelings and needs (Hensel, 1991; Kemple, 1991), emotional structure (Perez et all., 1982). Sisk & Roselli (1996); Karnes & Bean (1996) stated that leader children are sensitive to the feelings of others, have high empathy, strong verbal skills and flexible problem solving skills.

Shin et al. (2004) categorized the characteristics of child leaders into two categories. The first one is dynamic and strong personality and the second one is high awareness. They stated that leader children in the dynamic and strong personality category are generally creative, playful, humorous, energetic children; they have developed communication skills and strong cognitive and social skills. In the high awareness category, they emphasized that leader children can show a high awareness of others in order to feel what is happening around them and at the same time, they can freely use all the physical space in their environment without restriction. Pigors (1933) revealed four characteristics of child leaders. The first is strong self-control, the second is social awareness, the third is rapid comprehension of abstract concepts, and the fourth is their success in setting long-term goals instead of immediate goals. Hendricks et al. (2020) emphasized six personal characteristics of leadership in their leadership program: Integrity, dedication, magnanimity, humility, openness and creativity. Accordingly, leadership involves self-awareness and is defined as communicating this to others, building trust among others, and taking effective action to realize one's personal leadership potential. McGregor (1970) states that among the characteristics that are fundamental to leadership, there are behaviors and competencies that can be acquired or significantly changed through training. These include planning and taking action, solving problems, being open to communication, taking responsibility and gaining the competencies required for social relations.

Children leaders should have the competencies required for leadership, such as using interpersonal skills and problem-solving skills to guide and direct others towards a goal, joining forces with others to achieve a common goal, being honest in the use of influence and power, and displaying ethical behavior (Yalçın, 2018). Children who are leaders should also have the ability to communicate well, have confidence in themselves and others, take responsibility, be prone to teamwork, take risks, and be innovative (Kuşçu, 2021). Since it is understood that leadership-related behaviors in children emerge in peer interaction and play environment between the ages of 3-6, providing leadership education in early childhood and starting to gain these skills will ensure both the permanence of education and its lifelong sustainability.

4. Leadership Skills

There are important studies on how leadership skills develop in early childhood and how these skills contribute to children's social, emotional and cognitive development. Leadership skills such as cooperation, empathy, communication skills, and problem-solving abilities are among the basic skills that children acquire during this period. These skills enable children to communicate effectively with their friends, resolve conflicts and cooperate in groups. Hailey & Fazio-Brunson (2020) suggest that it may be difficult for some to think of very young children as leaders, but typical leadership behaviors observed in early childhood can be listed as the ability to use language, problem-solving skills, leadership intelligence, social and emotional skills, and social responsibility.

4.1. The ability to use language in leaders: Among leadership skills, the ability to use language effectively comes first. This includes comprehension, expression, listening and speaking skills. According to Woolfson (2016), compared to their peers, young leaders are better at listening and speaking skills, maintaining play and interaction, and expressing themselves well; for this, they have a rich vocabulary, use it appropriately for the situation and target audience, and communicate effectively with peers and adults (Karnes & Chauvin, 2000; Kemple et all., 1992; Kitano & Tafoya, 1982; Milligan, 2003; Perez et all., 1982; Trawick-Smith, 1988; Wolfle, 1989). Young leaders use gestures and facial expressions as part of effective communication (Kemple et al., 1992; Trawick-Smith, 1988). They also have the ability to offer alternative suggestions and reject them diplomatically (Green et al. 2008; Kemple et al., 1992; Trawick-Smith, 1988; Williams & Schaller, 1993). Perez et all. (1982)

stated that preschool children with high leadership skills have high verbal language skills, so they easily communicate their feelings and thoughts and guide others.

4.2. Problem Solving Skills in Leaders: Young leaders are known to have the ability to make the right decisions by listening to others and using the information they receive. They are curious and creative thinkers and are willing to take risks (Woolfson, 2016). They are willing to make suggestions for problem-solving strategies (Adcock & Segal, 1983; Hatch, 1990; Segal et all. 1987) and explore innovative ways to accomplish a task or teamwork (Sternberg, 2003; Woolfson, 2016).

4.3. Intelligence in Leaders: It may not be necessary to be gifted to have leadership skills, but leaders are often seen to have above-average intelligence (Sternberg, 2005). Thus, they demonstrate the ability to quickly analyze a situation, anticipate possible outcomes and the consequences of decisions, draw a logical conclusion, and organize a plan of action (Karnes & Chauvin, 2000; Kitano & Tafoya, 1983; Landau & Milich, 1990; Ramey, 1991; Sternberg, 2005). The fact that leaders have above average intelligence increases their imagination and enables them to be producers of new and innovative ideas (Feldhusen & Pleiss, 1994; Kitano & Tafoya, 1983; Sternberg, 2005; Trawick-Smith, 1988). Karnes & Bean (1995) found that gifted child leaders are able to solve problems creatively, have critical thinking skills, establish new relationships, have good communication skills, flexibility of thought and action, and are able to challenge others.

4.4. Social and Emotional Skills in Leaders: Young leaders have the ability to negotiate, persuade, compromise, and consider the needs of the group (Sankar-DeLeeuw, 2007; Sternberg, 2005; Trawick-Smith, 1988; Wolfle, 1989). They can deal effectively with social and emotional issues. They have high levels of social and emotional development: Sharing resources, maintaining personal emotional control (Landau & Milich, 1990; Ostrov & Guzzo, 2015), helping individuals in a group to organize their social interactions, and enjoying group interactions (Mawson, 2011; Scharf & Mayseless, 2009; Willis & Schiller, 2011), children leaders who use prosocial behaviors are more likely to get what they want (Hawley, 2015), young leaders pay attention to their playmates' feelings and empathize with actions and words (Feldhusen & Pleiss, 1994; Rivizzigno & Brendgen, 2014; Trawick-Smith, 1988).

4.5. Social Responsibility in Leaders: Young leaders tend to think about group needs rather than focusing only on their own interests. They are also altruistic. They recognize the needs of disadvantaged individuals and groups and seek solutions to the problems that cause this misfortune (Karnes & Bean, 1995; Scharf & Mayseless, 2009). They also create and apply conflict resolution strategies without using coercive methods (Mawson, 2011; Sankar-DeLeeuw, 2007; Trawick-Smith, 1988; Wolfle, 1989).

5. The Effects of Leadership Skills Acquired in Early Childhood on Future Life

The early childhood period is considered to be the years in which children are shaped in terms of their developmental areas. Providing children with stimulating and supportive environments and opportunities in this period has a direct positive impact on their developmental areas. Today, as important as it is for children to acquire 21st century skills from an early age, it is also important for children and parents, as well as for society, to acquire and develop leadership skills, one of these skills, from an early age. Because leadership skills are important in every field such as education, health, sports, arts, business world as well as in daily life, and the acquisition of these skills from early childhood directly affects the future of society. It may seem like a dream to think of young children as leaders or to give them leadership skills and it may be argued that this is not possible. Examining leadership behaviors in early childhood and showing how to apply leadership in children of that period will provide an understanding of the issue.

Leadership skills are important skills that individuals use effectively in social interactions and enable them to accept themselves to their environment. Leadership skills are not only specific to adulthood; they also begin to develop significantly in early childhood. Therefore, the development of leadership skills in early childhood is of great importance in supporting individuals to have strong and effective leadership skills in later life.

Since the childhood and adolescence experiences of leaders are directly related to their leadership qualities in adulthood, observing children in early childhood, measuring their leadership skills, and supporting their development can enable them to become more successful leaders in adulthood. Bisland (2004) states that making future leaders aware of their leadership potential from an early age and providing them with various opportunities is the beginning of developing their leadership skills. Black and Hazen (1990) state that leadership potential in childhood forms the basis of individual characteristics related to leadership that

will emerge in the future, and this makes an important contribution to society. Kuhn & Weinberger (2005) found that those whose leadership skills were observed during childhood are more likely to take up managerial positions in adulthood, and leadership skills developed during childhood can have a positive impact on an individual's professional life and income. Krosnick & Alwin (1989) suggest that leadership skills acquired during adolescence may have critical consequences for later leadership skills. Shin et al. (2004) stated that prosocial behaviors in child leaders develop over time, and by establishing strong bonds with teachers and peers, these children can develop social awareness that will help them exhibit social sharing behaviors as they grow and over time. Murphy & Johnson (2011) stated that the leadership process is a process that continues throughout life with development and interaction. Antonakis et al. (2004); Bass, 1990; Sacks, 2009) when studies on children's leadership qualities are examined; It was emphasized that similar findings emerged between the characteristics of child leaders and adult leaders and that they have similar leadership characteristics.

Although effective leadership skills and experiences continue to develop in individuals throughout life, many basic skills and abilities begin to develop at much earlier ages (Murphy and Reichard, 2011). Early life experiences play an important role in leadership development. Children; Exposing them to experiences that improve self-management, emotional control, social skill development, team skills, and classroom observation and teacher assistantship can encourage later leadership development (Riggio & Mumfors, 2011).

Teaching leadership skills to individuals at older ages is more difficult than teaching them to individuals at an early age. Because their basic values, beliefs and attitudes have already been formed (Vendetti, 2010). For this reason, leadership training, starting from pre-school education, is very important in terms of the permanence and lifelong effectiveness of education.

A leader will need to use all the skills he learned in childhood, such as influencing others in preschool years, coordinating others with teams practiced in primary school, and speaking in front of the public to gain support for a cause, in later ages (Barthold, 2014). The leadership skills that children acquire in early childhood have positive effects on their later leadership development. For example; What children exhibit in early childhood; It has been observed that the same leadership characteristics such as entrepreneurship, organization and adaptation represent their leadership abilities in later years (Chen, 2021).

6. Conclusion

As a result, leadership skills in early childhood are an important factor that shapes the personal and social development of individuals. Leadership skills gained during this period can form the basis for leadership skills in later ages. Educators, families, and society making efforts to support children's leadership skills at an early age play a critical role in maximizing their future leadership potential. In conclusion, the significance of leadership skills in the early childhood period cannot be overstated. Through the cultivation of leadership qualities such as communication, problem-solving, empathy, and collaboration, children develop essential life skills that lay the foundation for their future success. The impact of these skills extends beyond individual development, influencing peer interactions, classroom dynamics, and overall learning environments. As educators and caregivers, fostering a nurturing and supportive atmosphere that encourages the growth of leadership skills is paramount. By providing opportunities for children to practice leadership in age-appropriate ways, we empower them to become confident, capable, and socially adept individuals. Ultimately, investing in the development of leadership skills during early childhood is not only beneficial for the individual child but also contributes to the creation of a more compassionate, resilient, and equitable society.

