2021

Cilt 14, Sayı 1
Volume 14, Issue 1

Kuramsal
Eğitimbilim Dergisi
JOURNAL OF THEORETICAL EDUCATIONAL SCIENCE

Afyon Kocatepe Üniversitesi
Eğitim Fakültesi

ISSN: 1308-1659

http://www.keg.aku.edu.tr

Kuramsal Eğitimbilim

Kuramsal

KURAMSAL EĞİTİMBİLİM DERGİSİ*
Journal of Theoretical Educational Science
ISSN: 1308-1659

* **Journal of Theoretical Educational Science** is a quarterly peer-reviewed online journal.

Abstracting and Indexing
ULAKBİM TR Dizin, EBSCO, ERIH Plus, Index Copernicus, DRJI, DOAJ, Türk Eğitim İndeksi (TEİ), SOBIAD, Google Scholar

Redactions
Res. Asst. Mehmet Ertürk GEÇİCİ

English Language Editor
Res. Asst. Merve VEZİR

Address
Afyon Kocatepe Üniversitesi, Eğitim Fakültesi, A.N.S. Kampüsü, 03200 Afyonkarahisar, Turkey
Tel: +90 272 2281418
e-mail: editorkebd@gmail.com

CONTENTS

FROM THE EDITOR

Dear Distinguished Researchers and Readers,

JTES-KEG is honoured to publish the first issue of 2021 and the sixth issue in English. The change in the medium of publication as English, as we expected, has shortened the review and publication process up to 4.5 months. This 4.5-month process is even shorter due to our OnlineFirst system in which we publish articles earlier than its normal issue. In addition to the language change and OnlineFirst, we started the initial editor screening to accelerate the decision process. We hope all these efforts will shorten the review process.

All these changes happened thanks to the efforts of our international editorial board members. Without them, we cannot realize this quick and efficient process.

In 2021, we brought a new change in terms of the publication process. We welcome our language editor, Res. Asst. Merve Vezir, to our journal. She will help authors for proofreading, and this will increase the fluency of the manuscripts to reach a larger audience.

In this issue, we decided to publish four (4) distinguished research articles. We hope that these articles published in the first issue of 2021 will contribute to the literature. Also, we will continue to show accepted manuscripts in OnlineFirst soon.

Finally, we should also express our sincere thanks to the Editorial Board, reviewers and authors for their invaluable contributions. We also look forward to receiving submissions of sufficient rigor and quality. See you at the 2021 April issue!

Fatih GÜNGÖR, PhD
Afyon Kocatepe University
Faculty of Education

Journal of Theoretical Educational Science, 14(1), 1-19, January 2021
Kuramsal Eğitimbilim Dergisi, 14(1), 1-19, Ocak 2021
[Online]: http://dergipark.gov.tr/akukeg
DOI number: http://dx.doi.org/10.30831/akukeg.746818

Examining the Educational Sections of Development Plans in Turkey in the Context of Educational Administration

Türkiye'deki Kalkınma Planlarının Eğitim Bölümlerinin Eğitim Yönetimi Bağlamında İncelenmesi

Abdullah BALIKÇI*

Received: 02 June 2020 **Research Article** **Accepted:** 16 November 2020

ABSTRACT: Development-education interaction can be seen clearly in development plans. This study aims at making inferences about educational administration from the educational sections of the development plans in Turkey since 1963. This study was carried out with a qualitative research method. The data were analyzed using descriptive analysis approach. In this study, 11 development plans prepared since 1963 in Turkey were analyzed in terms of educational administration. Special expert commission reports prepared for development plans are included in the analysis. It was seen that the following points come to the fore in the context of educational administration: MoNE-based organization should be reviewed. The administrative processes should be implemented more effectively. Educational administration-environment interaction should increasingly be maintained. Arrangements should be made for the development and duties of educational administrators. For researchers, it can be recommended to conduct studies with different methods and studies on the problems between planning and implementation related to educational administration. For practitioners, it can be recommended to include educational administration experts in the planning process more and effectively, and include them in education plans more.

Keywords: Development plan, educational planning, educational administration.

ÖZ: Kalkınma- eğitim etkileşimi kalkınma planlarında açıkça görülebilmektedir. Bu çalışmada amaç, 1963 yılından bu yana yapılmış kalkınma planlarındaki eğitim bölümlerinde eğitim yönetimine yönelik çıkarımlarda bulunmaktır. Çalışmada nitel araştırma yöntemi kullanılmıştır. Veriler, betimsel analiz yaklaşımıyla analiz edilmiştir. Çalışmada, 1963 yılından günümüze yapılan 11 kalkınma planı eğitim yönetimi açısından analiz edilmiştir. Analize kalkınma planlarına yönelik hazırlanmış özel ihtisas komisyonu raporları dahil edilmiştir. Araştırmada eğitim yönetimi bağlamında şu noktaların ön plana çıktığı görülmektedir: MEB merkezli teşkilatlanmanın gözden geçirilmesi ihtiyacı vardır. Yönetim süreçlerinin daha etkin uygulanması gerekmektedir. Eğitim yönetimi-çevre etkileşiminin gittikçe artan bir şekilde sürdürülmesi gerekmektedir. Eğitim yöneticilerinin gelişimine ve görevlerine yönelik düzenlemeler yapılmalıdır. Araştırmayla ilgili olarak araştırmacılar için eğitim yönetimi alanıyla ilgili tüm planları kapsayacak şekilde farklı yöntemle araştırmalar yapılması, planlama ile uygulama arasındaki problemlerin araştırma konusu yapılması önerilebilir. Uygulayıcılar için, eğitim yönetimi uzmanlarının planlama sürecinde daha fazla ve etkin bir şekilde katılması, eğitime planlarda daha fazla yer verilmesi önerilebilir.

Anahtar kelimeler: Kalkınma planı, eğitim planlaması, eğitim yönetimi.

* *Corresponding Author*: Asst. Prof. Dr., Istanbul University-Cerrahpaşa, Istanbul, Turkey, abdullah.balikci@istanbul.edu.tr, https://orcid.org/0000-0002-9824-0197

Citation Information
Balıkçı, A. (2021). Examining the educational sections of development plans in Turkey in the context of educational administration. *Kuramsal Eğitimbilim Dergisi [Journal of Theoretical Educational Science], 14*(1), 1-19.

ISSN: 1308-1659

It is suggested that planning should include the decisions regarding the regulations to be made for the future (Koçel, 2001). Due to this relationship, countries are preparing their development plans. Development is expected in various domains of society (social, political, and economic, etc.). Social and individual gains can emerge with the realization of these expectations. These gains have a social dimension as well as the economic, environmental, and educational dimensions. Achieving and maintaining gains benefit from the concept of sustainable development today (Directorate of Strategy and Budget [DSB], 2018; Karakütük, 2019). Sustainable development can be realized through certain logic, central work, and planning that covers many social, economic, and environmental factors (Crowson, 1992; Tian, 2016). Başaran (1993) defines it as a simple, reliable, and economic study that can be continuously improved and includes planning, future-oriented activities, objectives desired to be achieved, and measurable results. Koçel (2001) suggests that planning is the decision regarding the regulations to be made for the future. For this, it is necessary to determine the goals, risks, and assumptions of the plans to be made as well as investigating and examining the things to be done in the future. The importance of planning for the organization makes it necessary for the administrators to make plans. Kondakçı and Zayim (2013) state that a plan is a decisive study for the realization of the decision and targets within organizations and its scope is what is desired and expected to be done in the future. Küçükali (2011) defines the aim in planning as creating order by preventing disorder in the organization while Balyer (2019) defines it as making decisions, designing the future, and satisfying the targeted groups and meeting their expectations. Another approach to planning is that planning can be a means with a compass and a road map in reaching the goals of planning. For a means to serve its purpose, the resources to be utilized should be determined and used effectively. Today, this means can be implemented as a strategic plan at the level of organizations (Beach & Lindahl, 2015; Gümüş & Şişman, 2012).

Considering the history of planning, it is seen that economic concerns have come to the fore (Ekiz & Somel, 2007). In addition to this, planning has come to the agenda in terms of development especially after the Second World War (Kaya, 2015, p. 8). After the Second World War, many countries have tended to make development plans to solve their problems in various fields (economic, political, education, health, etc.). Organizations such as the United Nations (UN), the International Monetary Fund (IMF), the World Bank (WB), the International Labor Organization (ILO), and the Organization for Economic Cooperation and Development (OECD) have been established to help countries develop in the specified areas (Karakütük, 2019). After the proclamation of the Republic of Turkey in 1929, the solution was sought in the industrial plans due to the crisis affecting the world. As a result, the first industrial plan was prepared in 1934 (Soyak, 2003). The development plans first arrived in Turkey after the 1960s. It was stated in the 1961 Constitution, Turkey, that planning was one of the duties of the state. The State Planning Organization (SPO) was established in 1960. A Research Planning and Coordination Board (APK) was established within the Ministry of National Education to work in coordination with the SPO. With law number 5436 enacted in 2005, the board left its duty to the Strategy Development Directorate. The duties of the SPO were transferred to the Ministry of Development, which was established in 2011 (Gümüş & Şişman, 2012, p. 149).

One of the areas that are included in the development plans and stand out is education. The role of education in development can be seen in development plans (Kaya, 2015). Education contributes to the achievement of development goals by raising the qualified labor force in all areas, especially the economy (Karakütük, 2019). Gümüş and Şişman (2012) identify the aim of planning in education as to maximize the benefit from education and increasing the effectiveness of the education system while Yıldız and Karakütük (2017) identify it as to train qualified labor force. Günkör (2017) interprets the positive relationship between education and development as the contribution of education to the ability to train qualified people, the increase in the economic power of individuals, and the training of individuals producing technology. In addition to this, he emphasizes that it is the source of development. Akar (2010) defines the benefit of education as facilitating adaptation to constantly evolving and changing conditions while Hess, Johnson, and Reynolds (2014) define it as meeting formal and informal requirements, and, therefore, contributing in and out of the organization in both short and long term.

It is possible to benefit from education through creating a certain order between planning and education (Adem, 1979), considering the education system (Bursalıoğlu, 2000), the opinions of the environment including students (Davidovitch-Marton, 2007), and various school types constituting the education system (Tian, 2016), determining the needs (Sezgin-Nartgün, 2000), preparing to reflect country's needs (Akça, Şahan, & Tural, 2017), providing effective and efficient cooperation between sectors (Persaud, 2017), bringing together the academicians and professional organizations of the created team, and ensuring sharing and cooperation among them (Alterman, 2017). However, it is understood that there are problems in implementing the above-mentioned issues. The problem experienced here results from being unable to create a planned change in the development plans for a qualified labor force in education and to ensure desired development in terms of educational financing (Altundemir, 2012) as well as acting without a plan (Adem, 1979).

One pillar of educational planning is administration. Bayram (2019) and Crowson (1992) emphasize administration's handling the organization in all its dimensions from the top to the bottom, and having sufficient training and equipment for this while Bursalıoğlu (2000) suggest that the administration should make a plan with a certain order for the works to be done after making a decision. Aydın (2000) states that an administration can benefit from planning for adapting the behavior of employees to the organization. He believes that it is an effective method for the administration to coordinate by starting from the environment of the employee and to organize it in a way that reveals the potential of the employees. In this regard, Yıldız and Karakütük (2017) believe that administrators can use various statistical data (the number of students and schools, building, classrooms, etc.) when making decisions. Considering the contribution of educational planning to the administration, administrator, and, therefore, education, Küçükali (2011) addresses the issue in terms of using it as a problem-solving method. Çakmak (2008) addresses the issue in terms of contributing to the development of society and reducing problems -such as crimes- in social development. Balyer (2019) addresses the issue in terms of making things simpler and eliminating arbitrary applications. In this regard, Alexander (2001) emphasizes that administrators should be competent in his/her field while Fullan (1992) emphasizes that administrators should

contribute to the planning of the parties related to education and organize them. Ergen (2013) suggests that administrators should emphasize their aspects of being flexible, forward-looking, and building democratically. Thus, plans can better demonstrate the performance of the administration and realistic approaches can be adopted. Similarly, Kaya (2015) states that an education plan considering both the quantity and quality dimensions will contribute to economic and social development.

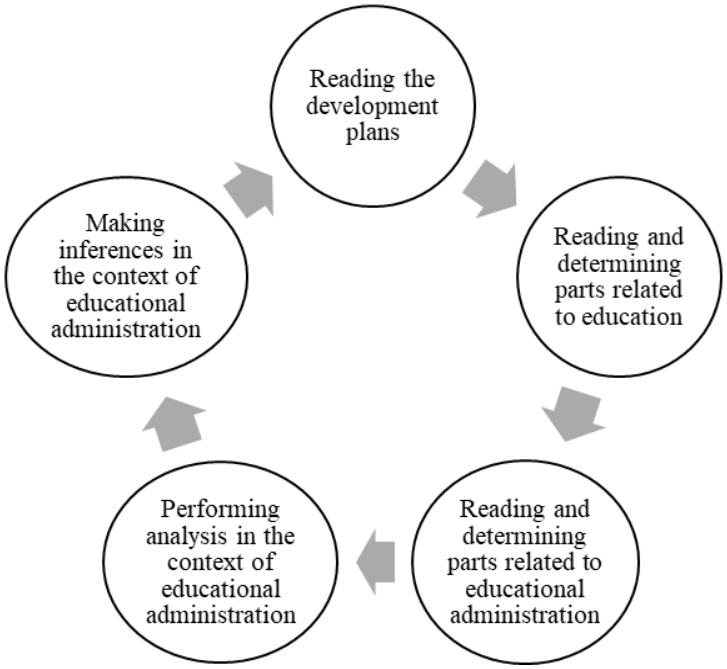
There is prevailing literature on development plans, especially focusing on education planning and the contribution of development plans to education (Alterman, 2017; Argün, 2003; Aşım, 2019; Bulut, 2002; Douse & Uys, 2018; Fullan, 1992; Gökalp, 2003; Gül, 1992; Karakütük, 2019; Korkmaz, 1995; Küçüker, 2008; Özdemir, 1997; Taş, 2007; Tuzcu, 2005; Yetkin-Ay, 2010; Yıldız & Karakütük, 2017). However, it is considered that the educational administration dimension of development plans is not sufficiently revealed. In addition to this, unlike other studies, the current study examines all development plans. Examining all plans can contribute to understanding the issue from a holistic and chronological perspective. In this regard, it is thought that the current study will contribute to revealing the development plan-educational administration dimension. This study aims to make inferences about educational administration based on the assessments made in the context of the educational administration in development plans in Turkey since 1963.

Method

This study aims to derive meaning from the plans in the context of education. Therefore, a qualitative research method was used in this study. In a qualitative study, the aim is to explain the subject in a descriptive, realistic, deep, and detailed way to the readers so that new meanings can be inferred (Merriam, 2015a; Neuman, 2006; Patton, 2014a; Yıldırım & Şimşek, 2011). In this study, all development plans (from 1st to 11th) available on the Presidency of the Republic of Turkey, Directorate of Strategy and Budget (DSB) website (www.sbb.gov.tr) with their full texts were used as documents to derive new meanings in the context of educational administration. In addition to these, special expertise commission reports prepared for education for the development plans were used to better analyze the evaluations made in the context of educational administration in development plans. In qualitative studies, one of the data sources can be official publications and documents based on reports (Christensen, Johnson, & Turner, 2015; Patton, 2014a).

A descriptive analysis was used in this study. In the descriptive analysis, the aim is to ensure that readers are included in the thoughts and help them discover focal points (Patton, 2014b; Yıldırım & Şimşek, 2011). In this study, it was attempted to perform descriptive analysis by directly quoting the assessments and items included in the development plans in the context of educational administration. In addition to this, inferences were made in terms of educational administration based on the analysis.

Figure 1. Analysis Process of Development Plans in the Context of Educational Administration



The descriptive analysis process was shown in Figure 1. The process was conducted with a deductive method and a circular approach. At the end of the process, the researcher's reflectivity, expert review, and supervision strategies were used for the reliability and validity of the emerging report (Christensen et al., 2015; Merriam, 2015b). These strategies were reflected in the study as follows: The reflectivity strategy was reflected by providing direct quotations from plans with page and item numbers and presenting Table 1 based on the analysis. Expert review strategy was reflected by taking the opinions of two academicians with different academic status and by using the assessments of Karakütük (2019). Analyses were directly related to the study and supervision strategy was reflected by considering the opinions of two academicians and one language expert. Abbreviations were used when expressing development plans. Some of the abbreviations are as follows: 1st Five-year Development Plan as "1st FYDP", 9th Development Plan as "9th DP", Ministry of National Education, Turkey as "MoNE", Council of Higher Education as "CoHE", and Directorate of Strategy and Budget as "DSB".

Findings

In this section, all of the development plans (from 1st to 11th) were analyzed in the context of educational administration. In addition to this, special expertise commission reports prepared for development plans were analyzed. However, the special expertise commission reports for the first 3 plans could not be reached. It was also seen that there were no special expertise commission reports for education in the 5th, 6th and 7th Development Plans. The evaluations on educational administration in special expertise commission reports prepared for the remaining 4th, 8th, 9th, 10th, and 11th Development Plans were analyzed (www.sbb.gov.tr). It was seen that the following subjects came to the fore in the context of educational administration: Evaluations on the organizational structure of the MoNE, evaluations on administrative processes,

evaluations on the connection between educational administration and the environment -especially CoHE-, training of the educational administrators, and evaluations on their duties. The inferences for the relevant plan were presented in Table 1.

Table 1

Educational Administration in Development Plans

Development Plan	Period	Section/Item	Page	Situations Assessed in terms of Educational Administration
1	1963-1967	7	439-468	Structural change and transformation expectation in MoNE, including administrative processes, cooperation with the environment, training educational administrators
2	1968-1972	6	158-187	Structural change and transformation expectations in MoNE continue, including administrative processes, cooperation with the environment continues
3	1973-1977	4/12	709-780	Structural change and transformation expectation in MoNE continue, including management processes, cooperation with the environment continues
4	1979-1983	2/5	433-459	Structural change and transformation expectations in MoNE continue, including administrative processes, cooperation with the environment and expectation of being environment-oriented
5	1985-1989	4/6	140-147	Including administrative processes, training educational administrators
6	1990-1994	4	291-296	Including administrative processes, revealing expectations from educational administration and administrators
7	1996-2000	3	23-34	Including administrative processes, emphasizing orientation function of MoNE, attempting to realize structural change and transformation in MoNE through regulation
8	2001-2005	8	80-85	Including administrative processes, attempting to realize structural change and transformation in MoNE through regulation, the need to resort to different methods, indicating cooperation with the environment, revealing the need for structural change in CoHE
9	2007-2013	570-577/581-602 (article)	84-85 85-87	Including administrative processes, structural change and transformation expectations in MoNE continue, the need for structural change in CoHE, cooperation with the environment continues, school administration

10	2014-2018	137-165 (article)	31-35	Including administrative processes, assigning the coordination task to the MoNE as well as the cooperation with the environment, including the concept of sustainable development, including the powers and responsibilities of the school administration, providing recommendations of CoHE
11	2019-2023	547-563 (article)	126-131	Including administrative processes, arrangements for school administration and administrators, arrangements for CoHE

Table 1 includes evaluations regarding educational administration in development plans. It was seen that there were evaluations centered on the Ministry of National Education in terms of educational administration. In addition to this, there were also evaluations regarding the interaction of administrative processes, educational administrators, and educational administration with the environment.

1st Five-Year Development Plan (1963--1967)

This plan consisted of 10 sections. Education was addressed in the 7th section, from page 439 to 468. The link between education and economy and its rationale was explained as follows: "…as it was also addressed in terms of training the necessary and sufficient number of staff to realize the work to be carried out in this period for achieving the social goals of education as well as the development goals…" (p. 441) While the reasons for not reaching the desired point in education were listed, the educational administration-centered organization problem was brought to the fore. In addition to this, being away from the holistic approach and not adapting the planned approach were among the other main problems. "…However, not considering the education system as a whole, not addressing education in a long-term framework and planned way, and disorganization in the educational institution prevented all these efforts and expenditures from being sufficiently efficient, and caused various imbalances in our education system" (p. 448). In addition to this, not training educational administrators and the lack of cooperation among institutions in this plan were also considered as problems. "It is also an important issue not to train educational administrators and not to establish necessary cooperation between Ministries and educational institutions" (p. 449).

This plan aimed at reviewing the educational organization as expressed in "the most important issue here is to bring the organization in charge of educational services to a position that can meet these services" (p. 457) creating cooperation in terms of the contribution of institutions to education as expressed in "close cooperation will be provided between institutions involving education and making plans for education" (p. 457), and organizing and coordinating education with the MoNE. "Various vocational schools will meet in a certain time to be carried out in cooperation with the relevant ministries and departments, the meeting will be held within the Ministry of National Education" (p. 457).

This plan evaluates education in terms of its contribution to the economy. In the context of educational administration, structural problems in the MoNE were brought

forward. As a solution, a structural change and transformation were expected in the MoNE for planning, coordination, and interaction, and communication between organizations. It was aimed to implement specified solutions through educational administrators expected and desired to be trained.

2nd Five-Year Development Plan (1968--1972)

This plan consisted of 11 sections. Education was addressed in the 6th section, from page 158 to 187. This plan revealed the organization and coordination among the educational institutions within the MoNE as expressed in "all educational institutions should be gathered within the Ministry of National Education" (p. 159), revealed supervision, evaluation, and cooperation with universities as expressed in "with the understanding explained in the principles, the supervision of private schools and provision of a certain standard of education and physical conditions will be observed, and those in higher education will continuously work under the supervision of an inter-university board under the direction of Ministry of National Education" (p. 176), and revealed inter-institutional cooperation, and contribution and participation of institutions to education as expressed in "the in-service training in industry concerns the Ministry of National Education" (p. 186).

In this development plan, it was aimed to provide coordination, organization, supervision, and evaluation from MoNE, and to communicate and cooperate with relevant institutions in terms of education, especially universities. However, expressing the issues of coordination, organization, and cooperation in the previous plan, and this plan also indicated that the problems could not be solved and continued to exist.

3rd Five-Year Development Plan (1973--1977)

This plan consisted of 6 sections. Education was addressed in the 12th part of the 4th section, from page 709 to 780. The MoNE was criticized for not performing its coordination and organizing functions expected from it in previous plans. Article 1455: "Administrative structures and personnel status of the Ministry of National Education and other educational institutions are far from ensuring the necessary internal planning, program development, and similar procedures for the implementation of the education policies envisaged in the plans and programs" (p. 715). After the criticisms, organizing the MoNE to target the development in the current plan, making it functional, and grounding on the decisions and implementation to reach the goals in the plan was expressed in article 1565/7 as follows: "It will be ensured that all educational organizations, especially the Ministry of National Education, will be reorganized to effectively implement the educational developments in the envisaged long term and to spread them to a nation-wide level. Decision-making and implementation activities envisaged by the Plan will be developed by grouping the overgrown, complex, and dysfunctional central organization of the Ministry of National Education into functional groups based on the administrative principles". It was seen that the mentioned conditions had not been achieved in the previous plan, and organization and planning processes in the MoNE had been brought to the fore.

4th Five-Year Development Plan (1979--1983)

This plan consisted of 4 sections. Education was addressed in the 5th part of the 2nd section, from page 433 to 459. Development-oriented reorganization of the education system was described in article 1637.1 with a dominating understanding by taking the environment into account as follows: "It is necessary to reorganize the education system to provide the ability to improve the physical and social environment of the individual and to be a factor bringing society to a further development stage". In this regard, it was seen that it was aimed in MoNE to make arrangements based on the development of educational organizations in article 1637/6 as follows: "All organizations related to education, especially the Ministry of National Education, will be restructured to effectively implement the educational developments and spread them to a nation-wide level".

The request for a change in the structure of the Ministry of National Education was stated in the special specialization commission of education as follows "According to the principles of planning and coordination introduced by the Basic Law of National Education, the decision mechanisms in the central and provincial organizations of the Ministry should be rearranged in a way to focus on vocational technical education" (p.55). The organizing and planning function of MoNE was emphasized in this plan. Special importance was placed on communication with the environment.

5th Five-Year Development Plan (1985--1989)

This plan consisted of 5 sections. Education was addressed in the 4th section, from page 140 to 147. As in the 1st FYDP, the plan addressed the training of educational administrators. Article 520 was as follows: "Emphasis will be placed on training highly qualified referral and administrators through in-school and non-formal education" (p. 140). However, there were no principles or goals in the education section to support this idea. In this plan, higher education was included in only one article (article 531, p. 140) in terms of preparation for teaching. This plan considered the training of educational administrators and it was seen that the planning works came to the fore in terms of school administration.

6th Five-Year Development Plan (1990--1994)

This plan consisted of 4 sections. Education was addressed in the 4th section, from page 291 to 296. Educational administrators were provided with the duty of determining and resolving problems in the plan and implement it. In this regard, article 813 was as follows: "For each education level, the aim of improving the problem determining and solution-seeking skills of the educational units in the provinces will be taken as a basis" (p. 294). Making arrangements in terms of educational administration was also included in this plan. Article 815 was as follows: "...arrangements to improve educational administration will be made" (p. 294). In addition to this, in this plan, making arrangements for making use of leisure time was also mentioned among the duties of educational administrators. Article 855 was as follows: "Central administrations, municipalities, and village administrations will be guiding in making use of leisure time" (p. 297). Encouraging decision-making for determining and solving problems in terms of educational administration by attaching importance to leisure time can be considered as positive arrangements. Uncertainty about what the measures to

improve educational administration are can be considered as negative arrangements. In terms of educational administration, this plan draws attention to the planning and organizing practices for the skills of administrators.

7th Five-Year Development Plan (1996--2000)

This plan consisted of 4 sections. Education was addressed in the 2nd section, from page 23 to 34. There is an important approach in the 7th FYDP. This approach was reflected as "education will be the top priority in this plan period" (p. 27). In addition to this, the attempt to make use of culture, physical education and sports, and leisure time services together can be considered as a positive perspective. Although the importance of education was emphasized, the fact that education was expressed in only 11 pages in the plan consisting of 219 pages suggested that there was a contradiction regarding this positive approach. As a solution to all these problems, it was requested to revise 1739 numbered National Education Basic Law, 222 numbered Primary Education and Training Law, and 3797 numbered Law on Organization and Duties of MoNE within the framework of legal and institutional arrangements. The arrangements were expected to be planned within the framework of cooperation. This situation was revealed as follows:

> Arrangements will be made in 3797 numbered Law on Organization and Duties of MoNE to realize a structuring based on service in national education, to turn the central organization into a high-level decision-making body that will deal with strategic planning, curriculum, research and development, supervision, and coordination tasks at the macro level, to reduce bureaucracy, to transfer the authority and responsibility to the provincial units of the Ministry and local administrators, and to ensure the active participation of Ministry provincial organizations, local administrations, and families in the serving process of education. (7th FYDP, p. 33)

Considering the 7th FYDP, expressing education as a priority can be considered as an important paradigm shift; however, its place in the whole plan and the absence of expressions supporting this in the following articles constitute doubts in terms of putting the specified changes into action. This plan adopts a planning approach in which change and development will be implemented based on the legislation directing education.

8th Five-Year Development Plan (2001--2005)

This plan consisted of 10 sections. Education was addressed in the 8th section, from page 80 to 85. In this plan, the articles between 99 and 111 were devoted to evaluations and developments in the field of education. It was attempted to bring the things that were done to the forefront rather than those that could not be done. In addition to these articles, there were also other articles including explanations about education. Article 186 drew attention to the connection among contribution to the economy, values, and high-level mental skills in terms of educational goals. "The goal of the education system is to educate people of the information age, who adhere to Atatürk's principles and reforms, adopt democratic values, internalize national culture, interpret different cultures, can think, perceive, and solve problems, and have creative thinking" (p. 25). To achieve this goal, different administration practices were included in article 683 as "A model based on performance measurement, which also takes into account total quality management, will be developed for evaluating the success of educational institutions and imbalances between regions will be eliminated" and the

contribution of the environment to this administration activities was explained in article 685 as "local administrations, voluntary organizations, and the private sector will contribute to the dissemination of education as well as the central administration" (p. 83). In addition to this, it was aimed to change the Law on Organization and Duties of MoNE and change the structure of higher education (articles 700 and 705, p. 85).

Among the aims and principles determined by the secondary education specialization commission, "in-service training of human resources in the education system should be made effective by reflecting them on their personal rights" (p. 82) and "necessary amendments should be made in the relevant legislation to facilitate the effective and efficient use of human and non-human resources in education" (p. 83) principles were included. The goal for these principles were set as follows: "To provide inclusive education at the secondary education level, 50 institutions should be equipped with the necessary structure, functioning and equipment for the successful implementation of this education and should supported by sufficient personnel" (p. 83). The evaluations included in the report emphasized the review of educational administration in terms of personnel, stakeholders, and organization.

Considering the goals, it was seen that the 8th FYDP was brought up to the agenda to include different administration practices with the contribution of the environment. As a solution in education, it was suggested to make changes in the structure of MoNE based on the legislation and it was planned to change the structure of CoHE. Communication and cooperation between MoNE and CoHE were also considered to be among the plans.

9th Development Plan (2007--2013)

It was seen that two changes were implemented with this plan. In this plan, the 'five-year' expression and the contents section were removed. Instead, 'development plan' expression and explanations under items were preferred. The subject of education was included in articles from 570 to 577 and articles from 581 to 602 (pp. 84-85; 85-87). The effect of the European Union membership process can be observed in 9th DP (article 9, p. 3; article 54, p. 12). Including education in a vision document can be considered as an important approach (p. 4). Problems related to education were mentioned (article 238-260, pp. 40-43). Another point drawing attention in this plan was that the concept of "sustainable" was included for the first time in various parts of the plan, including education (such as article 561, p. 83; article 581, p. 85; article 616, p. 88). The duty of cooperating with the environment to expand education in terms of educational administration was addressed in article 587 as "apart from the central administration, the contribution of local administrations, voluntary organizations, and private sector will be increased in disseminating education" (p. 86), the targeted structural changes were addressed in article 600 as "a service-based structure will be established in the central organization of MoNE, institutional capacity will be improved, and authority and responsibility will be delegated to the provincial organizations and educational institutions" (p. 87), the arrangements regarding the CoHE were addressed in article 601 as "the CoHE will be restructured to be responsible for setting standards, coordination, and planning" (p. 87), and arrangements regarding authority and performance in educational institutions were addressed in article 602 as "the authorities

and institutional capacities of educational institutions will be increased and a model based on performance evaluation will be developed" (p. 87).

It was seen that the views on regulating the Ministry of Education were discussed in the "Education: Preschool, Primary and Secondary Education special expertise commission". A proposal was made in the commission as follows: "In the new regulations, the role of the Ministry of National Education to be responsible for all types and levels of education other than higher education should be preserved. The central organization of the Ministry of National Education should have an institutional structure that determines more policies, conducts research and planning, guides, pioneers and supervises with pilot applications" (p.74). In addition to this, another proposal was as follows: "The structure and administration of educational institutions should be reorganized with a participatory understanding" (p. 75). It is believed that these recommendations are based on the transformation of the Ministry of Education within itself. It can be said that a participatory understanding is adopted for this.

In this plan, it was seen that emphasis was placed on inter-institutional cooperation, planning, organization, coordination, evaluation process, and balance of authority and responsibility. For establishing the specified balance, structural changes and a transformation were planned in MoNE as in previous plans.

10th Development Plan (2014--2018)

As in the previous plan, the explanations were made as articles. Education was included in articles from 137 to 165 (pp. 31-35). In this plan, the supervision and evaluation regarding the educational administration were addressed in article 151 as "multiple evaluation and supervision mechanism will be developed at the national level" (p. 34), the authorities and responsibilities of school administration were addressed in article 154 as "authorities and responsibilities of school administrations in budgeting processes will be increased" (p. 34), and the structure of the CoHE was addressed in article 161 as "higher education system will be transformed into a quality-oriented competitive structure within the framework of the principles of autonomy, performance orientation, specialization, and diversity based on accountability" (p. 34).

In the special expertise commission aimed at increasing the quality of the education system, the followings were proposed: "increasing the quality of teachers and administrators, ensuring equal opportunity in access; reducing the differences in human and physical infrastructure between provinces and schools, improving decision processes, activating the monitoring and evaluation activities, increasing accountability, setting meaningful learning goals, continuously evaluating and improving programs, following policies to realize social justice in education, decentralizing educational administration and delegating authority, and diversifying and increasing public and private resources allocated for education" (p. 43). The above-mentioned issues showed that the understanding that taking into consideration the development-oriented training and management processes within the profession would contribute to the success in school was dominant in the plan.

As in previous plans, it is considered that this plan is important in terms of bringing the administrative processes to the agenda, emphasizing the school administration, and the change in the structure of the CoHE, including the concept of

sustainability, and providing the MoNE with the coordination duty regarding the educational cooperation of various fields.

11th Development Plan (2019--2023)

It can be said that this development plan is the continuation of the previous one. Education was included in articles from 547 to 563 (pp. 126-131). Initially, as in each plan, explanations were made with articles for evaluating the previous plan. Considering education, articles 149, 150, and 153 can be exemplified (pp. 24-25). These articles indicated developments in education (one of the two priority areas according to the plan), improvement in infrastructure, and increased services. It was seen that 4 articles regarding educational administration came to the fore. First, article 553.3 addressed the professionalization of school administration, which could be also expressed as a bleeding wound in educational administration, and the training of administrators. The related article was as follows: "School administration will be transformed into a professional profession and an administrative accreditation structure will be created" (p. 127). Second, article 553.7 encouraged school administration. The related article was as follows: "Considering the student acquisition, incentive mechanisms will be created for teachers and school administrators at different rates depending on the type and location of the educational institutions they work at" (p. 128). Third, article 553.9 addressed the in-service training needs of school administrators. The related article was as follows: "The content of in-service training will be renewed in line with the current needs of teachers and school administrators." Fourth, article 554.2 addressed changing the understanding of administration.

In addition to this, it was seen that the arrangements regarding the duties of CoHE included project-centered arrangements. The related article, article 440.2, was revealed as follows: "…a coordination and support unit will be established within CoHE to strengthen the harmony between the plan objectives and projects…" (p. 100). It can be said that this plan aims at continuing and developing the practices of the previous plan. It can be considered as an important development to include the concept of governance concerning the educational administration as well as providing more space for the concept of sustainability.

It was seen that the special expertise commission for improving the quality in the education system had policy proposals regarding school administration. One of the proposals in this regard was as follows: "The quality of school administration should be improved and its autonomy should be ensured" (p. 62). The suggestion was meaningful as it indicated the place of the school administration in education. It was believed that this proposal would contribute to the solution as "… the adoption and implementation of the measures to be taken by all stakeholders, especially the Ministry of National Education, will help to eliminate the quality problem in education" (p. 62). It was determined that the understanding of taking the opinions of all the environment that could contribute to the school administration in the measures to be taken was adopted in this evaluation.

This plan includes the professionalization of school administration in terms of educational administration, the training of educational administrators, and the practices for promoting school administration. This plan also includes arrangements regarding various administration practices, such as reducing bureaucracy, ensuring information

security. It is requested for the CoHE to adopt a project-oriented structure. It is thought that goals for planning, coordination, and cooperation, and interaction with the environment are included in this plan.