References

Abdigapbarova, U. M., Ibrayeva, K. E., Baikulova, A. M., Ibrayeva, M. K., Shalabayeva, L. I., & Zhundybayeva, T. N. (2016). Communication through dialogue between preschool children with leadership skills. *International Electronic Journal of Mathematics Education*, *11*(5), 1343-1350

Adcock, D. & Segal, M. (1983). *Making friends: Ways of encouraging social development in young children. Englewood Cliffs*. NJ: Prentice-Hall.

Ahnert, Milatz, A., Kappler, G., Schneiderwind, J., & Fischer, R. (2013). The Impact of Teacher-Child Relationships on Child Cognitive Performance as Explored by a Priming Paradigm. Developmental Psychology, 49(3), 554–567. https://doi.org/10.1037/a0031283

Antonakis, J., Sehriesheim, C. A., Donovan, J. A., Gopalakrishna-Pillai, K., Pellegrini, E. K. ve Rossomme, J. L. (2004). Methods for studying leadership. In J. Antonakis, A. T. Cianciolo, ve R. J. Stemberg (Eds.). *The Nature of Leadership* (pp. 48-70). Thousand Oaks: Sage Publications.

Arvey, R. D., Rotundo, M., Johnson, W., Zhang, Z. ve McGue, M. (2006). The determinants of leadership role occupancy: Genetic and personality factors. *The Leadership Quarterly*, 17, 1-20.

Avolio, B. J., & Vogelgesang, G. (2011). Beginnings matter in genuine leadership development. In S.E. Murphy, & R.J. Reichard (Eds*.), Early Development and Leadership: Building the Next Generation of Leaders.* 179-204. Routledge.

Barthold, S. K. (2014). The Emergence of Leadership in Children: The Role of Play., Athletics, and School. *CMC Senior Theses*. Paper 859. http://scholarship.charemont.edu/cmc_thess/859

Bass, M. B. (1990). *Bass And Stogdill's Han dbook Of Leadership: Theory, Research, & Managerial.* (3th Ed.). New York: Free

Black, B. ve Hazen, N. L. (1990). Social status and patterns of communication in acquainted and unacquainted preschool children. *Developmental Psychology*, 26, 379-387.

Bean, S. (2010). *Developing Leadership Potential In Gıfted Youth:* The Practical Strategies Series In Gifted Education . Texas: Prufrock Press, Inc.

Berkelaar, B. L., Williams, E. A. & Linvill, J. S. (2009). Leaders define leadership: Discourses of leadership within an academic leadership development center, Revised Submission to International Communication Association, Annual Conference, Chicago, IL, May 21-25.

Bisland, A. (2004). Developing leadership skills in young gifted students. Gifted Child Today. 27(1), 24-27.

Bolden, R., Gosling, J., Marturano, A. & Dennison, P. (2003). A review of leadership theory and competency frameworks. Edited Version of a Report for Chase Consulting and the Management Standards, Centre for Leadership Studies, June, University of Exeter.

Chen, J. J. (2021). Leadership at play in perschoolchildren: a systematic synthesis of nearly nine decades of research. *Early Educationand Development.* https://doi.org/10.1080/10409289.2021.1988036

Chemers, M. M., Watson, C. B., & May, S. T. (2000). Disposition affect and leadership effectiveness: A comparison of self-esteem, optimism, and efficacy. Personality and Social Psychology Bulletin, 26, 267-277.

Cherry, K. (2022). The major leadership theories. VeryWellMind. https://www.verywellmind.com/leadership-theories-2795323#3-contingencytheories

Clapp, M. D. C. (2011). Today's Youth Are Tomorrows' Leaders http://www.us a patriotism.com/articles/tv/youth_leaders.htm

Cohen, L., Chang, P. P. W., Hendricks, J., Cope, V., & Harman, B. (2011). Enhancing psychology students' experiences: The development of an undergraduate leadership programme. Psychology Learning & Teaching, 10, 164–169. doi:10.2304/plat.2011.10.2.164

Covey, F. (2013) The Leader in Me. http://www.theleaderinme.org/ (last accessed 18 July 2013).

Çağdaş, A., Seçer, Z. (2002). *Çocuk ve Ergende Sosyal ve Ahlak Gelişimi*. Ankara: Nobel Yayınları

Çelik, V. (2000). *Eğitimsel Liderlik.* 2. Baskı. Ankara: Pegem A Yayıncılık

Den Hartog, D., & Koopamn, P. (2001). Leadership in organizations. In N. Anderson, D. S. Ones, H. K. Sinangil, & C. Viswesvaran (Eds.), *Handbook of Industrial, Work & Organizational Psychology* (Vol. 2, pp. 166–187). London: Sage.

Fasoli, L., Scrivens, C., & Woodrow, C. (2007). Challenges for leadership in Aotearoa/New Zealand and Australian early childhood contexts. In L. Keesing-Styles & H. Hedges (Eds.), *Theorising early childhood practice: Emerging dialogues* (pp. 231-253). Castle Hill: Pademelon Press.

Ferland, A., Li Chu, Y. E. N., Gleddie, D., Storey, K., & Veugelers, P. (2015). Leadership skills are associated with health behaviours among Canadian children. *Health Promotion International*, *30*(1), 106-113.

Feldhusen, J. F., & Pleiss, M. K. (1994). Leadership: A synthesis of social skills, creativity, and histrionic ability? Roeper Review, 16(4), 293–294. https://doi.org/10.1080/02783199409553602

Fu, V. R. (1979). Preschool leadership: Following behaviors. Child study Journal, 9(2), 133-139.

Fu, V. R. (1977). A Nursery School Leadership Observation Schedule And A Nursery School Leadership Rating Scale. (Eric Document Reproduction Service No. Ed 134601).

Fu, V. R., Canaday, H. ve Fu, D. (1982). Creativity and leadership in preschoolers. The Journal of Genetic Psychology, 141(2), 291-292.

Fukada, S., Fukada, H. & J. Hicks, J. (1997). The Relationship Between Leadership And Sociometric Status Among Preschool Children. The Journal Of Genetic Psychology . 158: 481- 486.

Gardner, J. W. (1990). *On leadership*. New York: Free Press.

Gardner, H. (2011). Positioning future leaders on the good work track. In S. E. Murphy, & R. J. Reichard (Eds.), *Early Development and Leadership: Buildingi the Next Generation of Leaders* (ss. 255-272). Psychology Press/Routledge.

Green, V. A., Cillessen, A. H. N., Rechis, R., Patterson, M. M., & Hughes, J. M. (2008). Social problem solving and strategy use in young children. *Journal of Genetic Psychology*, 169(1), 92–112.

Johnson, D.W., Johnson F. P. (1982). *Joining Together: Group Theory and Group Skills*. NJ: Prentice Hall

Hailey, D. & Fazio-Brunson, M. (2020). Leadership in the Early Childhood Years: Opportunities for Young Leadership Developmen in Rural Communities. *Theory & Practice in Rural Education.* Vol. 10, N. 1, Pg. 6-23

Hannah, S. T., Avolio, B. J., Luthans, F., & Harms, P. D. (2008). Leadership efficacy: Review and future directions. *The Leadership Quarterly*, 19, 669-692.

Hatch, T. C. (1990). Looking at Hank, looking at Ira: Looking at individual 4-year-olds especially their leadership styles. Young Children, 45(5), 11–17.

Hawley, P. H. (2015). Social dominance in childhood and its evolutionary underpinnings: Why it matters and what we can do. Pediatrics, 135(Supplement 2), S31–S38. https://doi.org/10.1542/peds.2014-3549D

Hendricks, M., Burger, M., Rijsendbilt, A., Pleeging, E., & Commandeur, H. (2020). Virtuous leadership: a source of employee well-being and trust. Management research review, 43(8), 951-970.

Hendricks, J. M., Cope, V. C., & Harris, M. (2010). A leadership program in an undergraduate nursing course in Western Australia: Building leaders in our midst. Nurse Education Today, 30, 252–257.

Hensell, N. H. (1991). Social Ledareship Skills In Young Children . Roeper Review, No. 14: 4 19

Ilies, R., Gerhardt, M. W. &Le, H.(2004).Individual differences in leadership emergence:Integrating meta-analytic findings and behavioral genetics estimates. International Journal of Selection and Assessment, 12, 207 – 219.

Kabadayı, A. (2005). Nasreddin Hoca fıkralarının okul öncesi eğitimde kullanılması için bilgisayar odaklı bir model önerisi. Uluslararası İnsan Bilimleri Dergisi, 2(2), 2-20. Retrieved from http://www.insanbilimleri. com.

Kabadayı, A. (2007). Sosyal bir ders materyali olarak bilmecelerin çocukların gelişim alanlarına katkılarının incelenmesi: Konya örneği. Uluslararası Insan Bilimleri Dergisi, 4(2), 2-17. http://www.insanbilimleri.com.

Kabadayı, A. (2009). Ninnilerin çocuğun gelişim alanlarına katkılarının içerik acıdan incelenmesi: Konya örneği. Uluslararası İnsan Bilimleri Dergisi, 6, 1. Retrieved from http://www.insanbilimleri.com

Kabadayı, A. (2014). Contributions of the "Counting Jingles" to children in plays from teachers' perspectives. Procedia - Social and Behavioral Sciences, 143, 458 – 462.

Kabadayı, A. (2014). Contributions of the "Counting Jingles" to Children in Plays from Teachers' Perspectives.Procedia-Social and Behavioral Sciences, 143, 458-463

Kabadayı, A. (2017). Enhancing early literacy development of the children via finger games. New Trends and Issues Proceedings on Humanities and Social Sciences. [Online]. 01, pp 401-408. Available from: www.prosoc.eu

Kabadayı, A. & Doğan Kirişçigil, F. (2021). Comparison of the humanistic and technological (e-book) methods in teaching the fairy tales to the preschoolers . International Journal of Quality in Education , 5 (1) , 76-91 . Retrieved from https://dergipark.org.tr/en/pub/ijqe/issue/60681/896061

Karnes, F. A., & Stephens, K. R. (1999). Lead the way to leadership education. Education Digest, 64(8), 62-65. Retrieved from http://search.proquest.com/openview/8ca50003e4091567c5a8f00aff5c9b51/1.pdf?pq-origsite=gscholar&cbl=25066

Karnes, F. A., & Bean, S. M. (1995).Leadership for students:A practical guide for ages 8-18.Waco, TX:Prufrock

Karnes, F. A., & Chauvin, J. (2000). Leadership development program. Scottsdale, AZ: Gifted Psychology Press.

Karnes, M. B. ve Strong, P. S. (1978). Nurturing leadership talent in early childhood. Urbana, Ill.: Institute for Child Behavior and Development, University of Illinois.

Kemple, K. M. (1991). Research in review: Preschool children's peer acceptance and social interaction. Young Children, 46, 47-54.

Kemple, K., Speranza, H., & Hazen, N. (1992). Cohesive discourse and peer acceptance: Longitudinal relations in the preschool years. Merrill-Palmer Quarterly, 38(3), 364–381.

Kitano, M. K. & Tafoya, N. (1982). Preschool leadership: A review and critique. Journal for the Educational of the Gifted. V (2), 78-89.

Koçel, T. (2010). *İşletme Yöneticiliği*. 12. Baskı. İstanbul: Beta

Komives, S. R., Nance Lucas, Timothy R. Mcmahon. (1998). *Exploring Leadership: For College Students Who Want To Make A Difference*. San Francisco: Josey Bass.

Kousez, J. M., & Posner, B. Z. (2006). *Student leadership practices ınventory. Facılıtator'sguide*. (2nd. Ed.) Jossey-Bass.

Krosnick, J. A., & Alwin, D. F. (1989). Aging and susceptibility to attitude change. Journal of Personality and Social Psychology, 57, 416–425.

Kuhn, P. & Weinberger, C. (2005). Leadership skills and wages. Journal of Labor Economics, 23, 395–436.

Kuşçu, M. (2021). *Uzaktan eğitimle öğrenci liderliğinin geliştirilmesi.* Yayınlanmamış Doktora Tezi. Çanakkale Onsekiz Mart Üniversitesi Lisansüstü Eğitim Enstitüsü.

Landau, S., & Milich, R. (1990). Assessment of children's social status and peer relations. In A. M. LaGreca (Ed.), *Through the eyes of a child* (pp. 259–291). Boston, MA: Allyn & Bacon.

Lee, S. Y., Recchia, S. ve Shin, M. S. (2005). "Not the same kind of leaders": Four young children's unique ways of influencing others. Journal of Research in Childhood Education, 20(2), 132-148.

Leithwood, K. (2005). *Educational leadership. Are view of the research*. Laboratory for Student Success (LSS).

Mawson, B. (2011). Children's leadership strategies in early childhood. Journal of Research in Childhood Education, 25(4), 327-338.

Maxcy, S. J. (1991). Leadership and the education of young children. S. Educational Leadership: A Critical Pragmatic Perspective. (95-109). Toronto, Ontario: OISE.

McClellan, D. E. ve Katz, L. G. (2001). Assessing young children's social competence. ERIC Digest. ED450953 2001-03-00.

McGregor, D. (1970). *Örgütün İnsan İlişkileri Yönü*. Ankara: ODTU İdari Bilimler Fakültesi Yayınları

Milgram, R. (2003). Challenging Out of school Activities As A Predictor Of Creative Accomplishments In Art, Drama, Dance And Social Leadership. Scandinavian Jo urnal Of Educational Research. Vol. 47. No. 3: 305-315.

Murphy, S. E., & Johnson, S. K. (2011). The benefits of a long-lens approach to leader development: Understanding theseeds of leadership. The Leadership Quarterly, 22, 459–470. doi: 10.1016/j.leaqua.2011.04.004

Murphy, J. (2012). Homeschooling in America: Capturing and assessing the movement. (1st ed.). Thousand Oaks, CA:Corwin.

Murphy, S. E. & Reichard, R. J. (2011). *Early development and leadership building the next generation of leaders*. Taylor & Francis Group, New York.

Nelson, D. A., Robinson, C. C., & Hart, C. H. (2005). Relational and physical aggression of   preschool-age children: Peer status linkages across informants. Early Education & Development, 16(2), 115-140.

Northouse, P. G. (2019). *Leadership: theory and practice.* (8th Ed.). Sage.

Ostrov, J. M., & Guzzo, J. L. (2015). Prospective associations between prosocial behavior and social dominance in early childhood: Are sharers the best leaders? Journal of Genetic Psychology, 176(2), 130–138. https://doi.org/10.10 80/00221325.2015.1018860

Özel, N. (2013). Kadın ve erkek liderlerin sözel iletişim yeterlikleri ve bunun çalışanların iş tutumları üzerine etkileri. Eskişehir Osmangazi Üniversitesi İİBF Dergisi, 8(2), 141-160.

Parker, J. P. ve Begnaud, L. G. (2004). Developing creative leadership. Portsmouth, NH: Teacher Ideas Press.

Perez, G., Chassin, D., Ellington, C. & Smith, J. (1982). Leadership giftedness in preschool children. Roeper Review, 4(3), 26-28.

Pigors, P. (1933). Leadership and domination among children. Sociologus, 9, 140-157.

Popper, M., & Mayseless, O. (2003). Back to basics: Applying a parentig perspective to transformational leadership. *The Leadership Quarterly*, 14, 41-65.

Ramey, D. A. (1991). Gifted leadership. Roeper Review, 14, 16–19. https://doi.org/10.1080/02783199109553374

REAL Kids Alberta. (2013) REAL Kids Alberta. www.realkidsalberta.ca (last accessed 22 July 2013).

Recchia, S. A. (2011). Preschool Leaders in the early childhood classroom. In Murphy S. E. Ve Reichard R. J. (Eds). *Early development and leadership. Building the next generation of leaders*. Routledge Taylor & Francis Group: New York.

Ricketts J. C., R.D. Rudd. (2002). A Comprehensi ve Le adership Education Model To Train, Teach, And Develop Leadership In Youth. Journal Of Career And Technical Education. Vol. 19. No. 1.

Reichard, Rebecca J., Susan J. Pack, (2011). Developing The Next Generation Of Leaders: Research, Policy And Practice . ed. Susan Elaine Murphy, Rebecca J. Reichard. New York: Routledge Taylor & Francis Group.

Riggio, R. E., & Mumfors, M. D. (2011). Introduction to the special issue: Longitudinal studies of leadership development. The Leadership Quarterly, 22(3), 453-456.

Rivizzigno, A. S., & Brendgen, M. (2014). Gene-environment interplay between number of friends and prosocial leadership behavior in children. Merrill-Palmer Quarterly, 60(2), 110–141.

Rodd, J. (2013). *Leadership in early childhood: The pathway to professionalism.* (4th Ed.). Berkshire: Open University Press.

Sacks, R. E. (2009). Natural born leaders an exploration of leadership development in children and adolescents. Phd thesis, University of Toronto.

Sankar-DeLeeuw, N. (2007). Case studies of gifted kindergarten children, part II: The parents and teachers. Roeper Review, 29(2), 93–99. https://doi.org/10.1080/02783190709554392

Segal, M., Peck, J., Vega-Lahr, N., & Field, T. (1987). A medieval kingdom: Leader-follower styles of preschool play. Journal of Applied Developmental Psychology, 8(1), 79–95. https://doi.org/10.1016/0193-3973(87)90022-0

Sergiovanni, T. J. (2000). *The Lifeworld of Leadership: Creating Culture, Community, and Personal Meaning In Our School*. San Francisco: Jossey Bass.

Scharf, M., & Mayseless, O. (2009). Socioemotional characteristics of elementary school children identified as exhibiting social leadership qualities. Journal of Genetic Psychology, 170(1), 73–94.

Shin, M. S., Recchia, S. L., Lee, S. Y., Lee, Y. J. & Mullarkey, L. S. (2004). Understanding early childhood leadership: Emerging competencies in the context of relationships. Journal of Early Childhood Research, 2(3), 301-316.

Sisk, D. A. (1993). Leadership education for the gifted. In K. A. Heller, F. J. Monks, & A. H. Passow (Eds.), International handbook of research and development of giftedness and talent (pp. 491–505). New York,

Sisk, D. A. ve Rosselli, H. C. (1996). Leadership: A special kind of giftedness. Unionville, NY: Trillium Press.

Shahidi, M. (2015). Leadership in child and youth educational settingi. *Journal of Education & Social Policy.* 2(2); 138-145.

Sorcher, M. ve Brant, J. (2002,). Are you picking the right leaders? Harvard Business Review, 80, 78-85.

Sternberg, R. J. (2003). Creative thinking in the classroom. Scandinavian Journal of Educational Research, 47, 325–338. doi:10.1080/00313830308595

Sternberg, R. J. (2005). WICS: A model of giftedness in leadership. Roeper Review, 28(1), 37–44.

Strayer, F. F. ve Trudel, M. (1984). Developmental changes in the nature and function of social dominance among young children. Ethology and sociobiology. 5. 79- 295.

Şişman, M. (2011). *Öğretim liderliği.* Ankara: Pegem Yayıncılık.

Trawick-Smith, J. (1988). Let's say you're the baby, OK?: Play Leadership and following behavior of young children. Young Children, 43(5), 51-59.

Türetgen, İ. Ö., Ünsal, P. ve Telman, N. (2004). Yöneticiler için liderlik özelliklerini ölçen bir ölçek geliştirme. *Psikoloji Çalışmaları Dergisi,* 24, 25-44.

Vendetti, D. C. (2010). "We Can Be Leaders If We Want To": A Case Study of Second Grade Leadership Education. Doktora Tezi. Wilmington University.

Wilcox, C. D. (2003). Order In The Kidsville Court: A Study Of The Longidutinal Co construction Of Child Leader Development And Group Activity Development. Doktora Tezi. Michigan State Universtiy.

Williams, D. E. & Schaller, K. A. (1993). Peer persuasion: A study of children's dominance strategies. Early Child Development and Care, 88,31-41.

Willis, C., & Schiller, P. (2011). Preschoolers' social skills steer life success. Young Children, 66(1), 42–49.

Wren, D. A. & Arthur G. B. (1995). The Evolution Of Management Thought. http://embanet.vo.llnwd.net/o18/USC/CMGT500/Week1/ docs/ CMGT500_w01_Chapter10.pdf [14/05/

Wolfle, J. (1989). The gifted preschooler: Developmentally different but still 3 or 4 years old. Young Children, 44(3), 41–48.

Woolfson, R. C. (2016). Take the lead. My Reading Room (blog). https://myreadingroom.online/en/live/parenting/young-parents/OoEQzyL7Rx

Yalçın, S. (2018). 21. Yüzyıl becerileri ve bu becerilerin ölçülmesinde kullanılan araçlar ve yaklaşımlar. *Ankara Üniversitesi Eğitim Bilimleri Dergisi.* 51(1), 183-201. https://doi.org/10.30964/auebfd.405860

Yamaguchi, R. (2001). Children's learning groups: A study of emotional leadership, dominance, and group effectiveness. Small Group Research, 32, 671-697.

Yankah, E. and Aggleton, P. (2008) Effects and effectiveness of life skills education for HIV prevention in young people. *AIDS Education and Prevention*, 20, 465–485.