Discussion and Conclusion

The transition to the planned period in Turkey in 1963 reveals the need for planning in the field of education as in all other fields. It was seen that there were various expectations about education in the plans (Beach & Lindahl, 2015; Kaya, 2015, p. 374; Küçükali, 2011, p. 63). However, when the plans were evaluated in terms of educational administration, it was seen that the following issues come to the fore: The understanding of planning and coordinating educational administration centered on the Ministry of National Education was dominant. For this, special importance was placed on obtaining the opinions of the ones to be affected by the plans of the MoNE, and cooperating with various institutions and organizations. Organizational arrangements - legal regulations - were expected for the planned changes. Considering the organizational arrangements in planning, Kondakçı and Zayim (2013) recommended that the targets should be realistic and should be needs-oriented for success. In addition to this, they also recommended that the relevant people should have a good command of the job and follow the work as well as coordinating and organizing the resources to be used in practice properly. Yıldız and Karakütük (2017) emphasized the importance of having experienced and qualified employees. In studies conducted, it was emphasized that planning involving education and the related environment is indispensable to ensure coordination within the organization. (Bennell, 2015; Boyacı, 2009; Chua, 2006; Özdoğan, 2012; Potts, Vella, Dale, & Sipe, 2016; Uvalić-Trumbić & Daniel, 2016; Yinfu, 2017). Teksöz (2014) emphasized that it was the right approach to cooperate with MoNE, CoHE, and other organizations in the context of the environment in sustainable development. Oghenekohwo and Torunarigha (2018) emphasized that not paying enough attention to education in the plans may prevent the implementation of values such as equality and social justice and thus limit development. It can be said that the results of the analyzes are in parallel with the findings in the relevant literature regarding the necessity of planning, how it should be done, and its benefits. However, it is thought that the analysis results for the planning and coordination function of the Ministry of National Education in the present study are not in parallel with the relevant literature as the research findings regarding all development plans in Turkey are insufficient.

One of the issues determined in the development plans was the expectations from the educational administrators. Educational administrators were expected to prepare plans in the organizations. For proper planning, the competencies and skills of educational administrators that could bring the plan to life were valued. In this regard, the educational administrators were expected to include the education-training requirements and innovations required by the age in planning (Douse & Uys, 2018), have professional knowledge and skills related to the plan (Nir, 2016), conduct a supervision and evaluation for the plan (Speck, 1999, p. 69), and receive adequate training (Arslan & Küçüker, 2016). For this, an educational administrator should know the different dimensions of planning and be able to establish a balance between the resources and goals (Gökalp, 2003; Gümüş & Şişman, p. 148; Hess et al., 2014;

Küçüker, 2008; MoNE, 1973; Özdemir, 1997). It can be concluded that the results of the analyzes and the studies are in parallel with each other in this regard.

Another point that drew attention in the plans was the attempt to reflect the approach stated as administration processes in the literature to the plans. It was seen that each plan included a different number of process elements. It was expected from the administrative processes to bring success in reaching the goals, especially in terms of planning. In the processes, direct or indirect effects of planning and organization on all plans could be seen. These effects were first felt in the evaluation of past plans. Başaran (1993, p. 43) and Aydın (2000, p. 121) stated that the administrative processes would contribute to the solution of administrational problems and administrators' coping with the problems. However, a process based on a certain systematicity, continuity, and determination could not be reflected in the plans (Ersöz, 2014; Tuzcu, 2005; Yıldız & Karakütük, 2017). Failure to apply administrative processes to the plans can cause problems in achieving goals (Argün, 2003; Aşım, 2019; Bulut, 2002; Gül, 1992; Korkmaz, 1995; Taş, 2007; Yetkin-Ay, 2010). However, an understanding of governance based on cooperation between the administration and the administered can contribute to overcoming the problems regarding sustainable development (Kayıkçı, 2018; DSB, 2018). All these evaluations are significant in terms of showing why similar points are repeated in the plans outlined in this specific study. This inference suggests that the results of the analysis are in parallel with the relevant literature.

Implications

It can be said that the above-mentioned studies are in parallel with this study in terms of explaining how necessary the training planning is and the difficulties experienced in this subject. However, it is difficult to say that the results of this study are in parallel with the previous studies in terms of educational administration. It is thought that there are two reasons for this. First, this study is based on the examination of all plans. Except for Karakütük (2019), no other study included all development plans in Turkey. Second, it is thought that there is not enough research on the relationship between planning and educational administration. In this study, there are various implications for educational administration, especially for administrative processes and the impact of the environment (Table 1).

The following suggestions can be made based on the fact that development plans include and direct educational administration as well as all areas. It can be recommended for the researchers to examine available plans by considering different aspects of education. The relationship between planning and educational administration can be investigated by considering various dimensions of educational administration. Research can be carried out by using different methods for the specified issues. All development plans can be included in the studies to be carried out. It can be recommended for the practitioners to make decisions in line with the plan targets by considering the importance of planning. Administrative processes can be reflected in the plans better and clearly. The opinions of educational administration experts, who are expected to be one of the environmental elements in the planning process, can be reflected more in the plans to be made.

References

Adem, M. (1979). Planlı bir eğitim düzeni kurulmalıdır. *Eğitim ve Bilim, 4*(21), 3-16.

Akar, G. (2010). *İnsan kaynaklarında eğitim planlaması ve çalışanların eğitim uygulamalarına ilişkin algıları* (Yayımlanmamış Yüksek Lisans Tezi). Gazi Üniversitesi, Ankara.

Akça, Y., Şahan, G., & Tural, A. (2017). Türkiye'nin kalkınma planlarında eğitim politikalarının değerlendirilmesi. *International Journal of Cultural and Social Studies (IntJCSS), 3*, 394-403.

Alexander, E. R. (2001). What do planners need to know? *Journal of Planning Education and Research, 20*, 376-380.

Alterman, R. (2017). From a minor to a major profession: can planning and planning theory meet the challenges of globalisation? *Transactions of the Association of European Schools of Planning, 1*, 1-17. http://dx.doi.org/10.24306/TrAESOP.2017.01.001

Altundemir, M. E. (2012). Kalkınma planlarından eğitime bakış: kamusal mallar teorisi perspektifinden. *The Journal of Knowledge Economy & Knowledge Management, Bilgi Ekonomisi ve Yönetimi Dergisi, 7*(1), 94-105.

Argün, H. (2003). *Planlı kalkınma döneminde (1963-2002) mesleki ve teknik eğitim (gelişmeler, uygulamalar, sorunlar)* (Yayımlanmamış Yüksek Lisans Tezi). Gazi Üniversitesi, Ankara.

Arslan, G., & Küçüker, E. (2016). Okul müdürlerinin planlama etkinlikleri ve stratejik planlamada karşılaşılan sorunlar. *Kastamonu Eğitim Dergisi, 24*(2), 839-856.

Aşım, M. (2019). *Kalkınma planlarında halk eğitiminin tarihsel gelişimi* (Yayımlanmamış yüksek lisans tezi). Marmara Üniversitesi, İstanbul.

Aydın, M. (2000). *Eğitim yönetimi* (6. baskı). Ankara: Hatipoğlu.

Balyer, A. (2019). *Eğitim yönetiminde yeni yaklaşımlar* (1. baskı). Ankara: Anı.

Başaran, İ. (1993). *Eğitim yönetimi* (1. baskı). Ankara: Gül Yayınevi.

Bayram, A. (2019). The viewpoints of educational managers on educational planning in Turkey. *European Journal of Education Studies, 6*(7), 452-462. http://dx.doi.org/10.5281/zenodo.3528377

Beach, R. H., & Lindahl, R. A. (2015). A discussion of strategic planning as understood through the theory of planning and its relevance to education. *Educational Planning, 22*(2), 5-16.

Bennell, S. J. (2015). Education for sustainable development and global citizenship: Leadership, collaboration, and networking in primary schools. *International Journal of Development Education and Global Learning, 7*(1), 5-32.

Boyacı, A. (2009). İlköğretim okulu öğretmenlerinin eğitim planlaması süreçlerine yönelik kullandıkları metaforlar. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 21*, 111-123.

Bulut, E. (2002). *Yedinci beş yıllık kalkınma planında eğitim hedefleri ve gerçekleşme düzeyi* (Yayımlanmamış Yüksek Lisans Tezi). İnönü Üniversitesi, Malatya.

Bursalıoğlu, Z. (2000). *Okul yönetiminde yeni yapı ve davranış* (11. baskı). Ankara: PegemA.

Christensen, L. B., Johnson, R. B., & Turner, L. A. (2015). Araştırma yaklaşımları ve veri toplama yöntemleri. A. Boyacı, & K. Bozkuş (Çev.), A. Aypay (Çev. Ed.) içinde, *Araştırma yöntemleri desen ve analiz* (ss. 30-71). Ankara: Anı.

Chua, C. S. K. (2006). Singaporean educational planning: moving from the macro to the micro. *Current Issues in Language Planning*, *7*(2-3), 214-228. http://dx.doi.org/10.2167/cilp095.0

Crowson, R. L. (1992). *School community relations, under reform* (1st ed.). Berkeley: McCuthcan Publishing Corporation.

Çakmak, Ö. (2008). Eğitimin ekonomiye ve kalkınmaya etkisi. *D. Ü. Ziya Gökalp Eğitim Fakültesi Dergisi, 11*, 33-41.

Davidovitch–Marton, R. (2007). The education system as a platform for involving the public in planning processes. *Children, Youth and Environments, 17*(3), 85-98.

Douse, M., & Uys, P. (2018). Educational planning in the age of digitisation**.** *Educational Planning, 25*(2), 7-23.

Ekiz, C., & Somel, A. (2007). Türkiye'de planlama ve planlama anlayışının değişimi. *Mülkiye Dergisi, 31*(256), 97-136.

Ergen, H. (2013). Türkiye'de eğitimde planlama yaklaşımları ve kullanılan eğitim göstergeleri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, *9*(2), 151-167.

Ersöz, G. (2014). Geçmişten ders almak: sürdürülebilir kalkınma için eğitim. *Boğaziçi Üniversitesi Eğitim Dergisi*, *31*(2), 73-97.

Fullan, M. G. (1992). *Successful school improvement* (1st ed.). USA: Open University Press.

Gökalp, M. (2003). *Türk eğitim sisteminin kalkınma planları doğrultusunda ihtiyaç duyduğu insan gücü niteliklerinin belirlenmesi ve buna uygun öğretmen yetiştirilmesi* (Yayımlanmamış doktora tezi). Atatürk Üniversitesi, Erzurum.

Gül, H. (1992). *Kalkınma planlarında eğitime ilişkin sayısal hedefler ve gerçekleşme düzeyi* (Yayımlanmamış yüksek lisans tezi). İnönü Üniversitesi, Malatya.

Gümüş, E., & Şişman, M. (2012). *Eğitim ekonomisi ve planlaması* (1. baskı). Ankara: PegemA.

Günkör, C. (2017). Eğitim ve kalkınma ilişkisinin incelenmesi. *Uluslararası Sosyal Bilimler Eğitimi Dergisi Journal of International Social Sciences Education*, *3*(1), 14-32.

Hess, M., Johnson, J., & Reynolds, S. (2014). A developmental model for educational planning: democratic rationalities and dispositions. *NCPEA International Journal of Educational Leadership Preparation, 9*(1) – March, 2014. Retrieved from https://files.eric.ed.gov/fulltext/EJ1024108.pdf

Karakütük, K. (2019). *Eğitim planlaması* (3. baskı). Ankara: PegemA.

Kaya, Y. K. (2015). *İnsan yetiştirme düzenimiz* (6. baskı). Ankara: PegemA.

Kayıkçı, S. (2018). Yönetişimin kamu kurumlarında uygulanabilirliği: yükseköğretim kurulu başkanlığı örneği. *Ombudsman Akademik, 1*, 163-181.

Koçel, T. (2001). *İşletme yöneticiliği* (8. bası). İstanbul: Beta.

Kondakçı, Y., & Zayim, M. (2013). Yönetim süreçleri. S. Özdemir (Ed.) içinde, *Eğitim yönetiminde kuram ve uygulama* (ss. 9-62). Ankara: PegemA.

Korkmaz, A. (1995). *Kalkınma planlarında öngörülen eğitim hedeflerinin gerçekleşme düzeyi* (Yayımlanmamış doktora tezi). Gazi Üniversitesi, Ankara.

Küçükali, R. (2011). *Yönetim felsefesi* (1. basım). Ankara: Nobel.

Küçüker, E. (2008). *Kalkınma planları kapsamında yapılan eğitim planlarının analizi (1963-2005)* (Yayımlanmamış doktora tezi). Ankara Üniversitesi, Ankara.

Merriam, S. B. (2015a). Nitel araştırma nedir? S. Turan (Çev.), S. Turan (Çev. Ed.) içinde, *Nitel araştırma desen ve uygulama için bir rehber (*ss. 3-20). Ankara: Nobel.

Merriam, S. B. (2015b). Nitel araştırmalarda geçerlik, güvenirlik, etik. E. Dinç (Çev.), S. Turan (Çev. Ed.) içinde, *Nitel araştırma desen ve uygulama için bir rehber (*ss. 199-228). Ankara: Nobel.

Milli Eğitim Bakanlığı (MEB) (1973). *Millî eğitim temel kanunu*, http://www.meb.gov.tr adresinden alınmıştır.

Neuman, W. L. (2006). *Toplumsal araştırma yöntemleri* (4. basım). S. Özge (Çev.). İstanbul: Yayınodası.

Nir, A. E. (2016). Educational planning: the ethics of compromise. *Educational Planning*, *23*(1), 5-17.

Oghenekohwo, J. E., & Torunarigha, Y. D. (2018). Education and development: dynamics of access, equity, and social justice in Nigeria. *International Journal of Education & Literacy Studies*, *6*(2), 10-14.

Özdemir, B. (1997). *Planlı kalkınma döneminde (1963-1995) ilköğretim politikalarındaki gelişmeler* (Yayımlanmamış Yüksek Lisans Tezi). Abant İzzet Baysal Üniversitesi, Bolu.

Özdoğan, E. (2012). *Yükseköğretim yöneticilerinin bireysel planlama davranışlarının örgütsel planlama davranışlarına etkisi konusundaki görüşleri* (Yayımlanmamış Yüksek Lisans Tezi). Ankara Üniversitesi, Ankara.

Patton, M. Q. (2014a). Nitel araştırmanın doğası. M. Bütün & S. B. Demir, (Çev.), M. Bütün & S. B. Demir (Çev. Ed.) içinde, *Nitel araştırma ve değerlendirme yöntemleri* (ss. 3-36). Ankara: PegemA.

Patton, M. Q. (2014b). Nitel analiz ve yorumlama. A. Çekiç & A. Bakla, (Çev.), M. Bütün & S. B. Demir (Çev. Ed.) içinde, *Nitel araştırma ve değerlendirme yöntemleri* (ss. 431-540). Ankara: PegemA.

Persaud, A. (2017). Integrated planning for education and development. *European Journal of Education*, *52*(4), 448-459.

Potts, R., Vella, K., Dale, A., & Sipe, N. (2016). Exploring the usefulness of structural–functional approaches to analyse governance of planning systems. *Planning Theory*, *15*(2), 162-189.

Sezgin-Nartgün, Ş. (2000). Stratejik planlama ve eğitim. C. Elma, K. Demir (Ed.) içinde, *Yönetimde çağdaş yaklaşımlar* (ss. 277-300). Ankara: Anı Yayıncılık

Soyak, A. (2003). Türkiye'de iktisadi planlama: DPT'ye ihtiyaç var mı? *Doğuş Üniversitesi Dergisi, 4*(2), 167-182.

Speck, M. (1999). *Building a learning community* (1st ed.). New Jersey: Prentice-Hall, Inc.

Taş, U. (2007). *Türkiye'de kalkınma planları ışığında eğitimin kalkınmadaki rolü* (Yayımlanmamış Yüksek Lisans Tezi). Eskişehir Osmangazi Üniversitesi, Eskişehir.

Teksöz, G. (2014). Geçmişten ders almak: Sürdürülebilir kalkınma için eğitim. *Boğaziçi Üniversitesi Eğitim Dergisi, 31*(2), 73-97.

Tian, L. (2016). Behind the growth: planning education in china during rapid urbanization. *Journal of Planning Education and Research, 36*(4), 465–475. http://dx.doi.org/10.1177/0739456X15618014

Tuzcu, G. (2005). *Avrupa birliği'ne giriş sürecinde Türkiye'de eğitim planlaması* (Yayımlanmamış doktora tezi). Ankara Üniversitesi, Ankara.

Türkiye Cumhuriyeti Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı (SBB) [The Presidency of the Republic of Turkey, Directorate of Strategy and Budget (DSB)]. (2018). *Kalkınma planları [Development plans](1-11),* www. sbb.gov.tr adresinden alınmıştır.

Türkiye Cumhuriyeti Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı (SBB) [The Presidency of the Republic of Turkey, Directorate of Strategy and Budget (DSB)]. (2018). *Özel ihtisas komisyonu raporları [Special expertise commission reports] (4., 8., 9., 10., 11. Kalkınma planları [Development plans]),* www. sbb.gov.tr adresinden alınmıştır.

Uvalić-Trumbić, S., & Daniel, S. J. (2016). Sustainable development begins with education. *Journal of Learning for Development, 3*(3), 3-8.

Yetkin-Ay, A. (2010). *Sekiz yıllık kesintisiz temel eğitime geçişten günümüze kalkınma planlarının ilköğretimde okullaşma oranı ve sınıf mevcudu açısından irdelenmesi* (Yayımlanmamış yüksek lisans tezi). Akdeniz Üniversitesi, Antalya.

Yıldız, S., & Karakütük, K. (2017). Planlı dönemde eğitim planlaması çalışmalarının değerlendirilmesi. *Mersin Üniversitesi Eğitim Fakültesi Dergisi, 13*(2), 703-725. doi: http://dx.doi.org/10.17860/mersinefd.317978.