CORPORATE SOCIAL RESPONSIBILITY OF UNIVERSITIES: A TURKISH STATE UNIVERSITY SAMPLE

Emel AKAY

(Dr.), Anadolu University,
E-mail: esentuna@anadolu.edu.tr
ORCID: 0000-0003-4322-1615

1. Introduction

In recent years, the interest of institutions in social responsibility projects and the demands of stakeholders for such projects have increased. The concept of social responsibility is mostly emphasized for commercial institutions and takes its place in the literature with the studies carried out in this field. Especially in many parts of the world, commercial organizations have realized that, in addition to operating within their own bodies, they also leave an impact on their environment with the activities they carry out, and that they can achieve success if they are perceived as socially responsible by their shareholders. Therefore, the concept of social responsibility has begun to be frequently expressed in corporate goals and decision-making processes, and efforts to minimize the side effects of corporate actions on the environment, employees, business groups, suppliers and other members of society have emerged (Idowu, 2008, p. 264).

2. Corporate Social Responsibility (CSR)

The first definitions of the concept of Corporate Social Responsibility (CSR) date back to the 1950s. Bowen (1953), in his book Social Responsibilities of the Businessman, defines this concept as the obligation of entrepreneurs to develop strategies in order to make the desired decisions regarding the goals and values of the society or to carry out activities in this direction (p.6). The concept of corporate social responsibility, which started to attract attention in the field

upon Bowen's emphasis, was soon taken up as a subject of study by many researchers. In line with these studies, it has been stated that companies are responsible for balancing and improving the environmental and social impacts they create, without harming their own economic performance (Chamberlain, 1973; Friedman, 1970; Holmes, 1976; Walton, 1967). With this approach, the traditional view that companies are structures that provide products or services to society has shifted towards the view that companies are institutions that contribute to the welfare of society.

CSR, which emerged as a fashionable concept in the 2000s, has been accepted and defined by different boards and commissions. For example, according to the World Business Council for Sustainable Development (WBCSD, 2000), CSR is the ongoing commitment of companies to act ethically and contribute to economic development while improving the quality of life of their employees and their families, the local community and society at large. This concept is defined by the European Commission as companies voluntarily incorporating social and environmental issues into their business activities and interactions with their stakeholders (European Commission, 2001, p.6). In the European Commission strategy document renewed in 2011, it is emphasized that in order for companies to fully fulfill their corporate social responsibilities, they must include social, environmental, ethical, human rights and consumer issues in their commercial activities and basic strategies in cooperation with their stakeholders (European Commission, 2011, p. .7). ISO 26000 states that CSR should focus mainly on economic, social and environmental issues (ISO, 2010). As can be seen in these definitions, the following basic features of CSR emerge (Jankal & Jankalova, 2017; Vallaeys, 2015):

a) *Versatility:* CSR is not specific to one type of organization but can also occur in the form of other social responsibilities.

b) *Volunteering:* Managements of organizations should decide to what extent the organization will act in a socially responsible manner.

c) *Active Participation:* Active participation of stakeholders in this process forms the basis of CSR.

d) *Sustainable Development:* It is necessary to focus not only on rapid growth but also on sustainable development.

Considering these features, it can be said that the concept of corporate social responsibility consists of a number of subheadings. Carroll and Shabana (2010, p. 90) discuss these elements with a pyramid-shaped framework and

classify them as economic, legal, ethical and humanitarian responsibilities (Figure 1).
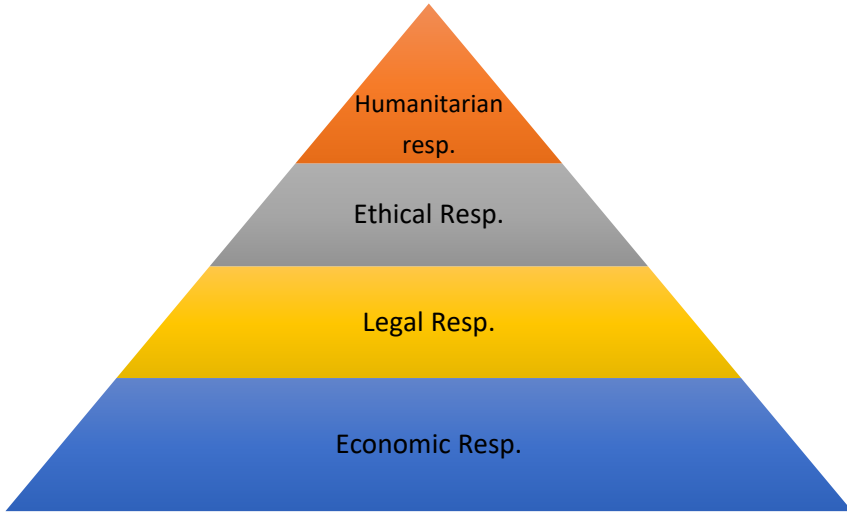
Figure 1. Corporate Social Responsibility Pyramid

According to this approach, economic responsibility, which is at the base of the pyramid, is the basic function of the institution as perceived by all stakeholders in society. Companies provide investment, create employment and services. The legal responsibility above this indicates that the institution carries out its economic responsibility within the framework of the laws and regulations of the state. Ethical responsibility is related to the practices expected from the institution by society. Companies voluntarily adopt principles regarding management and ethics. Humanitarian responsibility, which is at the top of the pyramid, is related to the company's activities that will meet social expectations in order to be a good legal person. Companies allocate funds in order to meet society's expectations (Carroll and Shabana, 2010, p. 90).

In line with the research conducted on the concept of corporate social responsibility, theories have emerged to position this issue.

Decision Usefulness Theory: According to this theory, investors think that social content information made public by legal entities helps their decision-making processes (Belkaoui, 1980; Buzby & Falk, 1979).

Stakeholder Theory: According to this theory, for an organization to obtain sustainable capital in the long term, there must be good relations between the institution and critical stakeholders (Carroll, 1989).

Sustainable Development Theory: This theory argues that the future of the human species depends on the ability to build sustainable business enterprises

and economic reality that connect industry, society and the environment (Senge & Carstedt, 2001).

Social and Political Theory: Social and Political Theory emphasizes that society operates under a set of social agreements that exist between its members and the society itself (Gray et al., 1996).

Legitimacy Theory: Legitimacy Theory suggests that the activities carried out by a legal entity are assumed to be desirable, unique and in accordance with some socially constructed norms, values, beliefs and definitions (Suchman, 1995).

2.1 Corporate Social Responsibility in Education

Nowadays, not only commercial organizations but also educational institutions attach importance to corporate social responsibility activities due to changing population characteristics, pressure from non-governmental organizations and the need for broader transparency. From the perspective of higher education institutions, social responsibility can be defined as a principle or philosophy of social action. Universities follow an ethical approach to improve local and global society in order to sustain social, ecological, environmental, technical and economic development. This process is possible within the framework of interactive dialogues established between society and universities through knowledge transfer, research, teaching and scholarships (Chen et al., 2015, p.165). In this context, educators working in higher education institutions are in a privileged position because they have the opportunity and power to influence the thoughts, actions and behaviors of future individuals, managers and leaders (Idowu, 2008, p.267).

2.2 Corporate Social Responsibility of Universities

The economic, political and social changes that have emerged in recent years have posed new challenges for universities and required them to enter into reform processes in order to respond to these changes. Factors such as globalization, internationalization, information society, innovation, development of information and communication technologies affect the mission of universities, their form of organization, and even their methods and quality of education (Vasilescu et al., p.4179). Therefore, in order to keep up with these rapid changes, universities have to provide educational services to their customer students in line with their demands by creating work areas compatible with the newly emerging job markets. In this case, CSR is conceptualized as the Social Responsibility of Universities (USR)

for higher education institutions that provide manpower training and development.

3. Concept of University Social Responsibility (USR)

The first definitions of the concept of University Social Responsibility (USR) emerged in the early 2000s. Reiser (2007) defines USR as an ethical quality policy in the activities of the university community to promote sustainable human development, in a participatory dialogue with society, through the responsible management of the university's educational, cognitive, labor and environmental impacts. Jimenez (2007) defined it as the capacity of universities to disseminate and put into practice a set of principles and values through four basic processes including management, teaching, research and publication activities. More recently, Chen et al. (2015) define USR as the philosophy of a university as an ethical approach to develop and interact with local and global society to sustain social, ecological, environmental, technical and economic development (p. 166). USR underlines ethical collaboration not only with the university community but also with ecology as an important component of stakeholder engagement. Since social responsibility generally refers to the concept of corporate social responsibility in higher education institutions to meet the expectations of stakeholders (administrators, faculty and staff, along with students, employers of graduates, funding institutions and society), the university, just like other business organizations, needs to adopt a social responsibility strategy. USR encompasses social, environmental and economic issues, which are an important aspect of how universities interact with their internal and external stakeholders and society, and should not be separated from the strategic planning and operation of a university (Esfijani, 2014).

Social responsibility issues emphasized in the context of universities are grouped under seven headings, these are corporate governance, human rights, labor practices, environment, fair operating practices, student-related issues, and social participation and development (Nejati et al., 2011). These headings were created based on the ISO 26000 document, which was first started to be worked on in 2009, published in 2010 and reconsidered in 2018 (ISO/DIS 26000, 2010; ISO, 2018)

1. *Corporate Governance (CG):* Corporate governance is the system by which an organization makes and implements decisions in line with its goals. Effective management should be based on the incorporation into decision-making and practice of the principles and practices of accountability, transparency,

ethical behavior, respect for stakeholder interests and respect for the rule of law (ISO/DIS 26000, 2010, p.21). From the perspective of higher education institutions, the effective management principles mentioned find their place in vision and mission statements.

2. *Human Rights (HR):* Human rights are the fundamental rights that all people deserve, with a sincere desire for freedom, peace, health and happiness. There are two broad categories of human rights. The first category includes civil and political rights and rights such as the right to life and liberty, equality before the law, and freedom of expression. The second category relates to economic, social and cultural rights and includes rights such as the right to work, the right to food, the right to health, the right to education and the right to social security. (ISO/DIS 26000, 2010, p.22). Universities have a responsibility to respect human rights in both their stakeholders and their spheres of influence.

3. *Labor Practices (LP):* An organization's workforce practices encompass all policies and practices related to work performed within, by, or on behalf of the organization.

Labor practices are the responsibilities that an organization has directly on behalf of its employees or in a workplace that an organization owns or directly controls. Labor practices include any policy or practice affecting the recruitment and promotion of workers, disciplinary and grievance procedures, transfer and relocation of workers, termination of employment, training and skills development, health, safety, hygiene and working conditions, especially working time and remuneration (ISO /DIS 26000, 2010, p.32). Similar to commercial organizations, universities have a responsibility to regulate such policies and practices for all their employees and students.

4. *Environment (E):* The decisions and activities of institutions always have an impact on the environment, wherever they are. Environmental responsibility is a prerequisite for human survival and well-being. Therefore, it is an important aspect of social responsibility. Environmental issues are closely linked to other core issues of social responsibility and environments. It also requires holistic education to be taken into account, as environmental education is essential for promoting the development of sustainable societies and lifestyles. Analysis of environmental impacts, use of nature-friendly technologies, reduction of the effects of hazardous and toxic chemicals and other wastes on ecosystem and human life, protection of water resources, monitoring of climate changes and reducing their causes, sustainability of natural resources, protection of biodiversity and identification of all kinds of environmental pollution factors

and their solutions. Practices aimed at minimizing environmental impacts are considered within the scope of environmental social responsibility (ISO/DIS 26000, 2010, p.40). In this context, universities are responsible as institutions that both create environmental impact and provide education that will raise awareness about environmental awareness in this respect.

5. *Fair Operating Practices (FOP):* Fair business practices concern ethical behavior in an organization's dealings with other organizations and individuals. These are the relationships between organizations and government agencies, as well as organizations and their partners, their suppliers, contractors and competitors, and the associations of which they are members. In the field of social responsibility, fair business practices concern how an organization uses its relationships with other organizations to promote positive outcomes. Underlying all fair business practices is the observance, development and promotion of ethical standards of conduct. Positive results can be achieved by providing leadership and encouraging the adoption of social responsibility more broadly across the organization's sphere of influence (ISO/DIS 26000, 2010, p.46). Universities are obliged to promote fair and ethical practices in their relations with both their employees, students and other stakeholders in their sphere of influence and to include these practices in their policies.

6. *Student (Consumer) Topics (ST):* Organizations that provide products and services to consumers and other customers have responsibilities to these consumers and customers. Addresses education on consumer issues related to social responsibility, fair marketing practices, protection of health and safety, sustainable consumption, resolution and resolution of disputes, protection of data and privacy, access to essential products and services and other topics (ISO/DIS 26000, 2010, p.50). Universities should also act fairly in the practices they provide to the students they provide education services to, ensure their health and safety, ensure the sustainability of the service they provide, provide solutions to possible student problems, protect students' data and privacy, and provide access to basic products and services that may be required during the education period.

7. *Social Participation and Development (SPD):* Today, it is accepted that organizations have a relationship with the societies in which they operate. This relationship can be based on community participation to contribute to community development. Community participation, either individually or through associations seeking to advance the public good, helps strengthen civil society. Organizations that approach society and its institutions with respect

reflect and strengthen democratic and civic values. Key areas of community development to which an organization can contribute include creating jobs by expanding and diversifying economic activities and technological development. Additionally, local economic development initiatives, social investments in wealth and income creation, expansion of education and skills development programs; can contribute through cultural preservation and health services (ISO/ DIS 26000, 2010, p.58). In this context, the main duties of universities are to develop the manpower for employment through education and skill development programs, to support economic development in the society by leading economic and technological activities or by providing consultancy, and to contribute to public health with the health services they provide.

Within the scope of this study, the subheadings mentioned above will be considered as criteria in data analysis.

3.1 Studies Conducted in the Field of University Social Responsibility

From the perspective of universities, previous studies show that higher education institutions create significant social impact. In his study involving 33 universities in the United Kingdom, Idowu (2008) observed that these institutions took social responsibility and sustainable development seriously. The study conducted by Nejati et al. (2011) evaluated the contents and annual reports published on the websites and annual reports of the world's top 10 universities by Times Higher Education in terms of social responsibility. The findings of this research have shown that the world's leading universities are committed to their social responsibility and provide adequate information on most of the key areas of corporate social responsibility. Ahmad (2012) conducted a study on students' awareness and behavior in contributing to social responsibility practices in the context of Malaysian universities. The results showed that most of the participants were aware of the need to protect the environment, but they were not exposed to actual activities. In their theoretical study published on the importance of social responsibility in educational institutions in Slovakia, Jankal and Jankalova (2017) examined the social responsibility practices of universities in their country and made some suggestions. According to researchers, social responsibility should not remain just on paper but should be a part of long-term strategic plans. Additionally, universities should set an example with their ethical behavior towards all areas of influence. They should educate students about social responsibility and be active participants in this regard. Educational programs should be designed to meet social needs and the projects carried out should contribute to sustainability by providing social benefit. Karimi

(2013) defines university public relations practices as independent variables and external factors including financial resources, environment, management challenges, perceptual and attitudinal challenges, technological change and individual experiences to define the role and responsibility of the Islamic Azad University (IAU) and the dependent variable. conducted a study to examine the relationship between social responsibility. The results of this study showed that IAU public relations has a strong importance in social responsibility practices. On the other hand, Leal Filho (2000) argued that universities create conceptual confusion regarding the economic, social and environmental dimensions and the importance of sustainability and social responsibility.

Independent studies on the increasingly important concept of USR and the efforts of universities in this context have created a comprehensive literature. In order to gather these independent efforts under one roof and to determine the standards and criteria to be followed in European higher education institutions for the social responsibility of universities, a project was carried out between 2012 and 2015 under the leadership of the European Union Higher Education Area (EHEA) (EU-USR, 2015). With this project, the concept of USR was defined functionally and standards and criteria were determined to evaluate the social responsibility approach of universities. According to the results of this project, universities are required to guarantee social responsibility standards in four basic areas, these are (1) Research, teaching, learning support and social participation (2) Management (3) Environmental and social sustainability (4) Fair practices. Within the scope of the project, a consensus was reached on the behaviors and activities that universities should demonstrate under each basic standard heading, and these behaviors and activities were listed in items to create evaluation criteria.

Studies on USR in Turkey generally include the Community Service course, which is compulsory in the curriculum, and research trying to determine the perception towards this course (Saran et al., 2011; Toker and Tat, 2013). In addition, in the study conducted to determine the perceptions of university students about taking part in the field of social responsibility (Külekçi and Özgan, 2015), it was found that taking part in the field of social responsibility improves students personally and socially, such as communication, empathy, problem solving skills, leadership, entrepreneurship and responsibility. It has been determined that it contributes to the acquisition of skills. Additionally, the "Social Responsibility and Social Entrepreneurship Pilot Project in Universities" was carried out by the Community Volunteers Foundation in 2013. Within the scope of this project, the participation of university students in Turkey

and the world in social responsibility and social entrepreneurship processes, the problems experienced by students in Turkey in this regard and solution suggestions are presented (TGV, 2013). In addition, social responsibility projects carried out on social, educational, environmental, health and corporate grounds are announced on the website prepared by the Social Responsibility Platform. Under the Education tab, information is provided about the social responsibility projects carried out by universities (Sosyal Sorumluluk Platformu, 2020). As can be seen, the studies conducted mostly include students as participants, and studies on the perceptions of academic and administrative staff on the subject remain limited.

3.2 4th Generation Universities

Emerging economic, political and social changes also force universities to change. In previous years, higher education institutions called 1st generation universities or education universities only offered education. When we moved to the 2nd generation universities, research and development activities gained importance, so such institutions began to be called research universities. In 3rd generation universities, the reflections of research and development studies on the industry began to attract attention. University and industry cooperation activities began to be carried out in these institutions, which are also called entrepreneurial universities.

Today, higher education institutions, called 4th generation or transformative-thematic universities, are structured around social responsibility. Aiming to serve society, such universities focus on environmental problems and turn to projects that can provide solutions to them. In addition, 4th generation universities take into account the needs of the industry and attach importance to training manpower to meet these needs. Students studying in such institutions not only passively acquire knowledge and skills, but also have the opportunity to realize their own ideas and projects as active participants. Therefore, such universities undertake a transformative role in society and aim to take it to a higher level by guiding the society (Erdem, 2016). As can be seen, social responsibility is the approach that 4th generation universities are based on. In line with social responsibility activities, an interdisciplinary approach is adopted in such universities (Şimşek, 2012).

4. Study Context

Established in 1958, Eskişehir Economic and Commercial Sciences Academy formed the basis of Anadolu University. In 1982, this academy

transformed into Anadolu University and started to serve. Today, this university hosts 12 faculties, 3 of which provide open and distance education, 3 Schools, 1 of which is the State Conservatory, 2 Vocational Schools, 6 Institutes and 30 Research Centers. By offering cultural and artistic events with cinemas, theatres, concert and exhibition halls within the campus, sports activities with sports facilities built at international standards, conference halls and academic congresses and workshops organized by various academic units, Anadolu University provides services nationally and internationally not only to the students, but also to the community in its impact area.

The mission of the institution is "*to be a world university focused on lifelong learning*", and expresses its vision as follows:

"*In order to improve the quality of life of the people of the city, region, country and the world, to contribute to the universal knowledge and cultural accumulation through education, research and projects in the fields of science, technology, art and sports, to offer qualified and original distance and formal learning opportunities to individuals of all ages, to provide social "To produce creative and innovative solutions by anticipating the needs.*" (AU web, 2024).

As can be understood from these statements, Anadolu University attaches importance to the concept of social responsibility and the activities carried out in this field.

5. Method

This study, which aims to evaluate the practices carried out by Anadolu University in the field of social responsibility, adopts a qualitative research method based on document analysis. Forster (1994) emphasizes that there are five basic stages to be followed in the document analysis method. These stages are:

- access documents
- checking authenticity
- understand documents
- analyze data
- is the use of data.

It is planned to follow the steps mentioned in this study process and find answers to the following question:

1- Which sub-headings of the USR concept do the university social responsibility activities specified in the aims, targets and strategies of Anadolu University's strategic plan between 2014 and 2023 focus on?

5.1 Data Collection and Analysis

The data to be used for this study consists of university strategic plans published between 2014 and 2023. From these documents, categories and units for USR subheadings will be coded using the document analysis method.

6. Findings

Among the accessed documents, first of all, the strategic plans for the 2014-2018 period and then 2019-2023 period published by Anadolu University were examined within the framework of the USR concept (AÜ SP1,2020; AÜ SP2, 2020).

6.1 Strategic Plans

Anadolu University 2014–2018 Strategic Plan

In this strategic plan, the following goals and objectives are expressed and strategies for implementation in line with these are specified (AU SP1, 2024).