Yıldırım, A., & Şimşek, H. (2011). *Sosyal bilimlerde nitel araştırma yöntemleri (*8. baskı). Ankara: Seçkin.

Yinfu, Y. (2017). Concepts and policy innovations in the national education plan. *Chinese Education & Society, 50,* 142–161.

Journal of Theoretical Educational Science, 14(1), 20-37, January 2021
Kuramsal Eğitimbilim Dergisi, 14(1), 20-37, Ocak 2021
[Online]: http://dergipark.gov.tr/akukeg
DOI number: http://dx.doi.org/10.30831/akukeg.793247

Investigation of the Relationship between Pre-service Teachers' Lateral Thinking Levels and Problem-Solving Skills

Öğretmen Adaylarının Yanal Düşünme Düzeyleri ile Problem Çözme Becerileri Arasındaki İlişkinin İncelenmesi

Akan Deniz YAZGAN*

Received: 10 September 2020 **Research Article** **Accepted:** 26 October 2020

ABSTRACT: The purpose of this study is to determine to what extent problem-solving skill contributes to the prediction of lateral thinking. The sample of the research consisted of 475 undergraduate students, more specifically 357 female (75.2%) and 118 male (24.8%) students, attending the Faculty of Education at Çanakkale Onsekiz Mart University in Çanakkale, Turkey. The Problem-Solving Inventory – developed by Heppner and Petersen (1982) – and the Lateral Thinking Scale – developed by Semerci (2016) – were employed in the study to collect data. The descriptive statistics (frequency, percentage, arithmetic mean, and standard deviation) and multiple regression analysis were used to analyze the obtained data. According to the findings of the study, the lateral thinking levels of the teacher candidates were high, and their problem-solving skills were at a positive medium level. The teacher candidates' confidence in problem-solving ability and approach-avoidance scores positively affected their lateral thinking levels, on which their personal control scores exerted negative effects. In addition, the participating pre-service teachers' total scores of problem-solving skills significantly predicted their lateral thinking scores.

Keywords: Lateral thinking, problem-solving, teacher training, teacher candidates.

ÖZ: Bu araştırmanın amacı, yanal düşünmenin yordanmasında problem çözme becerisinin ne düzeyde katkıda bulunduğunu belirlemektir. Araştırmanın çalışma grubunu Çanakkale Onsekiz Mart Üniversitesi Eğitim Fakültesi'ne devam eden 357 kız (%75.2), 118 erkek (%24.8) toplam 475 üniversite öğrencisi oluşturmuştur. Araştırmada veri toplamak amacıyla Heppner ve Petersen (1982) tarafından geliştirilen Problem Çözme Envanterive Semerci (2016) tarafından geliştirilen Yanal Düşünme Ölçeği kullanılmıştır. Araştırmada elde edilen verilerin analizinde betimsel istatistikler (frekans, yüzde, aritmetik ortalama ve standart sapma) ve çoklu regresyon analizi kullanılmıştır. Araştırmada ulaşılan bulgulara göre, öğretmen adaylarının yanal düşünme düzeyleri yüksek, problem çözme becerileri pozitif orta düzeydedir. Öğretmen adaylarının problem çözme yeteneğine güven ve yaklaşma-kaçınma puanları, yanal düşünme düzeyini olumlu yönde etkilerken, kişisel kontrol puanları olumsuz yönde etkilemektedir. Ayrıca öğretmen adaylarının problem çözme becerisi toplam puanları, yanal düşünme puanlarını anlamlı olarak yordamaktadır.

Anahtar kelimeler: Yanal düşünme, problem çözme, öğretmen yetiştirme, öğretmen adayları.

* *Corresponding Author*: Asst. Prof. Dr., Çanakkale Onsekiz Mart University, Çanakkale, Turkey, akandeniz@hotmail.com, https://orcid.org/0000-0002-4607-6700

Citation Information
Yazgan, A. D. (2021). Investigation of the relationship between pre-service teachers' lateral thinking levels and problem-solving skills. *Kuramsal Eğitimbilim Dergisi [Journal of Theoretical Educational Science]*, *14*(1), 20-37.

ISSN: 1308-1659

Industry 4.0, which can be expressed as a production revolution, and the new technological transformation it represents today confront the world with great challenges. It can be said that this transformation will affect every aspect of everyday life – e.g., ranging from production to logistics and from education to entertainment – although the reflections of this process have not been fully understood in Turkey yet. In Kagermann, Wahlster, and Helbig's (2013) words, jobs in the context of Industry 4.0 by nature will most likely hold high expectations about complexity management, abstraction, and problem-solving from all employees in a workplace. In this context, some new skills, referred to as 21st-century skills, are conspicuously prevalent in the literature. Eryılmaz and Uluyol (2015) state that the most important of these skills are creativity, critical thinking, collaboration, and problem-solving, and underline that these skills become functional in an integrated manner. Hecklau, Galaitzke, Flachs, and Kohl (2016) list the skills expected from individuals in Industry 4.0 in four dimensions as technical, methodological, social, and personal competencies and emphasize creativity and problem-solving, which are considered directly related to lateral thinking (Lawrence & Xavier, 2013), under the title of methodical competencies.

From a broader perspective, the role of creative thinking and problem-solving skills in the emergence of hunter-gatherer, agriculture, industry, post-industrial, and the Industry 4.0 societies in humanity's historical development is clear. In the struggle for survival with nature, human beings made stone tools for the continuation and welfare of their generation, opened huge channels to manage water resources, and invented money to expand trade and economy. In addition to all these developments, the systematization of the mind activity, called philosophy, thanks to Thales, his prediction of the exact time of the solar eclipse, the effort to understand the knowledge of nature using mathematics, astronomy, and philosophy can be regarded as the first manifesto of the skills known as creative thinking and problem-solving in the history of science and humanity. Inventions and discoveries that drive the progress of societies emerge as products of creative thinking and problem-solving (Senemoğlu, 2020). As Guilford (1967) puts it, creativity is needed to keep pace and to overcome many problems encountered in everyday life because creativity is the solution to the most serious problems of human beings.

Creative thinking requires the application of different problem-solving approaches through the effective use of available resources. In our education system, although different structural practices have been recently adopted in education and training, it is difficult to say that course contents are produced from a perspective that supports students' creativity and problem-solving skills. Karakuş (2001) expresses that "*this superficial approach ultimately prevents intellectual growth and development and causes education to be short-breathed and superficial since, in order to learn a subject, it is necessary to reveal the connections and relationships between the parts of that particular subject, that is, to employ reasoning and thinking*". It can be propounded that creative thinking can be discovered and improved in suitable environmental conditions and educational settings. However, although frequent references to these skills are included in the literature, the same does not hold true for their place in educational practices because learning and teaching processes, teacher competencies, and learning environment should be redesigned according to post-Industry 4.0 society – the new social paradigm – to reveal and develop creativity in students.

Although they are called the 21st-century skills, these skills [(For example: creative thinking, innovativeness, critical thinking, problem-solving, communication, cooperation, learning to learn, effective verbal and written communication, information literacy, media literacy, information and communication technology literacy, flexibility to access and analyze information, adaptability, entrepreneurship, social and cultural skills, productivity, responsibility, leadership, reasoning, decision making, discussion, cognitive flexibility, curiosity, and imagination (Ecevit & Kaptan, 2019)], most of which a qualified education system is expected to help individuals acquire, are unavailable in the education system of a great many countries – including Turkey –. Even if they theoretically exist in their systems, they cannot be imparted to students. It is known that education is one of the most effective tools in the treatment of all kinds of social diseases, especially the cases of violence that is very common in Turkey as well. The problem-solving and lateral thinking skills selected for the purpose of this research study are listed in the related literature as the 21st-century skills, which are directly related to creativity.

In this context, whether pre-service teachers' problem-solving skills predict their lateral thinking levels or not signifies the main problem of the study. It can be asserted that the findings of the study will be useful for decision-makers who shape educational policies, scholars who wish to look into the subject from different angles and viewpoints of scientific disciplines, and teachers who aspire to perfect their teaching processes.

Lateral Thinking

There are two commonly agreed-upon forms of thought. The first, which until recently prevailed in schools, books, and cultural narratives, is vertical thinking – the ability to follow a line of thought from the beginning to the end, to think in a linear pattern, or to break an idea down into its components. Vertical thinking, particularly associated with the paradigm characterized by limited access to information and with societies suffering from this depravity, is now being challenged by another way of constructing knowledge – i.e., lateral thinking. Edward de Bono, the founder of the theory of lateral and vertical thinking, states that "vertical thinking is about processing: we have some starting concepts, which are usually taken for granted, which we build on. Lateral thinking, on the other hand, is more concerned with perception, with examining and if necessary, changing these starting concepts and principles" (Braunstein, 1999). "Vertical thinking is best exemplified by the straight-arrow logic of the syllogism: a=b, b=c, so a=c. Lateral thinking, on the other hand, revels in creative juxtapositions and free association: dog>dogma>religion>Buddha" (Braunstein, 1999).

De Bono (1993) likens this cognitive mechanism to rain's forming channels on the ground. As he depicts, "rain falling onto a landscape will eventually form streams, rivers, and valleys. Once these have formed, future rainfall is channeled along these rivers and valleys. So the rain interacting with the landscape forms channels. which then affect the way future rain is collected and organized". "The brain has a marvelous ability to think, relate, analyze, synthesize and conclude in a matter of seconds; this, in turn, makes it a tough mission to think innovatively, since we need to force our brains to operate against their natures" (Hamza & Hassan, 2016).

According to De Bono (1971a); lateral thinking consists of four stages: 1. recognizing dominant ideas that polarize the perception of a problem, 2. searching for

different ways of looking at things, 3. relaxation of the rigid control of [vertical] thinking. Logical thinking is the prevention and classification of the flow of the thought with the label "No!". Vertical thinking catches the problem from the start. However, lateral thinking can develop a reverse perspective and can move forward, backward, and sideways, 4. the use of chance to encourage other ideas: In this method, the traditional thinking pattern must be broken and knowledge must be reorganized in a new way. In doing so, several techniques can be adopted, such as shifting attention between different aspects of the problem, necessarily allocating a share to alternative solutions, changing a concept, and breaking up the parts of a concept into sections and subsections–or doing the opposite – rearranging sections between parts in a new way.

Lateral thinking is defined as "seeking to solve problems by unorthodox or apparently illogical methods". The term was introduced as a means of moving sideways when working on a problem to try different perceptions, ideas, and points of entry. Lateral thinking is concerned with the generation of new ideas. New ideas are the stuff of change and progress in every field from art to science and politics to personal happiness. It is a habit of thinking more than the application of some techniques of thinking. Its usefulness of an outside view of a problem is that it lends itself to the emergence of a new point of view; therefore, it refuses fruitless manners of thinking baffling individuals when they are very close to solving a problem. (Burgh, 2005; De Bono, 1971b; Lawrence & Xavier, 2013; Rossdale, Martin, & Jeffcott, 2003).

Lateral thinking is also thought as a crucial component of creative thinking (De Bono, 1999). As Lindell (2011) suggests, "creativity refers to an ability to generate original, novel, flexible, and useful ideas that are not constrained by established mental habits". "Creativity is the production of the new, original, unique, and divergent products and ideas mediated through lateral thinking" (Lamb, Annetta, & Vallett, 2015). "There is considerable pressure to promote creativity and fluency as a means to develop the next generation of technological and scientific innovations within government agencies and companies. For example, the National Science Foundation, Intel, Microsoft, and Google all engage in competitive funding awards specifically identifying creativity as a goal. Other organizations also routinely offer contests promoting large awards for innovation and creative applications of science" (Lamb et al., 2015).

Problem-Solving

In the literature, problem as a term is defined in various ways. Some researchers define "problem" as a phenomenon that contains uncertainty and suspicion, while others as information that can be accessed through continuous research (Dostal, 2015; Ün, 2010). Problem-solving can be referred to as a mental and intellectual process of finding problems and solving on the basis of accurate data and information, so that appropriate and careful conclusions can be drawn (Winarti, Ichsan, Listyarini, & Hijriyanti, 2019). Solving problems/conflicts involves forms of cognitive/behavioral efforts to regulate adverse situations and to overcome problems. In solving problems of the real world, students can obtain the knowledge and skills that they will need after they graduate (de Almeida & Benevides, 2018; Docktor & Mestre, 2014; Heppner & Baker, 1997). Besides, an individual with problem-solving skills grows up as a self-confident individual who can think creatively and independently (Güneri Yöyen, Azaklı, Üney, & Demirci, 2017). Today's learners need specific skills, such as problem-solving,

scientific literacy, creativity and innovation, communication, collaboration, reasoning and critical thinking to prepare for an increasingly complex life (Alfin, Fuad, Nur, Yuanita, & Prahani, 2019; Demirel & Yılmaz, 2019; Irwanto, Saputro, Rohaeti, & Prodjosantoso, 2018). Moreover, schools must move beyond the typical focus on basic competency in core subjects to promoting understanding of the content at much higher levels by integrating the 21st-century skills into all subject areas (Husain, Kamal, Ibrahim, Huddin, & Alim, 2017).

Generally, a problem-solving process includes information categorization from the problem statement to be visual symbolic information, as well as a piece of writing that applies an appropriate concept for problem-solving (Mulyastuti, Sutopo, & Taufiq, 2018). D'Zurilla and Nezu (1990) note that the problem-solving process has five steps: 1. Problem definition, 2. Problem formulation, 3. Generation of alternative solutions, 4. Making decisions by evaluating the results of the options, 5. Implementing the decision and verification. Successful problem solvers often use analogical reasoning to solve a new problem by recognizing a corresponding schema in long-term memory that has the same structural characteristics, abstracting the solution method from the schema, and applying it to the target problem (Stahovich, Van Arsdale, & Mayer, 2019).

According to Malik et al. (2019), problem-solving skill is a complex and very important skill as a part of the learning process in all disciplines and it can be acquired and improved by students through learning and laboratory activities. Some experts believe that problem-solving is a sub-category of critical thinking, while others argue that these two concepts overlap (Karantzas et al., 2013). It can be concluded from the literature review that the acquisition of critical thinking and problem-solving skills can be improved through the implementation of collaborative inquiry-based learning in which the learning process is focused on developing metacognitive skills, such as building a solution, testing the solution, and evaluating the results (Irwanto et al., 2018). Problem-based learning is another learning method to use real-life problems. This student-centered method begins by defining the real-world problem and then solves it (Parno & Ni'mah, 2018).

Problem-solving is the basis of many academic learning processes and therefore considered as the main goal of education (OECD, 2013). Problem-solving cannot be abstracted from everyday life, and in order to define a person as a problem solver, it is necessary to be able to use the solutions or answers used in different problems, as well as in the more analytical problems they encounter. Since every activity in the future working life will include different and complex problems, it can be stated that every teacher candidate should have expert-level problem-solving competence (Şener, 2019; Widodo, Darhim, & Ikhwanudin, 2018).

Purpose

In this study, it is aimed to examine whether the lateral thinking levels of prospective teachers are predicted by their problem-solving skills. For this purpose, answers to the following research questions are sought:

1. What are the lateral thinking levels of prospective teachers?
2. What are the levels of teacher candidates' problem-solving skill according to:
    a. Confidence in problem-solving

b. Approach-avoidance

c. Personal control

3. Can prospective teachers' lateral thinking levels be predicted according to problem-solving skills sub-dimensions and total problem-solving scores?

Method

In order to put the problem and solution of the research into context, firstly the scientific literature on the subject was reviewed, during which previous studies similar to the research subject were examined. Based on these studies, the research problem was produced. In the next stage, the aims, methods, results, and sources of similar studies were examined, and the method and the needed sources were determined.

Research Model

The paper is a quantitative correlational research study. Quantitative research methods focus on objective measurements through statistical analyses or numerical data collection. Data is collected by a variety of tools, such as scales and questionnaires (Creswell, 2009). According to Gravetter and Forzano (2012), one of the important uses of relational research is its ability to establish a relationship between variables that can be used for predictive purposes. In a relational study, two variables studied are basically equivalent. However, relational studies generally define one variable as the predictive variable and the second as the criterion variable. In this study, firstly, the relationship between lateral thinking and problem-solving was examined and depending on the significance of the relationship, whether the level of problem-solving, which was determined as the predictor variable, had an effect on the lateral thinking level determined as the criterion variable was investigated.

Sample

The population of the research consists of the pre-service teachers studying in the undergraduate programs in the Faculty of Education at Çanakkale Onsekiz Mart University, adding up to 4500 teacher candidates. The sample consists of 475 participants. Stratified sampling, which is a type of sampling that aims to represent subgroups/strata in the universe in proportion to their weights in the universe Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz, and Demirel (2012) was adopted to produce the sample. While creating layers, the features of homogeneous groups were taken into account. The study layers are Social Studies Teaching, Japanese Language Teaching, Science Teaching, English Language Teaching, Turkish Language Teaching, Art Teaching, Music Teaching, German Language Teaching, and Psychological Counseling and Guidance. In stratified sampling, different sampling techniques can be used for subsamples. Subsamples in each stratum are determined by cluster sampling. The clusters denote the 1^{st}-, 2^{nd}-, 3^{rd}-, and 4^{th}-year classes. The participants selected from the subsamples were included in the study with simple random sampling (Matthews & Ross, 2010).