Table 1. AU 2014-2018 Strategic Goals and Objectives in the Context of USR

Goals and objectives	USR
Goal 1. Continuous improvement of education and training activities	*ST*
Objective 1.1. Institutionalizing a competency-based education-training culture	*CG*
Objective 1.2. Improving the education and training opportunities of the units	*ST*
Objective 1.3. Increasing the effectiveness of information and communication technologies in the education and training system	*ST*
Objective 1.4. Improving living conditions on all campuses	*ST*
Goal 2. Increasing the quantity and quality of research activities	*SPD*
Objective 2.1. Using and developing infrastructure effectively	*CG*
Objective 2.2. Giving priority to interdisciplinary projects that ultimately serve the society	*SPD*
Objective 2.3. Improving university-industry cooperation	*FOP*
Objective 2.4. To encourage increased research activities	*SPD*
Objective 2. 5. To increase the quantity and quality of cultural, artistic and sports activities	*SPD*
Goal 3: Increasing the effectiveness and ensuring the sustainability of activities related to community service	*SPD*
Objective 3.1. Promoting activities carried out for the purpose of serving the society by using the communication facilities of the university and social media	*SPD*

Objective 3.2. Increasing cooperation with non-governmental organizations that serve society	FOP
Objective 3.3. Providing cultural, artistic, sports, scientific, etc. activities focused on community service to ensure that national and international events are delivered more effectively to all segments of society	FOP
Goal 4: Increasing the effectiveness of the open education system	SPD
Objective 4.1. Ensuring the sustainability of the student-centered, flexible, accessible and technology-based nature of the open education system	SPD
Objective 4.2. Increasing the effectiveness of communication and learning technologies in the open education system	SPD
Objective 4.3. Ensuring the training and development of human resources for the open education system	LP
Objective 4.4. Carrying out studies on the institutional reputation of the open education system	CG
Goal 5: Ensuring that the management system is effective, efficient and sustainable	CG
Objective 5.1. Developing human resources practices	LP
Objective 5.2. To take initiatives to make legal regulations appropriate to the unique structure of the university.	CG
Objective 5.3. Creating a quality management system that can be applied in all units in the university	CG
Objective 5.4. Increasing national and international recognition	CG

When examined in terms of USR subheadings, the first of the 5 main goals of the institution is oriented towards student issues, the 2nd, 3rd and 4th objectives are expressed in the focus of social participation and development, and the 5th objective focuses on corporate governance. In addition, as seen in Table 1, 7 objectives focusing on corporate governance, 4 objectives on student issues, 9 objectives on social participation and development, 3 objectives on fair activity practices and 2 objectives on labor practices are stated in the strategic plan document. As can be seen, social participation and development outweigh other areas in the strategic goals of the institution. However, these goals and objectives do not include clear statements regarding the categories of human rights and environment.

Strategies to be put into action in line with these goals and objectives have been determined and put into practice. In Table 2, these strategies and the numbers for implementation are classified and shown under USR subheadings.

Table 2. AU 2014-2018 Strategies and
Indicator Numbers in the Context Of USR

2014-2018 Objectives and Strategies	Number
Corporate Governance	
O1.1 S11. Increasing the number of accredited programs/events offered in all kinds of environments	24
O5.2 S1. Contributing to scientific research, financial, personnel and education and training legislation studies	5
O5.3 S1. Accelerating the work on the internal control system	21
O5.3 S2. Creating the Electronic Document Management System (EBYS)	%100
O5.3 S3. Improving business processes and organizational structure	%50
Labor Practices	
O1.3 S4. Increasing the number of certification programs/events offered in all kinds of environments	125
O5.1 S1. Increasing activities for the professional development of employees	65
O5.1 S2. Organizing in-service training for academic and administrative staff	25
Fair Operating Practices	
O1.1- S4. Increasing the effectiveness of domestic/international exchange programs	73/267
O1.1- S6. Increasing the number of protocols made with other national/ international education and training institutions	1153
O1.1 S7. Supporting collaborations of student clubs with similar clubs of national/international universities/organizations	12
O3.2 S1. Carrying out activities to ensure cooperation with non-governmental organizations as stakeholders in the university's social responsibility projects.	117
O4.2 S3. Collaborating with research and development institutions/ organizations	-
O.4 S3. To carry out activities to increase the cooperation of the open education system with other external stakeholders	11
O5.4 S1. Increasing interaction and cooperation with all national and international stakeholders	910
O5.4 S2. Carrying out joint studies on lifelong education with world universities	3
Student Issues	
O1.2 S1. Keeping and improving the physical conditions of the units such as buildings, laboratories, classrooms, offices and equipment in sufficient number, capacity and fully equipped	1144
O1.2 S2. Making education and training activities sustainable	%100

O1.3 S1. Increasing the number of electronic resources accessible from the library and expanding their use and access	244393
O1.3 S3. Moving education-training resources to the virtual environment and keeping the information up-to-date	685
O1.4 S1. Increasing social facilities and living spaces on campuses	28
O1.4 S2. Providing transportation between and within campuses	% 66.85
O1.4 S3. Improving the life conditions of disabled	%90
Social Participation and Development	
O1.3 S4. Increasing the number of certification programs/events offered in all kinds of environments	125
O2.2 S1. Increasing the number of interdisciplinary projects that serve the society as a result	160
O2.2 S2. Increasing interdisciplinary scientific research opportunities	140
O2.3 S1 Increasing the functionality of R&D and Innovation Coordination Center Technology Transfer Office (ARINKOM TTO)	81
O2.3 S2. Ensuring the sustainability of the university's cooperation with the Public and Private Sector	139
O2.3 S3. Providing consultancy services to public and industrial organizations	60
O2.3 S4. Producing projects funded by non-university sources	43
O2.5 S1. University academic units; Supporting the organization of events in cultural, artistic and sports fields	600
O2.5 S2. To support the participation of faculty members in cultural, artistic and sports activities organized at national/international level.	651
O2.5 S3. Ensuring effective use of cultural, artistic and sports facilities	200482
O3.1 S.1. Organizing activities to share the university's focus and priority on "Lifelong Learning" with all social segments	448
O3.1 S2 Increasing the university's communication activities towards the society	945
O3.3 S1 All cultural, artistic, sports, scientific, etc. of the university. Allocating a part of the event venues to disadvantaged segments in events	128
O3.3 S2 To ensure that some of the activities are carried out in the university's cultural, artistic, sports, scientific, etc. living spaces for disadvantaged segments of the society (nursing homes, prisons, Child Protection Agency, women's shelters, etc.).	43
O3.3 S3 Conducting activities that encourage community service-oriented activities	103
O3.3 S4 Conducting studies contributing to the city and region	1207
Human Rights	-
Environment	-

From the corporate governance perspective, the organization's strategies generally refer to accountability, transparency and ethical behavior, and the rule of law. In this context, as of 2018, 24 educational programs have completed the accreditation process. 5 events were organized this year to contribute to scientific research, financial, personnel and education and training legislation studies. Similarly, 10 events were organized with the action plan for compliance with internal control standards to accelerate the work on the internal control system in order to improve accountability and transparency values. The Electronic Document Management System has been 100% completed in order to ensure effective management in inter-unit communication and to disseminate ethical and transparent practices. In addition, the work carried out to improve business processes and organizational structure has been completed by 50%.

When workforce practices are examined, the strategies included in the document mostly focus on training and skill development activities organized for employees. As of 2018, the number of certificate programs and events organized increased to 125, 65 events for the professional development of employees and 25 in-service trainings were organized for academic and administrative staff. However, in this strategic plan document, clear actions regarding recruitment of workers, disciplinary and complaint procedures, working conditions, health, safety and hygiene requirements of employees and their remuneration are not mentioned.

The strategies for fair operating practices included in the document focus on the university creating positive collaborations with other organizations and stakeholders. In this respect, 73 faculty members and 267 students participated in domestic and international exchange programs. 1153 protocols were signed with domestic and international universities,

12 collaborations were made with other national and international student clubs, 117 joint events were held with non-governmental organizations, 12 partnerships were established with external stakeholders in the Open Education system, 910 collaborations were made with all national and international stakeholders, and 3 joint events were held on lifelong learning with the universities of the world. In addition, there are no clear statements in this strategic plan document on anti-corruption practices, fair competition, egalitarian approach and property rights.

The title specified as consumer issues in the ISO 26000 document has been addressed as student issues within the scope of Social Responsibility of Universities. Strategies for student issues in this document reviewed mostly focus on students' access to basic products and services. During this period,

practices were made to improve the physical conditions of the units, the resources in the library were increased, importance was given to transferring educational resources to the virtual environment, social areas and living opportunities on the campus were increased, and arrangements were made for transportation facilities. In addition, efforts to facilitate living opportunities for disabled students have been completed at a rate of 90%. Although this strategic plan attaches importance to students' access to basic products and services, it does not include clear statements addressing the issue of ensuring the health and safety of students. Additionally, there is no strategy regarding the privacy of students' data and gender equality.

Another subheading examined in the context of USR is social participation and development. Research findings show that Anadolu University 2014-2018 Strategic Plan focuses on this issue. For this purpose, to increase the university's cooperation with other public and industrial organizations, to provide consultancy to them, to increase the projects funded by other organizations, to carry out cultural, artistic and sports activities for the society and to make university facilities available for the use of the society, to carry out studies for the society, the city and the region. Practices to encourage these practices are clearly stated in the document.

Apart from the USR categories mentioned above, there are no clear statements about human rights and freedoms or environmental and ecological responsibilities in the examined document.

6.2 Anadolu University 2019–2023 Strategic Plan

In this strategic plan, the following goals and objectives are expressed and strategies for implementation in line with these are specified (AU SP2, 2024).

Table 3. AU 2019-2023 Strategies and Indicator Numbers in the Context of USR

Goals and Objectives	USR
Goal 1. Continuous improvement of the quality of education and training activities	*ST*
Objective 1.1. Continuously improving the quality of education and training activities within the framework of qualifications	*ST*
Objective 1.2. Developing education and training programs by taking into account stakeholder needs	*SPD*
Objective 1.3. Increasing the effectiveness of information and communication technologies in the education and training system	*ST*

Objective 1.4. Increasing national/international cooperation in the field of education and training	FOP
Goal 2. Increasing the quantity, quality and diversity of research activities	SPD
Objective 2.1. Increasing the quality and quantity of research outputs	CG
Objective 2.2. Increasing research diversity within the university and between the university and industry	SPD
Objective 2.3. Completing the National Rail System Research and Test Center and implementing an operating model with institutes and research centers within the Center	SPD
Goal 3: Diversification and expansion of collaborations and activities that create value within the framework of social responsibility	SPD
Objective 3.1. Increasing cooperation and diversity of activities with civil society and other public/private institutions and organizations in line with social priorities	FOP
Objective 3.2. Increasing the awareness level of activities carried out for the purpose of serving the society	SPD
Goal 4: Continuous improvement of the quality of the open and distance learning system	CG
Objective 4.1. Ensuring the sustainability of the student-centered, flexible, accessible and technology-based nature of the open and distance learning system	ST
Objective 4.2. Increasing lifelong learning activities	SPD
Objective 4.3. To ensure the training and development of human resources for the open education system	LP
Objective 4.4. To carry out studies on the institutional reputation of the open education system	CG
Goal 5: Strengthening the effective and efficient management system in line with the principles of institutionalization	CG
Objective 5.1. Increasing the effectiveness of corporate communication	CG
Objective 5.2. Expanding quality assurance practices	CG
Objective 5.3. Strengthening professional development and motivation for human resources	LP
Objective 5.4. Improving living conditions on campus	ST
Goal 6: Dissemination of entrepreneurship culture	CG / SPD
Objective 6.1. Increasing activities aimed at developing entrepreneurship culture	CG / SPD
Objective 6.2. Supporting entrepreneurial activities that will create economic contribution at the university	CG / SPD

The number of goals, which was 5 in the previous period, was increased to 6 in the 2019-2023 period. When viewed from the perspective of university social responsibility, the first of these objectives refers to student issues, the 2nd and 3rd objectives refer to social participation and development, and the 4th, 5th and 6th objectives refer to corporate governance. Compared to the previous period, corporate governance objectives took precedence over social participation and development objectives in this period. Of the objectives stated in line with these purposes, 7 of them are statements about corporate governance, 5 of them are about social participation and development, 4 of them are about student issues, 2 of them are about fair activity practices, and 2 of them are about workforce practices. According to these goals, it is seen that strengthening effective institutional management has gained importance in this plan period. Similarly, there are no clear goals and objectives regarding environmental and human rights issues in the 2019-2023 strategic plan.