Table 1

Descriptive Statistics Regarding Sampling

		f	%
Gender	Male	118	24.8
	Female	357	75.2
Class	1st-year students	282	59.4
	2nd-year students	45	9.5
	3rd-year students	70	14.7
	4th-year students	78	16.4
Department	Social Studies Teaching	49	10.3
	Japanese Language Teaching	24	5.1
	Science Teaching	153	32.2
	English Language Teaching	34	7.2
	Turkish Language Teaching	75	15.8
	Art Teaching	19	4.0
	Music Teaching	32	6.7
	German Language Teaching	11	2.3
	Psychological Counseling and Guidance	78	16.4

As clear from Table 1, a total of 475 teacher candidates participated in the study. of the 1st, 2nd, 3rd, and 4th-year students account for 59.4% (282 students), 9.5% (45 students), 14.7% (70 students), and 16.4% (78 students), respectively. The table also reveals that the pre-service teachers who were included in the participants studying in Science Teaching correspond to the highest (32.2%) and in German Teaching to the lowest percentage (2.3%). Of the teacher candidates participating in the study, 75.2% (357 students) are female and 24.8% (118 students) are male.

Ethical Considerations and Data Collection Tools

At this stage of the study, the characteristics of the measurement tools used in the data collection process, how reliability was assessed, and the results of the assessment are presented. The Problem-Solving Inventory – developed by Heppner and Petersen (1982) – and the Lateral Thinking Disposition Scale, whose validity and reliability were studied by Semerci (2016), were used for data collection. Each measurement tool is explained separately in the following sections.

Ethical approval and written permission were obtained from the Scientific Research Ethics Committee of Çanakkale Onsekiz Mart University (dated 07.09.2020 and numbered 2020-25), respectively. Ethical rules were followed at all stages of research. The research participants participated in the research on a voluntary basis. In this context, the aim and the method of the study were introduced to the students, and their verbal permissions were also obtained.

Problem Solving Inventory. The Problem-Solving Inventory was developed by Heppner and Petersen (1982). Heppner and Petersen (1982) proposed a five-step problem-solving model (general orientation, definition of the problem, alternative generation, decision making, and evaluation). However, the factor analysis results regarding the construct validity of the developed 35-item scale did not support the five stages determined. The analysis yielded a three-factor structure. These are (1) confidence in problem-solving, (2) approach-avoidance, and (3) personal control (Heppner, Witty, & Dixon, 2004). Confidence in problem-solving ability refers to an individual's sense of confidence in problem-solving skills, approach-avoidance to his/her willingness to cope with difficult problems, and personal control to the feeling that the individual is in control of the situation (Heppner & Petersen, 1982).

The inventory consists of 35 items that describe how people react to their personal and everyday life problems. It is a six-point Likert-type inventory. Of these, (1) indicates "strongly disagree", while (6) denotes "strongly agree". Scores ranging between "1" and "6" are assigned to each answer. At the time of scoring 9th, 22nd. and 29th items are excluded from scoring. Items 1, 2, 3, 4, 11, 13, 14, 15, 17, 21, 25, 26, 30, and 34 are scored reversely. The inventory consists of three sub-domains: "confidence in problem-solving ability", "approach-avoidance", and "personal control". Trust in problem-solving ability is represented by 11 items (items 5, 10, 11, 12, 19, 23, 24, 27, 33, 34, and 35), approach-avoidance by 16 items (items 1, 2, 4, 6, 7, 8, 13, 15, 16, 17, 18, 20, 21, 28, 30, and 31), and personal control by five items (items 3, 14, 25, 26, and 32).

It was concluded after consulting the subject matter experts before the application that there was no problem regarding the content validity. In the evaluation of the scores harvested with the scale, it was resolved to take into account the average score instead of the total score range of 32-192 in order to include the sub-dimensions in the analysis. Hence the average scores between 1 and 6 points were included in the evaluation. The points and their respective descriptions are as follows:

1.00-1.49: *Very low*; 1.50-2.49: *Low*; 2.50-3.49: *Negative intermediate*; 3.50-4.49: *Positive intermediate*; 4.50-5.49: *High*; 5.50-6.00: *Very high*.

The internal consistency coefficient was calculated to assess the reliability of the Problem-Solving Inventory. The Cronbach's Alpha value was calculated as .834 for the sub-domain of 'confidence in problem-solving ability', .794 for 'approach-avoidance', .682 for 'personal control', and .848 for the total inventory. It was understood that the measuring tool was reliable.

Lateral Thinking Disposition Scale. Lateral Thinking Disposition Scale was developed by Semerci (2016). The scale is a 5-point Likert scale, the levels of which range from "totally disagree" to "totally agree". It consists of nine items and one domain. In line with the data obtained in the study, it was concluded that the factor loads in the scale occurred between .41 and .70 and the item total correlation values of the items between .47 and .67, and the reliability coefficient was calculated to be .754. According to the results obtained, the scale was valid and reliable. Consulting with the experts of the subject before the application warranted that there was no problem regarding the content validity. For the reliability analysis of the Lateral Thinking

Disposition Scale, the internal consistency coefficient was calculated to be.786. The points and their descriptions are as follows:

1.00-1.49: *Very low*; 1.50-2.49: *Low*; 2.50-3.49: *Intermediate*; 3.50-4.49: High; 4.50-5.00: *Very high.*

Data Analysis

In the interpretation of quantitative data, a significance level of p=.05 was adopted to judge upon the statistical significance of the differences. Descriptive statistical techniques were used to analyze the data concerning the first and second research questions. In this context, frequency, percentage, arithmetic mean, and standard deviation values were calculated. Multiple regression analysis was performed to assess the third research question. SPSS 23.0, a statistical software program, was used to analyze the quantitative data.

Results

In this part of the study, the quantitative findings obtained in the research are presented in tables, and the comments on the findings are included.

Lateral Thinking Levels of Teacher Candidates

The lateral thinking levels of the teacher candidates are tabulated below.

Table 2

Lateral Thinking Levels of Participants

	Very low	Low	Intermediate	High	Very high	$\bar{X}$	*ss*
f	0	11	81	341	42	3.9	.5
%	.0	2.3	17.1	71.8	8.8		

As clear from Table 2, the lateral thinking levels of the teacher candidates range from ‘low’ to ‘very high’. The levels of 2.3% (11) of the teacher candidates are low, 17.1% (81) are medium, 71.8% (341) are high, and 8.8% (42) are very high. It can be said that the average scores of the teacher candidates ($\bar{X}$=3.9) are at a high level.

Problem-Solving Skill Levels of Teacher Candidates

The problem-solving skill levels of the teacher candidates are presented below.

Table 3

Problem-Solving Skill Levels of Participants

Domain		Very low	Low	Negative intermediate	Positive intermediate	High	Very high	$\bar{X}$	*ss*
Confidence in problem-solving	*f*	0	2	48	193	209	23	4.5	.7
	%	.0	.4	10.1	40.6	44.0	4.8		
Approach-Avoidance	*f*	0	2	37	233	193	10	4.3	.6
	%	.0	.4	7.8	49.1	40.6	2.1		

Personal Control	*f*	0	13	128	277	57	0	3.8	.6
	%	.0	2.7	26.9	58.3	12.0	.0		
Problem-Solving (Total Score)	*f*	0	1	27	271	175	1	4.3	.5
	%	.0	.2	5.7	57.1	36.8	.2		

Table 3 exhibits that the problem-solving skill levels of teacher candidates range between 'low' and 'very high'. The levels of problem-solving skills of the participants were examined in consideration of the sub-dimensions and the total scale scores.

The analysis of the subscale of 'confidence in problem-solving ability' revealed that the average scores of the participants ($\bar{X}$=4.5) were high. The confidence levels of 40.6% (193) of the participants are positive medium, of 44.0% (209 participants) are high, and of 4.8% (23 participants) are very high. Only 10.1% (48 respondents) are moderate negative and are reluctant to place trust in their problem-solving ability. It was concluded from these findings that teacher candidates generally have confidence in their problem-solving skills.

The examination of the approach-avoidance sub-domain showed that the levels of the average scores of the participants ($\bar{X}$=4.3) are positive intermediate. The levels of 49.1% (233) of the participants are positive intermediate, of 40.6% (193) are high, and of 2.1% (23) are very high. 7.8% (37) of the participants are at a negative intermediate level and it can be realized that they are hesitant in the approach-avoidance domain. Based on these findings, it can be said that teacher candidates are generally at a positive intermediate level in the approach-avoidance subscale, which can also be expressed as the interventional-practical dimension of problem-solving.

It was understood in regards to the domain of personal control that the mean scores of the participants ($\bar{X}$=3.8) were negative intermediate. The levels of 58.3% (277) of the participants are positive intermediate, of 26.9% (128 participants) are negative intermediate, and of 12% (57 participants) are high. Based on these findings, it was understood that the teacher candidates were at a medium level in the personal control subdomain, which can be regarded as the decision-making-implementation dimension of problem-solving.

The analysis of the Problem-Solving Inventory on the basis of total scores indicated that the average scores of the participants ($\bar{X}$=4.3) were positive intermediate. The level of 57.1% (271) of the participants are positive intermediate, of 36.8% (175) are high, and of 5.7% (27) are negative intermediate. Based on this finding, it can be stated that the levels of the pre-service teachers' problem-solving skills are positive and intermediate.

Relationship between Teacher Candidates' Lateral Thinking Levels and Problem-Solving Skill Levels

In this part, firstly the teacher candidate's problem-solving skill levels were separately determined in view of 'confidence in problem-solving', 'approach-avoidance', and "personal control". Then, they were collectively presented as the total score and whether there was a relationship between lateral thinking levels was questioned. The predictive analysis was conducted under two models for each examination.

Table 4

Analysis Results Related to Problem-Solving Skill Level Predicting Lateral Thinking Level

	Predictive Variable	*B*	Standard Error*B*	*β*	*t*	*p**	Partial *r*	Part *r*	
Model 1	Constant	2.621	.194		13.509	.000			*Multiple R=.36* *R^2=.13* *Adjusted R^2=.13* *F=23.909* *p*<.05
	Confidence in Problem-Solving	.172	.038	.230	4.573	.000	.206	.196	
	Approach-Avoidance	.187	.044	.218	4.294	.000	.194	.184	
	Personal Control	-.088	.039	-.105	-2.276	.023	-.104	-.098	
Model 2	Constant	2.445	.191		12.835	.000			*Multiple R=.33* *R^2=.11* *Adjusted R^2=.10* *F=56.249* *p*<.05
	Problem-Solving	.331	.044	.326	7.500	.000	.326	.326	

*p<.05

The first model was found to be statistically significant in predicting the lateral thinking levels of the prospective teachers [R^2=.13, Adjusted R^2=.13, F=23.909, p<.05]. Confidence for problem-solving ability scores of the teacher candidates significantly predicted lateral thinking scores (β=.230, p<.05). Approach-avoidance scores significantly predicted lateral thinking scores (β=.218, p<.05). Personal control scores too significantly predicted lateral thinking scores (β=-.105, p<.05). According to these results, while teacher candidates' confidence in problem-solving ability and approach-avoidance scores positively affected lateral thinking level, it was negatively affected by personal control scores. The regression model equation is as follows:

Lateral Thinking = 2.621 + (.172*Confidence in Problem-Solving) + (.187*Approach-Avoidance) + (-.088*Personal control)

The second model was statistically significant in predicting the lateral thinking levels of the pre-service teachers [R^2=.11, Adjusted R^2=.10, F=56.249, p<.05]. The teacher candidates' total scores of problem-solving skills significantly predicted lateral thinking scores (β=.326, p<.05). According to this result, the teacher candidates' total problem-solving scores positively affected lateral thinking level. The regression model equation is as follows:

Lateral Thinking = 2.445 + (.331*Problem-Solving)

Discussion and Conclusion

According to the initial finding of the study, the lateral thinking levels of the teacher candidates were high. This finding supports the findings of similar studies conducted on primary school teacher candidates (Yıldız & Yılmaz, 2020) and students of teacher training (for non-educational departments) (Semerci, 2017). These researchers have found that the lateral thinking tendencies of prospective teachers are high and at expected levels. On the other hand, Evin Gencel (2018), who conducted her study on primary school teacher candidates attending three state universities in the Marmara Region, has found that lateral thinking tendencies are at a moderate level. In the same study, it is reported that those who have reading habits and frequently use social media have higher levels of lateral thinking disposition. Karagöz (2019), who has investigated the lateral thinking tendencies of 197 pre-service teachers in terms of gender, grade, school type, reading habits, and internet use, and has concluded that there was no significant difference between the lateral thinking tendencies of pre-service teachers in consideration of all the variables.

According to Lawrence and Xavier (2013), lateral thinking is a way of thinking that seeks solutions to difficult problems with elements that can normally be ignored with unconventional methods or logical thinking. In other words, lateral thinking focuses on seeing the "big picture" from different angles. Therefore, the products of thought emerging in such a process are also of higher value than those realized solely based on traditional or logical thinking because lateral thinking is both the initiator and the most indispensable component of creative thinking. In terms of the efficiency of the educational process, it is important that teacher candidates have high lateral thinking skills as they will become effective actors in gaining lateral thinking skills in their future careers. In this context, instead of activities and tasks where teacher candidates can access information from a single source during their pre-service training, it would be beneficial to offer them activities that will support their different perspectives on the world and on their personal and social domains and boost their intellectual and social development.

According to the second finding obtained in the study, the problem-solving skills of the teacher candidates are at a positive intermediate level. However, it was understood pertaining to the subscales that the level of the personal control sub-dimension of problem-solving was lower in terms of the mean score than that of the subdomains confidence in problem-solving and approach-avoidance. In the study conducted on 406 pre-service teachers by Kolayiş and Turan (2018), the subdomains are not taken into consideration and it has been found that the perceived problem-solving skill scores of teacher candidates are below the intermediate level. Eyvaz (2017) has found that pre-school teacher candidates' problem-solving skills were low. Üstündağ and Beşoluk (2012) have concluded that although there is a significant difference in problem-solving skills in terms of gender, school, and education type, there is no statistically significant difference according to the results of the Problem-Solving Inventory, which has been filled out by pre-service science teachers; besides, they have found that problem-solving skills differ according to class standing. Şahin, İbili, and Uluyol (2017) have concluded that pre-service teachers have moderate and high levels of self-perceptions in terms of problem-solving tendencies, and they consider themselves more planned and self-confident than emotional, intuitive, and avoidant.

Problem-solving skill is among the social and emotional competencies and one of the high-level thinking skills that all individuals have at various levels (Frey, Hirschstein, & Guzzo, 2000). From a philosophical perspective, it can be stated that human life is a long problem-solving process. In the education of their student, teacher candidates who will have a critical role in their personal, social and cognitive development can be said to be in need of practice-oriented courses or activities to be implemented in different courses, enriched with different contents that will support the development of - problem-solving skills during their pre-service training. In addition, it was understood that the scores of the personal control subdomain were lower than those of the others. The personal control domain emphasizes decision making and implementation. Altun (2003) underlines that people who see themselves as systematic and determined individuals also see themselves as having correct problem-solving skills. Duman, Yakar, Türkoğlu, and Yakar (2013) have found that pre-service teachers who think that they do not have emotional fluctuations and who think they are not extroverted, open to experience, and responsible have higher levels of problem-solving skills. In this context, it can be said that confronting prospective teachers with different types of problems, supporting them to make sound and consistent decisions in the problem-solving process, and encouraging them in lessons can have positive effects.

According to the last finding, while the confidence of the teacher candidates in problem-solving ability and approach-avoidance scores positively affected lateral thinking level, personal control scores negatively affected them. In addition, pre-service teachers' total scores of problem-solving skills significantly predicted their lateral thinking scores (β=.326, p<.05). As clear from these results, the pre-service teachers' total problem-solving scores positively affected their lateral thinking level. It is remarkable that the self-control variable has a negative effect on problem-solving. In other words, teacher candidates experience some limitations in managing the problem-solving process. It can be claimed that there is a need for new research to be conducted in different stages, fields, and disciplines to substantiate this finding.

Lateral thinking and problem-solving skills handled in the present study are referred to as high-order thinking skills in PISA, conducted triennially by the Organization for Economic Co-operation and Development (OECD) and prominent as an international educational indicator. This is because lateral thinking incorporates different perspectives on phenomena, whereas problem-solving embodies the efforts favoring technical and scientific methods intended for the analysis and solution of these phenomena. Level 5 and 6 in PISA 2018 refer to significant cognitive skills different from the other levels in terms of both lateral thinking and problem-solving skills (For example, Level 5 students can use abstract scientific ideas or concepts to explain unfamiliar and more complex phenomena, events and processes; apply more sophisticated epistemic knowledge to evaluate alternative experimental designs and justify their choices and use theoretical knowledge to interpret information or make predictions. Level 6 students can draw on a range of inter-related scientific ideas and concepts from the physical, life and earth and space sciences and use content, procedural and epistemic knowledge in order to offer explanatory hypotheses of novel scientific phenomena, events and processes or to make predictions; distinguish between arguments that are based on scientific evidence and theory and those based on other considerations. Besides, according to PISA 2018, students in Turkey are incompetent in

Level 5 and 6 in terms of science literacy and these students account for 85.3% (Aydın Ceran, 2019).

Traditional approaches to teacher training fall short of satisfying professional demands (UNESCO, 2002). Among the most important duties of a teacher in the learning-teaching processes is to contribute to the development of their students' thinking skills. One of the most effective ways to achieve this is to design the course contents, learning environment, and teaching methods and techniques needed by the teacher in a way to help them acquire these skills. In the post-Industry 4.0 society, robot teachers now enter classrooms, programs based on artificial intelligence dominate students, teachers, and learning environments, and high-tech-based efforts challenge education systems all around the globe. In such a process, pre-service training of prospective teachers should focus on how to equip students with what is called 21st-century skills. Furthermore, it can be said that there is a need for research on these skills, especially lateral thinking and problem-solving skills of students at different levels. It can be suggested that different data collection techniques and different theoretical variables should be used in future studies on the subject.

References

Alfin, J., Fuad, A. Z., Nur, M., Yuanita, L., & Prahani, B. K. (2019). Development of group science learning (GSL) model to improve the skills of collaborative problem solving, science process, and self-confidence of primary schools teacher candidates. *International Journal of Instruction*, *12*(1), 147-164.