Strategies to be put into action in line with these goals and objectives were determined and implemented as of 2019. These strategies are shown in Table 4, classified under USR subheadings.

Table 4. AU 2019-2023 Objectives, Strategies and Indicator Numbers in the Context of USR

2019-2023 Objectives and Strategies	Number
Corporate Governance	
O1.1 S1. Increasing the number of accredited programs	42
O 2.1 S2. Monitoring the activities of research centers by determining performance criteria (number of active participation in national/ international scientific/artistic activities) (number of projects within the scope of BAP completed)	5689 763
O 2.3 S1. Tender processes will be completed for the administrative and educational buildings planned to be built within the scope of the project.	%100
O 3.2 S1. Promoting the university's social responsibility activities using all communication means (number of activities covered in the media)	12.119
O 4.1 S3. Increasing the number of accredited programs in the open education system	50
O 5.1 S1. The effectiveness of the Press and Public Relations Directorate will be increased.	%100
O 5.1 S2. Planning the development and distribution of materials promoting the units (number of promotional activities)	2070
O 5.2 S1. Increasing the effectiveness of internal control studies in units (number of units with completed internal audit)	82

O 5.2 S2. Carrying out activities that will raise awareness of the quality management system within the university (number of events organized by the internal control unit)	32
O 5.2 S3. Increasing the effectiveness of Unit Quality Commissions (number of activities for improvement)	931
Labor Practices	
O 1.3 S2. To carry out in-service training activities on the use of information and communication technologies	-
O 2.1 S3. Improving the quality of researcher human resources (number of publications in journals scanned in field indexes outside the scope of SCI, SCI-Expanded, SSCI, AHCI, Art Index or Design and Applied Art Index)	1664
O 4.2 S1. To support in-service training activities offered in different sectors (Number of in-service trainings contributed by Open Education or organized at the university)	108
O 5.1 S3. Organizing activities for university employees to come together (Number of social-cultural events organized for academic and administrative staff)	2153
O 5.3 S1. Planning activities to improve the competencies of employees and evaluating the effectiveness of the training provided (number of personal/professional development events organized for academic and administrative staff)	1942
O 5.3 S3. Supporting the education-related competencies of faculty members (Number of academic and administrative personnel receiving personal/professional development training)	3668
O 5.4 S1. Increasing maintenance and repair efforts to raise the standards of facilities and buildings (Number of facilities/buildings etc. that are maintained and repaired)	17
O 5.4 S2. Continuing efforts to increase the security and accessibility of spaces (Number of buildings where risk analysis has been carried out and precautions have been taken)	3
O 5.4 S3. To establish new physical spaces in line with the university budget, to renew and develop existing ones and to make them comply with standards by taking into account the results of occupational safety risk analysis. (Completion rate of projects approved for construction)	%61,29
O 6.1 S1. To increase the number of faculty members who can teach entrepreneurship-related courses and lectures in academic units. (Number of courses opened on entrepreneurship, technology management and innovation management)	26

O 6.1 S2. To increase the number of events related to entrepreneurship (training, workshops, etc.). (Number of internal and external events organized by the university regarding entrepreneurship)	151
Fair Operating Practices	
O 1.4 S1. Increasing the effectiveness of national exchange programs (Number of programs cooperated within the scope of national exchange programs such as Farabi, bilateral collaborations, etc.)	120
O 1.4 S2. Increasing the effectiveness of international exchange programs (Number of students benefiting from exchange programs)	2449
O 1.4 S3. Increasing the number of international collaborations (Number of programs cooperated within the scope of international exchange programs such as Erasmus+, Mevlana, etc.)	742
O 2.2 S1. Increasing the activities of the university in cooperation with the sector (public/private/NGO) (Number of projects within the scope of university-sector cooperation)	108
O 2.3 S2. To gradually continue the expropriation of the projected test and driving roads in coordination with the General Directorate of Infrastructure Investments	%100
O 2.3 S3. To finalize tenders for the design and manufacturing of units to be used in research and testing processes and to follow the manufacturing processes to be carried out by the contractor company. (Number of research and test units whose design has been completed)	21
Student Issues	
O 1.1 S2. Increasing the diversity of graduate programs (Number of graduate programs)	167
O 1.2 S3. Increasing the number of students taking Academic English courses (Number of students taking Academic English courses)	9454
O 1.3 S1. To popularize electronic environments that will benefit the education and training process (Number of students benefiting from electronic media)	4.796.932
O 4.1 S1. Increasing program diversity (Number of open and distance learning programs)	15
O 4.1 S2. To ensure continuous improvement in the quality of existing programs (the number of programs accredited/renewed in the open education system)	50
Social Participation and Development	
O 1.2 S1. To increase the number of activities that take into account sector needs in education and training. (Number of events held with stakeholders in the sector)	294

O 1.2 S2. Increasing interaction with alumni (Number of events organized for alumni)	194
O 2.1 S1. Increasing the number of university-addressed research outputs (the number of citations to university-addressed publications in journals scanned in SCI, SCIExpanded, SSCI, AHCI, Art Index or Design and Applied Art Indexes)	6.097
O 2.2 S2. Increasing the functionality of the R&D and Innovation Coordination Center-Technology Transfer Office (ARINKOM-TTO) (number of activities)	260
O 3.1 S1. Holding regular meetings with NGOs and other public/private institutions and organizations to determine issues that serve social needs and priorities (number of events held with NGOs and other public/private institutions and organizations)	757
O 3.1 S2. Supporting joint work with civil society and other public/private institutions and organizations in line with social priorities (number of projects carried out with NGOs and other public/private institutions and organizations)	50
O 3.1 S3. Increasing cooperation with student clubs in the activities to be carried out within the scope of the Community Service Practices course (number of activities)	109
O 6.1 S3. Increasing the interaction between universities and technoparks (Number of internal and external events organized by the university regarding entrepreneurship)	151
O 6.2 S1. Increasing the number of entrepreneurs in pre-incubation/incubation (Number of entrepreneurs included in pre-incubation/incubation programs)	73
O 6.2 S2. Increasing the number of companies (number of companies) benefiting from incubation services (training, mentoring, consultancy, meeting with investors, etc.)	42
Human Rights	0
Environment	0

When these strategies are examined, it is observed that the orientation is mainly expressed towards the workforce practices subheading of the USR concept. In this context, training and skill development programs to be provided to employees are generally specified. During this strategic plan period, the university organized 1942 professional development events for academic and administrative staff. In addition, raising the standards of facilities and buildings in terms of improving working conditions was mentioned and attention was

drawn to the security of the spaces. One strategy in this category (O6.2 S3) touched upon the issue of promotion and appointment of academics.

Another notable difference compared to the previous period is the increase in strategies related to the corporate governance title of the USR concept. Strategies addressing external evaluation, internal control and quality management show that accountability, transparency, ethical behavior and effective management values are given importance in terms of corporate governance. In addition, the strategies expressed for increasing communication and promotional activities similarly refer to the value of transparency.

Another subheading in this strategic plan that has the same number of strategies as corporate management is social participation and development. There are strategies that mostly recommend cooperation with non-governmental organizations and other public and private institutions and organizations. However, the social needs or priorities for which collaborative activities are planned have not been clearly expressed in the strategies. Although initiatives aimed at creating local employment and income or local development are not mentioned, only the issue of entrepreneurship is emphasized.

The six strategies expressed in terms of fair operating practices mostly focus on relationships and cooperation with other institutions or stakeholders. It can be said that the O2.3 S3 strategy, which envisages monitoring the transactions of contractor companies, is aimed at ethical practices with stakeholders.

In terms of student issues, the strategies of this period were expressed for the development of existing education programs and activities, and in this respect, they referred to the sustainability of the practices. In addition, strategies for improving facilities, buildings and spaces discussed under the heading of workforce practices can be discussed here as they also affect the living conditions of students. However, apart from access to basic products and services, strategies regarding issues such as students' health, safety, and data privacy are not included in the document.

Similar to the strategic plan of the previous period, the strategic plan for the 2019-2023 period does not include clear statements about human rights and freedoms or environmental and ecological responsibilities.

7. Conclusion

Universities must be able to adapt to the rapid change in areas such as globalization, internationalization, information and communication technologies, and provide educational services that will meet the demands of new business markets. In addition, today's universities, called the 4th

generation, aim to provide social service on the basis of social responsibility as transformative and thematic institutions, instead of providing only education, research and sector-oriented services. Therefore, students studying at such universities have important roles in guiding and developing society as active participants.

In this study, the social responsibility activities specified in the 2014-2018 and 2019-2023 strategic plans of a state university, goals, objectives and strategies were evaluated under the corporate governance, labor practices, fair activity practices, student issues, social participation and development, human rights and environment sub-structures of the USR concept. While the goals and strategies for the social participation and development framework were mostly emphasized in the first plan, in the following period, the goals and strategies for workforce practices were mainly included in the document. The reason why social participation goals are not underlined may be that these goals are adopted in the first period and acting with this awareness is taken for granted in the following period. In addition, the importance of workforce practices in the second strategic plan may be due to the fact that the Covid19 pandemic has caused a paradigm shift in higher education, as in many aspects of life. During this period, developing distance education plans and organizing support and activities that will facilitate the adaptation of students, as well as academic and administrative staff, to this process have come to the fore. Renewing and improving physical spaces and making them suitable for occupational safety and health has become very important.

In addition, human rights and environmental issues within the framework of corporate social responsibility were not mentioned in both strategic plans. Universities should respect the civil, political, economic, social and cultural rights of employees and students, as well as individuals within their sphere of influence, and act sensitively on this issue, and organize events to raise the awareness of stakeholders on this issue when necessary. A comprehensive approach in this regard should be stated in the goals and strategies.

In addition, in both strategic plans examined, goals and strategies for the environment subheading within the scope of corporate social responsibility were not specified. Universities are responsible as institutions that both create environmental impact and provide education that will raise awareness about environmental issues. They must take responsibility and highlight these issues in their goals and strategies, both in terms of reducing the negative environmental impacts and carbon footprint created by their own institutions, as well as promoting sustainable community practices and raising awareness. In summary,

the concept of social responsibility in higher education institutions should not remain just written on paper but should be transformed into real actions. In this way, universities should set an example for all areas of influence.

This study, of course, has limitations. Only one state university's strategic plans for two periods were examined. All existing strategic plans could be examined in order to see the general approach of the institution within the framework of social responsibility and to take into account its evolution from past to present. In addition to these plans, scientific projects, publications and patents produced within the institution could also be included in the study. Additionally, instead of just one state university, more institutions could have been selected as a sample and the findings could have been compared. These limitations may be taken as further research areas for future studies. Despite this, the results of this study can raise awareness for higher education institutions to self-criticize within the scope of corporate social responsibility and provide a basis for future studies.

References

Ahmad, J. (2012). Can a university act as a corporate social responsibility (CSR) driver? An analysis. *Social Responsibility Journal, 8*(1), s. 77-86. doi:10.1108/17471111211196584

AU web. (2024). *Anadolu Üniversitesi kurumsal*. Retrieved from https://www.anadolu.edu.tr/universitemiz/kurumsal/vizyon-and-misyon on 16.02.2024.

AU SP1. (2024). *Anadolu Üniversitesi 2014–2018 Stratejik Planı*. Retrieved from https://www.anadolu.edu.tr/uploads/anadolu/ckfinder/web/files/kalite/2014-2018_Stratejik_Plan.pdf on 03.02.2024.

AU SP2. (2024). *Anadolu Üniversitesi 2019–2023 Stratejik Planı*. Retrieved from https://www.anadolu.edu.tr/uploads/anadolu/ckfinder/web/files/kalite/2019_2023_stratejik_plan.pdf on 03.02.2024

Belkaoui, A. (1980). The impact of socio-economic accounting statements on the investment decision: an empirical study. *Accounting, Organisations and Society*, *5*(3), s. 263–283.

Bowen, H. (1953). *Social Responsibilities of the Businessman*. New York: Harper and Row.

Chamberlain, N. (1973). *The Limits of Corporate Social Responsibility*. New York: Basic Books.

Buzby, S. L. & Falk, H. (1979). Demand for social responsibility information by university investors. *The Accounting Review, 54* (1), s. 23–37.

Carroll, A. B. (1989). *Business and Society: Ethics and Stakeholder Management*. South-Western, Cincinnati, OH.

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews, 12*(1), s. 85–105. doi:10.1111/j.1468-2370.2009.00275.x

Chen, S. H. A., Nasongkhla, J. & Donaldson, J. A. (2015). University Social Responsibility (USR): Identifying an ethical foundation within higher education institutions. *Turkish Online Journal of Educational Technology - TOJET, 14*(4), s. 65–172. Retrieved from http://www.tojet.net/articles/v14i4/14416.pdf on 10.03.2023

Deegan, C. (2002). The legitimising effect of social and environmental disclosures-A theoretical foundation. *Account. Audit. Accountability Journal, 15*(3), s. 282-311.

Erdem, A.R. (2016). Üniversite Anlayışındaki Değişim: Birinci Nesil Üniversiteden Dördüncü Nesil Üniversiteye. *Türkiye'de Yüksek Öğretim ve Akademi, 6*(16), s. 21- 52.

Esfijani, A. (2014). Methodology development for measuring virtual university social responsibility (Yayınlanmamış Doktora Tezi). Curtin University, School of Information Systems, Perth, Australya. Retrieved from https://espace.curtin.edu.au/bitstream/handle/20.500.11937/488/199910_Esfijani%202 014.pdf?sequence=2&isAllowed=y on 12.04.2020.

European Commission. (2001). *Corporate Social Responsibility Green Paper, Promoting aEuropean Framework for Corporate Social Responsibility*. Retrieved from http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2001:0366:FIN:EN:PDF on 10.03.2020.

European Commission. (2011). *A Renewed EU Strategy 2011–14 for Corporate Social Responsibility.* Retrieved from https://www.europarl.europa.eu/meetdocs/2009_2014/documents/com/com_com(2011)0681_/com_com(2011)0681_en.pdf on 10.03.2020.

EU-USR. (2015). *Comparative Research on the Social Responsibility of Universities in Europe and Development of a Community Reference Framework*. No: 527209-LLP-1- 2012-1-RO-ERASMUS-ESIN. EU Lifelong Learning Programme. Retrieved from http://www.eu-usr.eu/wp-content/uploads/2015/04/D1.4-Final-Report-Public-Part-EN.pdf on 10.04.2020

Forster, N. (1994) The analysis of company documentation. In C. Cassell & G. Symon (Eds.), *Qualitative methods in organisational research: A practical guide* s.147–166. London, England: Sage.

Friedman, M. (1970). Social Responsibility of Business is to Increase its Profits. *New York Times Mag. 13*, s.122-126. SEP

Holmes, S.L. (1976). Executive perceptions of corporate social responsibility. *Business Horizons*, *19*, s. 34-40.

Gray, R., Owen, D. & Adams, C. (1996). *Accounting and Accountability, Changes and Challenges in Corporate Social and Environmental Reporting*. Harlow: Prentice-Hall.

Idowu, S.O. (2008). An empirical study of what institutions of higher education in the UK consider to be their corporate social responsibilitiy. *Environmental Economics and Investment Assessment II, 108*, s.263-273.

ISO/DIS 26000. (2010). *ISO/DIS 26000 Guidance on Social Responsibility Functions*. Geneva: ISO copyright office. Retrieved from http://isotc.iso.org/livelink/livelink/8385026/ISO_DIS_26000_Guidance_on_Social_Responsibility.pdf?func=doc.Fetch&nodeid=8385026 on 12.04.2020.

ISO. (2018). *ISO 26 000 Guidance on Social Responsibility.* Geneva: ISO copyright Office. Retrieved from on https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100258.pdf adresinden 12.05.2020.

Jabbour, C.J.C. (2010). Greening of business schools: a systemic view. *International Journal of Sustainability Higher Education, 11*(1), s.49-60.

Jankal, R. & Jankalova, M. (2017). Social responsibility of the educational institution. *Human Resources Management & Ergonomics, 11*(2), s. 51-58.

Jimenez, M. (2007). The socially responsible university: A way of being. *The Global*

University Network for Innovation (GUNi). Retrieved from http://www.guninetwork.org/articles/socially-responsible-university-way-being adresinden on 12.04.2020.

Karimi, M. R. (2013). Designing the conceptual model of social responsibility of the Azad University by public relation role. *African Journal of Business Management, 7*(1), s. 8-21.

Külekçi, E. & Özgan, H. (2015). Üniversite öğrencilerinin algılarına göre sosyal sorumluluk alanında görev alma nedenleri ve sonuçları. *Anadolu Eğitim Liderliği ve Öğretim Dergisi, 3*(2), s. 1-15.

Leal Filho, W. (2000). Dealing with misconceptions on the concept of sustainability. *Int. J. Sustainab. Higher Educ., 1*(1), s. 9-19.

Nejati, M., Shafaei, A., Salamzadeh, Y., Daraei, M. (2011). Corporate social responsibility and universities: A study of top 10 world universities' websites. *African Journal of Business Management, 5*(2), s. 440-447.

Reiser, J. (2007). Managing university social responsibility. *International Sustainable Campus Network: Best Practices - Future Challenges*. Retrieved

from https://international- sustainable-campus-network.org/conferences/ zurich-2007/ on 09.04.2020.

Saran, M., Coşkun, G., Zorel, F.İ.; Aksoy, Z. (2011). Üniversitelerde sosyal sorumluluk bilincinin geliştirilmesi: Ege üniversitesi Topluma Hizmet Uygulamaları dersi üzerine bir araştırma. *Journal of Yasar University, 22*(6), s. 3732-3747

Senge, P. M. & Carstedt, G. (2001). Innovating our way to the next industrial revolution. *Sloan Management Review*, *42*(2), s. 24–38.

Sosyal Sorumluluk Platformu. (2020). *Sosyal Sorumluluk.org.* Retrieved from http://www.sosyalsorumluluk.org/ on 13.02.2023.

Suchman, M. C. (1995). Managing legitimacy: strategic and institutional approaches. *Academy of Management Review, 20*, s. 571–610.

Şimşek, H. & Adıgüzel, T. (2012). Yükseköğretimde yeni bir üniversite paradigmasına doğru. *Eğitim ve Bilim, 166*, s. 250-261.

TGV. (2013). Üniversitelerde Sosyal Sorumluluk ve Sosyal Girişimcilik Pilot Projesi. Gençlik Araştırmaları ve Sosyal İlişkiler Departmanı. Retrieved from https://www.tog.org.tr/wp-content/uploads/2019/01/2Universitelerde_ Sosyal_Sorumluluk_Rapor.pdf on 10.04.2020.

Toker, H. & Tat, M. (2013). Sosyal Sorumluluk: Kamu ve Vakıf Üniversiteleri Öğrencilerinin Sosyal Sorumluluğa İlişkin Bilgi Düzeyleri ve Algılarının Ölçülmesi. *Selçuk İletişim Dergisi, 8*(1), s. 34-56.

Vallaeys, F. (2015). *Defining Social Responsibility: A Matter of Philosophical Urgency for University. Global University Network for Innovation.* (Online). Retrieved from http://www.guninetwork.org/articles/defining-social- responsibility-matter-philosophical-urgency- universities on 10.03.2020.

Walton, C. (1967). *Corporate social responsibilities*. Wadsworth, Belmont (CA).

Vasilescu, R., Barna, C., Epure, M., & Baicu, C. (2010). Developing university social responsibility: A model for the challenges of the new civil society. *Procedia Social and Behavioural Sciences, 2*, s. 4177-4182.

WBCSD. (2000). *Corporate Social Responsibility: Making Good Business Sense*. Retrieved from https://www.globalhand.org/system/assets/ aadd8f32f6ecef3fe3b080b8d462d509da3f3e57/original/CSR_Good_Business_ WBCSD_2000.pdf on 10.03.2020.

Wright, T. (2010). University presidents' conceptualizations of sustainability in higher education. *International Journal of Sustainability in Higher Education, 11*(1), s. 61-73.