Altun, İ. (2003). The perceived problem solving ability and values of student nurses and midwives". *Nurse Education Today*, *23*, 575-584.

Aydın Ceran, S. (2019). PISA 2018 perspektifinde fen bulgularına Türkiye özelinde genel bakış. Retrieved from http://arastiranokul.org/wp-content/uploads/2019/12/PISA-2018-FEN-OKUR-YAZARLI%C4%9EI.pdf on October 2, 2020.

Braunstein, P. (1999). The case for lateral thinking: Discerning new thought patterns on the contemporary info-sphere. *Convergence*, *5*(1), 10-17.

Burgh, G. (2005). From Socrates to Lipman: Making philosophy relevant. In D. Shepherd (Ed.), *Creative engagements: Thinking with children (pp. 25–31)*. Oxford, England: Inter-Disciplinary Press.

Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2012). *Bilimsel araştırma yöntemleri* (Geliştirilmiş 11. baskı). Ankara: Pegem Akademi.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.

de Almeida, Z., & Benevides, A. (2018). Social skills, coping, resilience and problem solving in psychology university students. *Liberabit*, *24*(2), 265-276. https://doi.org/10.24265/liberabit.2018.v24n2.07

De Bono, E. (1971a). *Lateral thinking for management: A handbook*. Maidenhead: McGraw – Hill.

De Bono, E. (1971b). *The use of lateral thinking*. Harmondsworth, Middlesex, England: Pelican.

De Bono, E. (1993). *Serious creativity: Using the power of lateral thinking to create new ideas*. New York: HarperBusiness.

De Bono, E. (1999). *Six thinking hats*. Boston: Back Bay Books.

Demirel, T., & Yılmaz, T. K. (2019). The effects of mind games in math and grammar courses on the achievements and perceived problem-solving skills of secondary school students. *British Journal of Educational Technology*, *50*(3), 1482-1494.

Docktor, J. L., & Mestre, J. P. (2014). Synthesis of discipline-based education research in physics. *Physical Review Special Topics-Physics Education Research*, *10*(2), 1-58. https://doi.org/10.1103/PhysRevSTPER.10.020119.

Dostal, J. (2015). Theory of problem solving. *Procedia – Social and Behavioral Sciences*, *174*, 2798 - 2805.

Duman, B., Yakar, A., Türkoğlu, İ. E., & Yakar, P. (2013). Türkiye'de öğretmen yetiştirme programları çerçevesinde öğretmen adaylarının kişilik tiplerine göre problem çözme becerilerinin incelenmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *Özel Sayı*(1), 121-143.

D'Zurilla, T. J., & Nezu, A. M. (1990). Development and preliminary evaluation of the Social Problem-Solving Inventory. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *2*(2), 156-163.

Ecevit, T., & Kaptan, F. (2019). 21. yüzyıl becerilerinin kazandırılmasına yönelik tasarlanan argümantasyon destekli araştırma-sorgulamaya dayalı öğretim modelinin betimlenmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*. Advance online publication. https://doi.org/10.16986/HUJE.2019056328

Eryılmaz, S., & Uluyol, Ç. (2015). 21. Yüzyıl becerileri ışığında FATİH projesi değerlendirmesi. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, *35*(2), 209-229.

Evin Gencel, İ. (2018). Sınıf Öğretmeni adaylarının yanal düşünme eğilimleri. *VIII. Uluslararası Eğitimde Araştırmalar Kongresi*, Bildiri Özetleri Kitabı, s. 48.

Eyvaz, A. (2017). Okul öncesi öğretmen adaylarının problem çözme becerilerinin incelenmesi (Yayınlanmamış Yüksek Lisans Tezi). Doğu Akdeniz Üniversitesi, Gazi Magusa, KKTC.

Frey, K. S., Hirschstein, M. K., & Guzzo, B. A. (2000). Second step: preventing aggression by promoting social competence. *Journal of Emotional and Behavioral Disorders*, *30*(4), 102-112.

Gravetter, F. J., & Forzano, L. B. (2012). *Research methods for the behavioral sciences (4th ed.)*. Wadsworth, Cengage Learning: USA.

Guilford, J. P. (1967). Creativity: yesterday, today and tomorrow. *The Journal of Creative Behavior*, *1*(1), 3-14.

Güneri Yöyen, E., Azaklı, A., Üney, R., & Demirci, O. (2017). Ergenlerin kişilik özelliklerinin problem çözme becerileri üzerine etkisi. *Doğu Anadolu Sosyal Bilimlerde Eğilimler Dergisi, 1*(1), 229-241.

Hamza, T. S., & Hassan, D. K. (2016). Consequential creativity: Student competency and lateral thinking incorporation in architectural education. *International Journal of Technology and Design Education*, *26*, 587-612.

Hecklau, F., Galaitzke, M., Flachs, S., & Kohl, H. (2016). Holistic approach for human resource management in Industry 4.0. *Procedia CIRP-54*, 1-6.

Heppner, P. P., & Baker, C. E. (1997). Applications of the problem solving inventory. *Measurement and Evaluation in Counseling and Development*, *29*, 229-241.

Heppner, P. P., & Petersen, C. H. (1982). The development and implications of a personal problem solving inventory. *Journal of Counseling Psychology*, *29*(1), 66-75.

Heppner, P. P., Witty, T. E., & Dixon, W. A. (2004). Problem–solving appraisal and human adjustment: A review of 20 years of research using the problem solving inventory. *The Counseling Psychologist*, *32*(3), 344-428.

Husain, H., Kamal, N., Ibrahim, M. H., Huddin, A. B., & Alim, A. A. (2017). Endangering problem solving skills and mathematical knowledge via programming. *Journal of Engineering Science and Technology, Special Issue on PEKA 2017*, 1-11.

Irwanto, Saputro, A. D., Rohaeti, E., & Prodjosantoso, A. K. (2018). Promoting critical thinking and problem solving skills of preservice elementary teachers through

process-oriented guided-inquiry learning (POGIL). *International Journal of Instruction, 11*(4), 777-794. https://doi.org/10.12973/iji.2018.11449a

Kagermann, H., Wahlster, W., & J. Helbig, J. (2013). *Recommendations for implementing the strategic initiative industrie 4.0: Final report of the industrie 4.0 Working Group*. Acatech-National Academy of Science and Engineering, Germany.

Karagöz, B. (2019). An evaluation of pre-service Turkish teachers' lateral thinking dispositions with regard to different variables. *European Journal of Educational Studies*, *5*(9), 156-165.

Karakuş, M. (2001). Eğitim ve yaratıcılık. *Eğitim ve Bilim*, *26*(19), 3-7.

Karantzas, G. C., Avery, M. R., Macfarlane, S., Mussap, A., Tooley, G., Hazelwood, Z., & Fitness, J. (2013). Enhancing critical analysis and problem solving skills in undergraduate psychology: An evaluation of a collaborative learning and problem based learning approach. *Australian Journal of Psychology*, *65*(1), 38-45.

Kolayiş, H., & Turan, H. (2018). Öğretmen adaylarının algılanan problem çözme becerileri. *CBÜ Beden Eğitimi ve Spor Bilimleri Dergisi*, *13*(1), 22-32.

Lamb, R., Annetta, L., & Vallett, D. (2015). The interface of creativity, fluency, lateral thinking, and technology while designing serious educational games in a science classroom. *Electronic Journal of Research in Educational Psychology*, *13*(2), 219-242.

Lawrence, A. S. A., & Xavier, S. A. (2013). Lateral thinking of prospective teachers. *Journal of Educational Reflection, 1*(1), 28-32.

Lindell, A. K. (2011). Lateral thinkers are not so laterally minded: Hemispheric asymmetry, interaction, and creativity. *Laterality: Asymmetries of Body, Brain and Cognition*, *16*(4), 479-498.

Malik, A., Yuningtias, U. A., Mulhayatiah, D., Chusni, M. M., Sutarno, S., Ismail, A., & Hermita, N. (2019).Enhancing problem-solving skills of students through problem solving laboratory model related to dynamic fluid. *IOP Conf. Series: Journal of Physics: Conf. Series 1157*, 1-6.

Matthews, B., & Ross, L. (2010). *Research methods: a practical guide for the social sciences*. Pearson Education Limited, Essex: Britain.

Mulyastuti, H., Sutopo, A., & Taufiq, A. (2018). Identification of high school students' problem-solving skills on rotational dynamics, *IOP Conf. Series: Journal of Physics: Conf. Series 1171*, 1-14. https://doi.org/10.1088/1742-6596/1171/1/012028.

Organization for Economic Co-operation and Development [OECD]. (2013). *PISA 2012 assessment and analytical framework: Mathematics, reading, science, problem solving and financial literacy*. PISAParis: OECD. Retrieved from https://www.oecd.org/pisa/pisaproducts/PISA%202012%20framework%20e-book_final.pdf on July 26, 2019.

Parno, L. Y., & Ni'mah, B. Q. A. (2018). The influence of PBL-STEM on students' problem solving skills in the topic of optical instruments. *IOP Journal of Physics Conference Series 1171*, 1-9. https://doi.org/10.1088/1742-6596/1171/1/012013.

Rossdale, P. D., Martin, C. L., & Jeffcott, L. B. (2003). Lateral thinking: a different way of benefiting from reading Equine Veterinary Journal and other scientific publications. *Equine Veterinary Journal*, *35*(1), 3-4.

Semerci, Ç. (2016). Yanal Düşünme Eğilimi (YADE) Ölçeğinin geliştirilmesi: Geçerlik ve güvenirlik çalışması. *Eğitimde Kuram ve Uygulama Dergisi*, *12*(1), 358-371.

Semerci, N. (2017). Pedagogical formation students' dispositions toward lateral thinking/pedagojik formasyon öğrencilerinin yanal düşünme eğilimleri. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, *6*(1), 336-345.

Senemoğlu, N. (2020). *Gelişim, öğrenme ve öğretim: Kuramdan uygulamaya* (27. Baskı). Anı Yayınevi: Ankara.

Stahovich, T. F., Van Arsdale, T. S., & Mayer, R. E. (2019). How handwriting behaviours during problem solving are related to problem-solving success in an engineering course. *Contemporary Educational Psychology*, *58*, 331-337.

Şahin, S., İbili, E., & Uluyol, Ç. (2017). Öğretmen adaylarında problem çözme ve internet bağımlılığı ilişkisinin incelenmesi. *Afyon Kocatepe Üniversitesi Sosyal Bilimler Dergisi*, *19*(1), 1-21.

Şener, G. (2019). The predictive power of teacher's proactive personality traits on their problem solving skills. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 45*, 175-189.

United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2002). *Teacher education guidelines: Using open and distance learning*. Retrieved from http://unesdoc.unesco.org/images/0012/001253/125396e.pdf on October 3, 2020.

Ün, E. (2010). *Satranç eğitiminin problem çözme yaklaşımları, karar verme ve düşünme stillerine etkisinin incelenmesi* (Yüksek Lisans Tezi). Selçuk Üniversitesi Eğitim Bilimleri Enstitüsü, Konya.

Üstündağ, S., & Beşoluk, Ş. (2012). Fen bilgisi öğretmen adaylarının problem çözme becerilerinin çeşitli değişkenler açısından incelenmesi. *X. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi (27-30 Haziran 2012)*, Bildiriler Kitabı, Niğde Üniversitesi: Niğde.

Widodo, S. A., Darhim, T., & Ikhwanudin, T. (2018). Improving mathematical problem solving skills through visual media. *Journal of Physics Conference Series-948*, 1-8. https://doi.org/10.1088/1742-6596/948/1/012004

Winarti, A., Ichsan, A. N., Listyarini, L., & Hijriyanti, M. (2019). The effectiveness of collaborative strategy based on multiple intelligences in chemistry learning to improve students' problem-solving skill and multiple intelligences. *International Conference on Mathematics and Science Education (ICMScE 2018)*, Journal of Physics: Conference Series-1157, 1-7. https://doi.org/10.1088/1742-6596/1157/4/042011

Yıldız, K., & Yılmaz, B. (2020). Sınıf öğretmenliği adaylarının eleştirel düşünme ve yanal düşünme eğilimleri arasındaki ilişki. *Bolu Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, *20*(1), 335-353.

Journal of Theoretical Educational Science, 14(1), 38-63, January 2021
Kuramsal Eğitimbilim Dergisi, 14(1), 38-63, Ocak 2021
[Online]: http://dergipark.gov.tr/akukeg
DOI number: http://dx.doi.org/10.30831/akukeg.797081

An Evaluation of Activity Books in Terms of Outcomes and Learning Processes Related to Food and Nutrition

Etkinlik Kitaplarının Besin ve Beslenme ile İlgili Kazanımlar ve Öğrenme Süreçleri Açısından Değerlendirilmesi

Gülşah İNALCIK [*] **Duriye Esra ANGIN** [**]

Received: 18 September 2020 **Research Article** **Accepted:** 04 December 2020

ABSTRACT: This research was carried out to evaluate the activities in the Ministry of National Education Preschool Education Program Activity Book and Digital Education Platform Educational Information Network Teachers' Preschool Activity Book, in terms of outcomes, indicators and learning processes related to food and nutrition. In this research, document review method, which is one of the qualitative research methods, was utilized. The resources, on which the research will be carried out, were determined by one of the purposeful sampling methods; the criterion sampling method. The data were analyzed using descriptive analysis method. The documents discussed in the research have been scanned for learning outcomes related to food and nutrition and healthy nutrition with its indicators, nutrients, food groups, where food comes from, importance of eating various foods, benefits of foods. As a result of the research, it has been determined that there are no learning outcomes related to food and nutrition concepts in the activities and that no references have been made to food and nutrition concepts in learning processes in the Activity Book of Preschool Education Program. However, in the activities included in the Digital Education Platform Educational Information Network Teachers' Preschool Activity Book, not only learning outcomes related to food and nutrition were discussed, but also food and nutrition concepts were addressed in the learning processes. The results are presented in tables, and suggestions were made at the end of the paper.

Keywords: Preschool education program, activity book, learning outcomes and indicators, learning process, food and nutrition.

ÖZ: Bu araştırma Millî Eğitim Bakanlığı Okul Öncesi Eğitim Programı Etkinlik Kitabı ve Dijital Eğitim Platformu Eğitim Bilişim Ağı Öğretmenler için Okul Öncesi Etkinlik Kitabı içerisindeki etkinliklerin besin ve beslenme ile ilgili kazanım, gösterge ve öğrenme süreçleri açısından değerlendirilmesi amacıyla gerçekleştirilmiştir. Araştırmada nitel araştırma yöntemlerinden doküman incelemesi yöntemi kullanılmıştır. Araştırmanın yapılacağı kaynaklar amaçlı örnekleme yöntemlerinden ölçüt örnekleme yöntemi ile belirlenmiştir. Veriler betimsel analiz yöntemi kullanılarak analiz edilmiştir. Araştırmada ele alınan dokümanlar besin ve beslenme ile ilgili kazanımlar ve göstergeleriyle birlikte sağlıklı beslenme, besinler, besin grupları, besinlerin nereden geldiği, çeşitli besinlerden yemenin önemi, besinlerin faydaları kelimeleriyle de taranmıştır. Araştırmanın sonucunda, Okul Öncesi Eğitim Programı Etkinlik Kitabı'nda yer verilen etkinliklerde besin ve beslenme kavramları ile ilişkili kazanımların bulunmadığı aynı zamanda öğrenme süreçlerinde de besin ve beslenme kavramlarına yer verilmediği tespit edilmiştir. Dijital Eğitim Platformu Eğitim Bilişim Ağı Öğretmenler için Okul Öncesi Etkinlik Kitabı içerisinde yer verilen etkinliklerde ise, hem besin ve beslenme ile ilişkili kazanımların ele alındığı hem de öğrenme süreçlerinde besin ve beslenme kavramlarına yer verildiği bulunmuştur. Elde edilen bulgular tablolar halinde sunulmuş, araştırmanın sonunda konuyla ilgili önerilerde bulunulmuştur.

Anahtar kelimeler: Okul öncesi eğitim programı, etkinlik kitabı, kazanımlar ve göstergeleri, öğrenme süreci, besin ve beslenme.

[*] Graduate student, Aydın Adnan Menderes University, Aydin, Turkey, 1930803101@stu.adu.edu.tr, https://orcid.org/0000-0002-7457-3157

[**] *Corresponding Author*: Asst. Prof. Dr., Aydın Adnan Menderes University, Aydin, Turkey, esra.angin@adu.edu.tr, https://orcid.org/0000-0001-6601-4892

Citation Information
İnalcık, G., & Angın, D. E. (2021). An evaluation of activity books in terms of outcomes and learning processes related to food and nutrition. *Kuramsal Eğitimbilim Dergisi [Journal of Theoretical Educational Science], 14*(1), 38-63.

ISSN: 1308-1659

In order to continue living in a quality way, it is necessary to be physically, mentally and socially healthy and to know the factors affecting health well. Examining the factors affecting health, it is stated that the effect of nutrition is high; and considering reasons of diseases except for infections and accidents, the effect of factors except for nutrition is almost 10% (Tayar, Korkmaz, & Özkeleş, 2017). The World Health Organization [WHO] states that 38.3 million children under 60 months are overweight/obese, and this figure is almost 50 times (49.6) more among adults. Moreover, considering death reasons for children under 60 months, it was stated that 45% of these reasons are related to nutrition (WHO, 2020). Nutrition is an important concept in terms of its effects on individual's health as well as on society and country's economy. (Food and Agriculture Organization of the United Nations, 2005a; Türkiye Beslenme Rehberi [TÜBER], 2016).

Nutritional behaviour is a process that begins in the mother's womb and continues throughout our lives. It is necessary to be careful about the nutrition, beginning from the pregnancy period and to support the nutrition of the child according to the development and needs of the child in the postnatal period (Merdol, 2008). Considering that the habits acquired in the first years of life develop behaviours in later ages; it is stated that adequate and balanced nutrition and healthy eating habits should be acquired at an early age (T.C. Halk Sağlığı Genel Müdürlüğü, 2020b). For this reason, it is important to pay attention to the factors that affect nutritional behaviour. Nutritional behaviour of children; is affected by factors such as cultural factors, the number of family members, whether the family has received nutritional education or not, their attitudes during nutrition, their professions, their financial means and spendings on food, their meal planning, the child's age, food preferences and gender (Al-Hussein & Kano, 2018; Hu et al., 2008; Köroğlu, 2009; Küçükkömürler, 2015; Merdol, 2008; Ünver, 2004). In cases where factors affecting nutritional behaviour are not taken into consideration, it can be said that these factors pave the way for inadequate and unbalanced nutrition and for the formation of nutritional problems.

We can notice nutritional problems in children; as a lack of appetite, choice of food, excessive food consumption, not following meals, not being able to eat/not eating alone and wrong food choices. Nutritional problems pave the way for extreme meagreness or obesity, vitamin deficiencies, tooth decay, constipation or diarrhea, blood pressure, diabetes, heart and infectious diseases; for situations such as fatigue, restlessness, irritability, attention deficit and learning difficulties (Food and Agriculture Organization of the United Nations, 2005a; Karaoğlu & Samur, 2017; Marotz, 2012). In the Nutrition and Health Survey Turkey (T.C. Sağlık Bakanlığı, 2014), it is stated that children in our country, aged 0-60 months, have chronic diseases such as growth and development retardation, iron deficiency anemia and rickets. It is also stated that when children cannot be fed adequately in a balanced way in mother's womb and postnatal period their development and growth slow down and their mental development is negatively affected (Başkale, 2010; Merdol, 2008). Benton (2008) stated that when the cognitive development is undernourished in a critical period, its effects can be permanent. Considering the diseases and problems caused by nutrition, the importance of gaining the right nutritional habit in the early period is understood.

The preschool period is an important period for the formation of adequate and balanced nutritional habits (TÜBER, 2016). Confront healthy growth in a holistic sense

and gaining sufficient and balanced nutritional habits for development, offering rich learning opportunities and possibilities as particularly important issues. Children start to acquire adequate and balanced nutrition habits in the family. It is important that parents are the right role models for children with their eating habits. It is necessary to sit at the table together, to pay attention not to deal with different situations during meals and not to differentiate between meals, to use positive statements about foods, to prefer healthy foods and taking care to have foods from each food group in meals (Karaoğlu & Samur, 2017; Merdol, 2008; Okul Öncesi ve Okul Çağı Çocuklara Yönelik Beslenme Önerileri ve Menü Programları, 2013). When children start school; both the nutritional behaviour of teachers and being the right model for children and the offered activities as well are important (Carraway-Stage et al., 2014; Dazeley & Houston-Price, 2015; Kabacık & Gül, 2016; Özcan, 2019). Considering that mealtimes are important while giving children the habit of sufficient and balanced nutrition, it is also stated that it's important for institutions and teachers to pay attention to sufficient time at mealtimes and to consume their meals with children (Healthy Eating Guidelines, 2004). However, the types and contents of activities offered to children through the curriculum also appear to us as an important title. As with all other titles, the Nutrition Education title is also included in the Preschool Education Curriculum in order to carry out a planned, high quality and inclusive education. In our country, it is desired to give children the importance of adequate and balanced nutrition via the Ministry of National Education (MoNE) Preschool Education Program (MEB, 2013a). And when we take a look at the Preschool Curricula in different countries; in the aims of the Hong Kong Preschool Education curriculum, it is stated that it should be supported that children acquire good habits and that they are healthy. And in line with this purpose, children are expected to gain self-care skills and to adopt a healthy lifestyle and continue in the following periods (Curriculum Development Council, 2017). In Romania's early childhood education curriculum, children in 0-3 age group are expected to know edible and non-edible food, and in 3-6 age group they are expected to apply some basic principles regarding having a healthy diet. It is seen that the theme "Who we are" in the curriculum includes our body, our own and family health (Curriculum Pentru Educatia Timpurie Romania, 2019). In the Swedish Preschool Curriculum, physical activity is also emphasized along with a healthy diet and lifestyle and the understanding of the importance of taking care of children's health is aimed (Skolverket, 2020). In the Korean Preschool Education Curriculum, developing correct eating habits, creating healthy living habits and preventing diseases are included under the title of Health (Proclamation of the Ministry of Education and Human Resources Development, 2007). An educational project called "Ackerheldenmachen Schule-Farm heroes go to school" has been carried out to inform children about health and nutrition in Germany and Australia since 2013. In the scope of this project, children and young people are given the opportunity to experience growing organic vegetables (Ackerhelden, 2020). In the USA, we can notice the MyPlate Curriculum developed by the Ministry of Agriculture to support Nutrition Education. Discover MyPlate offers a free access set for teachers in Preschool Nutrition Education. The set includes resources such as activity suggestions, teacher guide, curriculum, meal cards and mini books (USDA Food and Nutrition Service, 2020). Within the framework of Leonardo Da Vinci Project, Turkey, Germany, Austria, Latvia and Romania have developed a nutrition guide for early childhood

active stakeholders. This guide mentions issues such as importance of nutrition, attitudes of pre-school teachers towards nutrition education, learning objectives and activity samples (Angın, Aktaş, & Cebirbay, 2015).

Considering that education provides behavioural change in individuals; including concepts related to nutrition in the education process is important in terms of increasing the knowledge level of nutrition and gaining a healthy eating habit. When the studies on nutrition education are examined, the results of the nutrition education given to children show that; nutritional behaviours were positively affected, the consumption of healthy foods such as vegetables, fruits, milk and dairy products, adequate and balanced nutrition habits, the rate of regular meals, the level of nutritional knowledge and healthy snack choices have increased, the consumption of junk food and packaged food decreased (Alay, 2019; Başkale, 2010; Franciscato et al., 2019; Hu et al., 2008; Matvienko, 2007; Ünver, 2004). At the same time, when looking at the two studies done by Kerkez (2018) and Ocak, Duban, and Yağıcı (2016), it was concluded that children; know food but do not know whether they are healthy or not, have a lack of knowledge about adequate and balanced nutrition and define nutrition as "eating".

> Nutrition education in early childhood period can be defined as pre-planned, theory-based and partners involved educational activities in which appropriate educational methods are employed to make desired changes in the behaviors of children with regard to foods, healthy nutrition and food choice. There are many factors for nutrition education, which aims to help children develop and sustain healthy nutrition behaviors, to be successful. The most important factors are the family, effective education programs and the teacher (Aktaş & Angın, 2015).

As can be understood from the studies conducted, children have a lack of knowledge about the concept of nutrition. It is thought that in order to prevent this situation, nutrition education should be given to children and it should be supported by activities conducted in the classroom. While gaining healthy eating habits, it is important to provide nutritional training and activities appropriate to the age groups, developmental levels, individual differences, environmental conditions and culture of children. Activities; can include tales, books, dramas, case studies, culinary activities and can be given with an interdisciplinary approach (Karaoğlu & Samur, 2017). It is also necessary to establish effective communication and cooperation between school and home in order to create nutritional behaviour changes in children (Marotz, 2012). When studies about nutrition in the preschool period are examined in general, it is seen that the effects of various nutrition education given to the family or the child (Aktaç, 2016; Aytekin, 2013; Obalı, 2009; Şenturan, 2017; Whiteley & Matwiejczyk, 2015), the comparison of nutritional characteristics of children in different institutions (Akar, 2006; Kobak & Pek, 2015), the factors affecting children's nutritional behaviour (Al-Hussein & Kano, 2018; Köroğlu, 2009), nutritional habits (Oğuz, 2011) and perceptions (Uzakgiden, 2015), views, knowledge levels and practices on child nutrition of teachers and families (Liu et al., 2018; Tepe, 2010) are being investigated.

Considering that the education of children starts in the family and continues in schools, presenting concepts and contents of food and nutrition to children in applications in schools is thought to be important for children to positively affect their healthy food choices, increase their nutritional knowledge, gain healthy eating habits and acquire skills that they can apply throughout their lives. Behavioural changes desired to occur in children in preschool education institutions are offered to children through activities. The activities are prepared in line with the outcomes and indicators of

the MoNE Preschool Education Program (PEP) (MEB, 2013a). Two books have been prepared by the MoNE in order to guide teachers while preparing activities. The first of these books which was prepared and published in 2013 with the PEP is named as "MoNE Preschool Education Program Activity Book (PEPAB) (MEB, 2013b)", the second book which was prepared in 2018 is called "MoNE Digital Education Platform Educational Information Network (DEPEIN) Preschool Activity Book for Teachers (PABFT)". When studies on activity books which are prepared for teachers of the PEP and preschool teachers are examined, it is seen that the studies contain program such as neurodevelopment (Aydın, Madi, Alpanda, & Sazcı, 2012), development of musical skills (Kandır & Türkoğlu, 2015), children's rights (Musaoğlu, 2012), health (Sönmez & Seyhan, 2016), character education (Kocalar, 2019), examination in terms of 21st-century skills (Tuğluk & Özkan, 2019) and that the PEPAB studies contain such as examination in terms of phonological awareness (Kartal & Güner, 2017). Looking at the studies that examine whether early childhood education programs include concepts related to food and nutrition or not; we can notice that the preschool curriculum in various provinces of Canada (Lynch, 2014) and Romania (Ilaş, 2015), the primary school curriculum in South Africa are evaluated with questionnaires (Nguyen, de Villiers, Fourie, Bourne, & Hendricks, 2013) and we can notice studies which are examining the Australian New South Wales Primary Education Curriculum and teaching practices (de Vlieger, Riley, Miller, Collins, & Bucher, 2018). Looking at the studies conducted in our country; we have reached the study carried out by Aktaş (2011) about concepts related to food and nutrition, ability, learning outcome, activity examples and sub-discipline acquisitions of the primary education 1-3grade Life Science curriculum. At the end of the study, it was found that there are concepts related to food and nutrition within three themes. It was also stated that food and nutritional gains and efficacy contents were included in the 1-3. grade Life Science curriculum should be renewed depending on the developments in food technology and nutrition science. At the same time, it has been determined that there hasn't been conducted any study which discusses food and nutritional outcomes and indicators of the (PEP). No research has been found on the PABFT (2018). The fact that the examination of the program in terms of containing the concepts of food and nutrition is not carried out at the basic education level and is not examined in the preschool period, which is a critical period in the formation of behaviours and knowledge, drew the attention to the gap in the literature and formed the basis for this research.

Considering all of this, based on the question "Are food and nutritional contents included in the learning processes of learning outcome, indicators and activities related to food and nutrition in the activities of the PEPAB (MEB, 2013b) and the PABFT (2018)?", the answers of the following questions have been sought in this study:

1. Are there any learning outcomes and indicators related to food and nutrition in the activities of the PEPAB (MEB, 2013b) and the PABFT (2018)?
2. What are the food and nutrition-related themes in the learning process of the activities including the learning outcome and indicators about food and nutrition in the PEPAB (MEB, 2013b) and the PABFT (2018)?
3. What are the food and nutrition-related themes in the learning process of the activities which are not including the learning outcome and indicators about food and nutrition in the PEPAB (MEB, 2013b) and the PABFT (2018)?

Method

Research Model

The document analysis method, which is one of the qualitative research methods, was used in this research, which is aimed to examine the status of the concepts related to food and nutrition in the activities included in the PEPAB (MEB, 2013b) and the PABFT (2018). The document review method includes the analysis of written or visual materials such as films, videos, and photographs that contain information about the subject under investigation (Yıldırım & Şimşek, 2016). In the research, a document review was carried out in order to examine the outcomes and indicators included in the program and activity books, which are written resources, and the concepts of food and nutrition in the activities.

Working Group

The PEPAB (MEB, 2013b) and the PABFT (2018) form the working group of the study in order to examine the outcomes, the indicators and the learning processes related to food and nutrition. While creating the working group, it was determined as a criterion to examine the content offered to teachers by the MoNE and therefore, the criterion sampling method, one of the purposeful sampling types, was used.

The PEPAB (MEB, 2013b). The PEPAB was prepared within the scope of the "Preschool Education Strengthening Project" and was published in 2013. In the introduction part of the book, the tag of the activities including the name of the activity, the type of activity, age group and adaptation are given. There are a total of 40 activities for children in different month groups and consists of 94 pages. The activities created according to the outcomes, the indicators and the concepts in the PEP (MEB, 2013a) have been prepared to support teachers while creating their own activities. It was expressed that teachers should create their own activity pool and prepare their activities in advance by making use of this published activity book to support the development of children according to their needs. It is thought that the book will guide teachers to generate various ideas and enrich their activities.

The PABFT (2018). The PABFT was prepared and published in 2018 in order to guide and support teachers due to the importance of creating an activity pool, the feedbacks from institutions and the increase in ready-made plans that are not suitable for children (Eğitim Bilişim Ağı, 2020a). In the contents section of the book, the name of the activity, the content of the activity, its type, outcomes and indicators and page number are specified. The activities were not prepared for different age groups, and the age group was not specified. There are 341 activities in the book and it consists of 378 pages. The fact that the activities are planned as integrated activities in accordance with the basic principles of the PEP, that certain days and weeks are included, that activities that can be applied in different regions are included, that there has been paid attention to the equality in the distribution of the activity types and that it is child-centred are among the features of the book (Eğitim Bilişim Ağı, 2020b).

Data Collection

In line with the general purpose of the research, firstly the activity books, which are published by the MoNE and which are providing the basis for preschool teachers to prepare their activities, have been determined and the outcomes and indicators related to food and nutrition in the PEP (MEB, 2013a) have been confirmed. In the second stage, the status of food and nutrition-related outcomes and indicators in the activities of both PEPAB (MEB, 2013b) and PABFT (2018) was examined. In the third stage, the food and nutritional content of the learning process of the activities within PEPAB (MEB, 2013b) and PABFT (2018) in which the outcomes and indicators related to food and nutrition are included, were examined. In the fourth stage the food and nutritional contents of the learning processes in the activities within PEPAB (MEB, 2013b) and PABFT (2018) in which the outcomes and indicators related to food and nutrition were not represented in the activities, were examined.

Data Analysis

In the research, the data were analysed with the descriptive analysis method. Descriptive analysis is the summarization and interpretation of data according to pre-determined titles. This analysis method has four stages: creating a theme and processing the data accordingly, obtaining and interpreting the findings (Yıldırım & Şimşek, 2016).

The outcomes and the indicators related to food and nutrition were scanned in the activities within PEPAB (MEB, 2013b) and PABFT (2018). In order to determine food and nutritional content in learning processes, scanning has been performed again using the words healthy nutrition, adequate and balanced nutrition, the importance of nutrition, vegetables, fruits, food groups and foods, how the food is obtained (where it comes from and how it is grown), the importance of eating various foods. The scanning process was carried out twice by the researcher in order to avoid an overlooked concept. At the same time, the activities were scanned by two experts working in the field of Preschool Education using the same keywords. All activities in the activity book have been transferred to a table. The activities determined in the keywords were marked in which activity they took place.

Validity and Reliability

The methods of ensuring validity and reliability in qualitative researches are quite different from quantitative researches. Erlandson et al. (1993) stated that the concept of internal validity is used as credibility, the concept of external validity as transmissibility and the concept of external reliability as confirmatory (As cited in Yıldırım & Şimşek, 2016). After the analysis conducted by the researcher to ensure credibility, the documents were also evaluated by two different researchers who are experts in the field of preschool education. It has been seen that the analysis of the expert and the analysis made by the researcher are consistent with each other. It is stated that detailed description and the sampling method are important in qualitative research to obtain transmissibility (Başkale, 2016). In the research, the detailed presentation of the findings and the research process and the fact that the sampling method is one of the purposeful sampling methods, increase the transmissibility. For verifiability, the data obtained in the research are stored so that another expert can also review it.

Ethical Statement

There is no ethics committee report for the research, as the data in the research is obtained from the documents. However, during the research the reporting was carried out objectively and findings were presented clearly without alteration. In the process of the data analyze, the necessary sensitivity was shown. Activity books determined for analysis and other sources were definitely referenced.

Findings

The behaviours expected to be acquired by children about food and nutrition in the PEP (MEB, 2013a); are expressed as adequate and balanced nutrition, eating and drinking food and drinks in sufficient quantities, eating at mealtimes, avoiding food and drinks that negatively affect health, being healthy and paying attention to good manners while eating food and using appropriate tools and equipment during nutrition. In Table 1, Outcomes and indicators regarding food and nutrition in the field of self-care skills in the PEP (MEB, 2013a) are given.

Table 1

Outcomes and Indicators Regarding Food and Nutrition Specified in the PEP (MEB, 2013a)

Self-Care Skills
Outcome 4: Has adequate and balanced nutrition. *(Indicators: Eats/drinks enough food and drink. Makes an effort to eat at mealtimes. Avoids eating/drinking foods and drinks that negatively affect health. Pays attention to health and manners while eating food.)*
Outcome 6: Uses the necessary tools and equipment for the daily life skills. *(Indicators: Uses appropriate tools and equipment during nutrition.)*
Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that can occur when not paying attention to health. Does what it takes to protect health.)*

When the outcomes and indicators in the PEP (MEB, 2013a) are examined, it is seen that three outcomes and eight indicators related to food and nutrition are under the title of self-care skills. The self-care skills outcome 4 includes “Has adequate and balanced nutrition” and the indicators “Eats/drinks enough food and drink”, “Makes an effort to eat at mealtimes”, “Avoids eating/drinking foods and drinks that negatively affect health”, and “Pays attention to health and manners while eating food”. Outcome 6, includes “Uses the necessary tools and materials for the daily life skills”, although there are three indicators under this outcome, only the indicator “Uses appropriate tools and equipment during nutrition” has been noticed to be related to food and nutrition. Outcome 8 includes “Takes measures regarding health” and the indicators “Tells what to do to protect health”, “Describes the consequences that can occur when is not paying attention to health”, and “Does what it takes to protect health” but there is no clear statement about food and nutrition. In the study outcome 8, were also examined, considering the need to pay attention to factors such as sufficient and balanced nutrition of the individual to protect our health, being aware of the importance of nutrition and sleep patterns.

PEPAB (MEB, 2013b) and PABFT (2018): Investigation of the Status of Outcomes and Indicators Related to Food and Nutrition in Activities

There are 40 activities in the PEPAB (MEB, 2013b) and 341 activities in the PABFT (2018). Among the activities in PEBAP, it was determined that none of the outcomes and indicators (Outcome 4, 6, 8) related to food and nutrition discussed in the field of self-care skills in Table 1 were not included. Also, it was determined that the outcomes and indicators (Outcome 4, 6, 8) related to food and nutrition presented in the field of self-care skills took place in 15 activities in the PABFT and these activities are shown in Table 2.

Table 2

Outcomes and Indicators Related to Food and Nutrition Addressed in the Field of Self-Care Skills in the Activities of the PABFT (2018)

Activity Name	Outcomes and Indicators Taking Place
I am Eating Balanced, Thank You	Outcome 4: Has adequate and balanced nutrition. *(Indicators: Eats/drinks enough food and drink. Makes an effort to eat at mealtimes.)*
Fruit Salad	Outcome 4: Has adequate and balanced nutrition. *(Indicators: Avoids eating/drinking foods and drinks that negatively affect health.)* Outcome 6: Uses the necessary tools and materials for the daily life skills. *(Indicators: Uses appropriate tools and equipment during nutrition.)*
Five Soup	Outcome 4: Has adequate and balanced nutrition. *(Indicators: Eats/drinks enough food and drink. Makes an effort to eat at mealtimes. Pays attention to health and manners while eating food.)* Outcome 6: Uses the necessary tools and materials for the daily life skills. *(Indicators: Uses appropriate tools and equipment during nutrition.)*
The Speed of My Heart	Outcome 4: Has adequate and balanced nutrition. *(Indicators: Avoids eating/drinking foods and drinks that negatively affect health.)*
Let's Squeeze an Orange	Outcome 4: Has adequate and balanced nutrition. *(Indicators: Avoids eating/drinking foods and drinks that negatively affect health.)*
Dental Health	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that can occur when is not paying attention to health.)*
I Brush My Teeth	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that can occur when is not paying attention to health.)*
I Wash My Hands, I Protect My Health	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that can occur when is not paying attention to health.)*
Wheel Games	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that*

	can occur when is not paying attention to health. Does what it takes to protect health.)
Ferment Your Own Yogurt	Outcome 8: Takes measures regarding health. *(Indicators: Does what it takes to protect health.)*
Food Plate	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that can occur when is not paying attention to health. Does what it takes to protect health.)*
I Count while I'm Brushing	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that can occur when is not paying attention to health.)*
Is it Fresh or is it Stale?	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health.)*
Let's Design Our Own Scarf	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health. Describes the consequences that can occur when is not paying attention to health.)*
Time to Move	Outcome 8: Takes measures regarding health. *(Indicators: Tells what to do to protect health.)*

The outcomes and indicators related to food and nutrition within the PABFT (2018) are included in the activities shown in Table 2. We can notice that the indicators "Eats/drinks enough food and drinks.", "Makes an effort to eat at mealtimes.", and "Pays attention to health and manners while eating food." which are belonging to this outcome, are taking place in the "Five Soup" activity. We can see that the "Avoids eating/drinking foods and drinks that negatively affect health." indicator is handled as the only indicator for this outcome in the "Fruit Salad", "The Speed of My Heart", and "Let's Squeeze an Orange" activities. The indicator "Uses appropriate tools and equipment during nutrition." of the "Uses the necessary tools and materials for the daily life skills." outcome is taking place in the "Fruit Salad" and "Five Soup" activities. The "Takes measures regarding health." outcome is taking place in the "Dental Health", "I Brush My Teeth", "I Wash My Hands, I Protect My Health", "Wheel Games", "I Count While I am Brushing", "Let's Design Our Own Scarf", "Ferment Your Own Yogurt", "Food Plate", "Is It Fresh or is it Stale?", and "Time to Move" activities. It is seen that all indicators of this outcome are represented only in the "Wheel Games" and "Food Plate" activities. The "Tells what to do to protect health." and "Describes the consequences that can occur when is not paying attention to health." indicators are included in the "Dental Health", "I Brush My Teeth", "I Wash My Hands, I Protect My Health", "I Count While I am Brushing", and "Let's Design Our Own Scarf" activities. In addition, there are three activities in which the only one of the indicators "Tells what to do to protect health." and "Describes the consequences that can occur when is not paying attention to health." belonging to this outcome is represented. These are the "Is it Fresh or is it Stale?" and "Time to Move" activities which are representing the "Tells what to do to protect health." indicator; and the "Ferment Your Own Yogurt" activity which is representing the "Does what it takes to protect health." indicator.

Investigation of the Learning Process of the Activities that Represent the Outcomes and Indicators Concerning Food and Nutrition in the Field of Self-Care Skills in the PEPAB (MEB, 2013b) and PABFT (2018)

Due to the absence of food and nutrition-related outcomes and indicators (Outcome 4, 6, 8) in the field of self-care skills in the PEPAB (MEB, 2013b), it could not be examined in line with this sub-objective.

When the learning processes of the activities in the PABFT (2018) have been examined, it was determined that there was no food and nutritional content in seven activities. In the learning process of activities named "Dental Health", "I Brush My Teeth", "I Wash My Hands, I Protect My Health", "Wheel Games", "I Count While I am Brushing", "Let's Design Our Own Scarf", and "Time to Move" including the "Takes measures regarding health." outcome, the concepts related to food and nutrition are not included. During the learning processes of these activities, the importance of brushing teeth, washing hands, dressing according to the weather conditions and doing sports for our health are explained. In the PABFT (2018), it has been observed that the learning process of eight activities, which include the outcomes and indicators related to food and nutrition, which are discussed in the field of self-care skills, have food and nutritional content. The activities are listed in Table 3.

Table 3

PABFT (2018)

Activity Name
I am Eating Balanced, Thank You
Fruit Salad
Five Soup
The Speed of My Heart
Let's Squeeze an Orange
Ferment Your Own Yogurt
Food Plate
Is it Fresh or is it Stale?

Food and nutrition-related concepts are included in the "I am Eating Balanced, Thank You", "Fruit Salad", "Five Soup", "Speed of My Heart", "Let's Squeeze Orange", "Ferment Your Own Yogurt", "Food Plate", and "Is it Fresh or is it Stale?" activities in the outcome indicators and during the learning processes of activities in the PABFT (2018). In the learning processes of the activities in general; the importance of adequate and balanced nutrition, of consumption of some animal foods and fresh foods for our health, of beneficial and harmful foods, of mealtimes and what should be eaten at meals, of fruits and vegetables and what is happening; the examination of the texture, taste, smell and colour of various foods; their place in our culture; eating rules and food preparation processes are included.

During the learning processes of the activities "Five Soup", "Fruit Salad", "Let's Squeeze Orange", and "Ferment Your Own Yogurt", various foods are prepared with the children. They prepare soups, salads, orange juice and yogurt themselves and talk about the tastes and benefits of foods. It is observed that the activities of "Five Soup", "Fruit Salad", "Let's Squeeze an Orange" activities are encouraged for children to consume fruits and vegetables during their learning process. The importance of fruits and vegetables and their benefits for our health take place in the learning process of these activities and children learn the properties of fruits and vegetables by using their sense organs. The benefits of yogurt and its place in our culture are mentioned in the activity "Ferment Your Own Yogurt" and the importance of fresh eggs for our health and the importance of eggs in healthy nutrition are mentioned in the activity "Is it Fresh or is it Stale?". In the "Let's Squeeze Orange" activity, it is emphasized that ready-made fruit juices are not healthy and that we should consume freshly squeezed fruit juices. In the same way, the harm of junk food and fizzy drinks for our health is explained in the "Food Plate" activity. In the "Is it Fresh or is it Stale?" activity, we can notice what we need to eat for a healthy diet, in the "Food Plate" activity, we can see the food groups to be consumed during the day and in the "The Speed of My Heart" activity, we can see the foods we need to consume for the healthy functioning of our internal organs. It is seen that the eating rules, what to do before and after eating are included in the activities "I Eat Balanced, Thank You" and "Five Soup" and in the "Food Plate" activity, we can notice that the mealtimes are included.

The importance of adequate and balanced nutrition and healthy eating is emphasized in all activities. In the learning processes of the "I am Eating Balanced, Thank You", "Fruit Salad", and "Food Plate" activities, it is seen that the importance of a balanced diet for us to maintain a healthy life and to continue our lives is expressed more clearly than other activities.

Investigation of the Concepts Related to Food and Nutrition in the Learning Process of the Activities in which the Outcomes and Indicators Related to Food and Nutrition Are Not Represented in the Field of Self-Care Skills in the Activities of the PEPAB (MEB, 2013b) and the PABFT (2018).

Among the 40 activities in the PEPAB (MEB, 2013b), it was determined that the name of the food is only mentioned in the "Journey of Milk Bottles" activity, but when the learning process of the activity was examined, it was confirmed that recycling was explained and that concepts and content related to food and nutrition were not included.

It is seen that a total of 15 activities which are "I Know Ashoura", "Brother Lemon", "We are Making Pickles", "Where Does Wheat Grow?", "I Eat Colourfully", "Winter Fruit", "We are Making Cookies", "We are Making Cake", "Sweet oh so Sweet!", "Lemon Vase", "Time to Discover Tastes", "Is it a Wish or a Need?", "Salt Lake", "Taste Jar", and "Lemon Vase", give place to concepts related to food and nutrition in the learning process.

In the activity named "I Know Ashoura", the names, tastes and benefits of the foods used in making Ashoura are discussed. The stages of making Ashoura are explained through a game and the place of Ashoura in our culture is mentioned. In the activity named "Brother Lemon", lemonade is made by expressing the benefits of lemon as it contains vitamin C and cleans the microbes in our body, and the fruits orange and

tangerine are also included during the game. In the activity “We Are Making Pickles”, the foods used in pickles are introduced and information is given about where, how and when they are grown. Children are given the opportunity to prepare pickles. In addition, talking about vegetables that should be consumed in autumn and taste experiments with vegetables are performed. In the activity “Where Is Wheat Grown?”, in which region and how the wheat is grown, how pasta and bread is made by turning it into flour is explained. It is seen that the concept of healthy nutrition is included in the activity called “I eat colourfully”. Children are shown photographs of fruits and vegetables, and they are given the opportunity to describe and ask the names of fruits and vegetables they don’t know. In the “Winter Fruit” activity, a fruit cake is made with the children, names of various fruits are expressed. In the “We Are Making Cookies” activity, foods used in making cookies are introduced to the children and cookies are made together. In the activity called “We Are Making Cake”, cake making is told by a story. As can be seen in the “We are Making Cookies” and “We Are Making Cake” activities, children learn the process of making a cookie and a cake and get to know the foods that are used, better. In the “Sweet oh so Sweet!” activity, the colour, shape, texture, smell, taste and what can be done with orange are discussed and orange jam is made together with the children. In the learning process of the “Salt Lake” activity, children are asked to separate various foods (such as raisins, salted peanuts, dried apricots, popcorn) as sweet and salty. In addition, it is emphasized where salt comes from, how it is obtained and how important natural resources are.

When the learning processes of the activities were examined, it was seen that the concepts of food and nutrition, the importance of healthy food and nutrition were expressed loud and clearly in the learning processes of some activities, while some of them included the concepts of food and nutrition was not so clear. In the activity “Is it a Wish or is it a Need?”, it is discussed what products are needed to live a healthy life and the example, that a cake will be food we would like to buy even if we don’t need it, is given in the learning process. In the “Lemon Vase” activity, children are shown a vase filled with lemons in order to create a still life work. During the learning process of the activity, there is a conversation about the colour, taste and amount of lemon. Salt, sugar, lemon, chili pepper, banana, Turkish bagel and pepper are included in the learning process of the “Time to Discover Tastes” activity. It is emphasized that the foods are grouped as sweet, salty and sour, and the flavours are taught with experiments and games. And in the “Taste Jar” activity, there is a conversation about sweet, salty, sour and bitter foods, and children are asked to separate the food they bring according to their taste. Having the activity names related to food and nutrition and looking at the learning processes, we can notice that there are also activities that are determined to not include food and nutrition. In the activity “I Found Bread but There Is Nothing to Eat with It”, the word bread is used in the rhyme, but no message is given about food or nutrition during the learning process. In the name of the activity “The Sparrow’s Dining House”, the word food is mentioned, but when the learning process is examined, it is understood that its content is to prevent waste and to utilize leftover food. We can see the word egg in the name of the activity “Don’t Let Your Egg Break” activity, but when the learning process is examined, it is seen that, in order to give responsibility to the children, it is ensured that they were able to bring the egg to the school without breaking it for a week.

Discussion

In this part, findings obtained from the research are presented in the light of the literature.

Regarding the first sub-objective of the study, the status of including the outcomes and indicators (Outcome 4, 6, 8) related to food and nutrition determined under the title of self-care skills in the activities within PEPAB (MEB, 2013b) and PABFT (2018) was examined. In this context, it was determined that the activities in PEPAB (MEB, 2013b) did not include the outcomes and indicators (Outcomes 4, 6, and 8) under the title of self-care skills. It is stated that it is important to lay the foundations of healthy eating habits in this period, as personality and habits begin to be acquired in the preschool period. In addition, it is also necessary to offer and prefer healthy foods during this period, as the growth and development rates are quite high (T.C. Halk Sağlığı Genel Müdürlüğü, 2020b). When the literature is examined, researches and findings reveal how important the subject is. In the Nutrition and Health Survey of Turkey, which was conducted in 2010, the weight status of 2607 children between 0-60 months was examined; it was determined that 4.1% were very weak, 13.0% were weak, 14.6% were overweighed and 5.9% were obese (TBSA, 2014). It is stated that besides the psychological and physical health problems caused by nutrition, the nutritional status of the people also affects the economy and development of a country, it is indicated that education supporting healthy eating habits and healthy food choices in schools should be given to prevent the occurrence of the specified problems (T.C. Halk Sağlığı Genel Müdürlüğü, 2020b; The Nutrition Education Resource Guide for California Public Schools, 2017; Türkiye Sağlıklı Beslenme ve Hareketli Hayat Programı, 2019). In the academic year of 2018-2019, 2740 kindergartens, 148229 children, 7899 teachers, as well as parents and school staff, were trained in order to achieve the habit of healthy nutrition and regular physical activity on the basis of Healthy Nutrition and Active Life Program of Turkey with the title "Growing Turkey with Healthy Fed Active Students" (T.C. Halk Sağlığı Genel Müdürlüğü, 2020a). In this direction, it can be said that activities that will support the outcome of healthy eating habits should be offered to children.

Various recommendations have been made by the Food and Agriculture Organization of the United Nations (FAO, 2005a), emphasizing the importance of nutrition education in schools in gaining healthy eating habits. In these suggestions; various projects, excursions, activities, regulation of school policies and Nutrition Education Curriculum, training for teachers, provision of material support to schools take place. Considering the explanations about the necessity of including Nutrition Education in schools, the importance of providing the resources that teachers will benefit from the Nutrition Education process is understood. In a study conducted to determine the problems experienced in Pre-School Education, most of the teachers stated that they could gain all the competencies, but some of them stated that they were not sufficient in gaining self-care skills (Yalçın & Yalçın, 2018). This situation makes think about the necessity that self-care skills outcome and indicators should be included in the activities within PEPAB (MEB, 2013b), which are offered as a guide to teachers in providing children with self-care skills and healthy eating habits. Looking at the activities in the PABFT (2018), 15 activities were identified that include the outcomes and indicators (Outcomes 4, 6, and 8) related to food and nutrition. The outcomes in the

determined activities; "Outcome 8 - Takes measures regarding health." has been observed to be taking part in two activities, "Outcome 4- Has adequate and balanced nutrition." in five activities and "Outcome 6- Uses the necessary tools and equipment for the daily life skills" in two activities. This situation makes us think that "Outcome 8 - Takes measures regarding health." is being emphasized among the outcomes related to food and nutrition discussed under the self-care skills title of PABFT (2018). There are 341 activities in the PABFT (2018) and 40 activities in the PEPAB (MEB, 2013b). Due to the low number of activities in the PEPAB (MEB, 2013b), it can be interpreted as that the content is limited and that therefore concepts related to food and nutrition are not included.

In line with the second sub-objective of the study, the learning processes of the activities, in which the outcomes and indicators (Outcomes 4, 6, and 8) related to food and nutrition in the activities in the PEPAB (MEB, 2013b) and the PABFT (2018), were examined. PEPAB (MEB, 2013b) could not be discussed in this sub-objective because the outcomes and the indicators related to food and nutrition were not included in the activities of the PEPAB (MEB, 2013b). When the learning processes of the 15 activities, which included the outcomes 4, 6, and 8 in PABFT (2018), it was seen that there was no food and nutritional content in the learning process in seven activities. All of these activities include the outcome 8, *"It should not be forgotten that the most important conditions of a healthy life are adequate and balanced nutrition, enough rest/sleep and doing the necessary body movements. Informative activities should be held on common paediatric diseases, on the ways of protection from them and on treatment methods."* (MEB, 2013). In this direction, it can be stated that some activities that contain the outcome 8 include the importance of adequate and balanced nutrition, as well as hygiene, sleep patterns, rest and physical activity.

When the learning process of the activities in the PABFT (2018) is analysed we can see that the learning process of eight activities had food and nutritional content. In the learning processes of these activities; it was determined that the importance of adequate and balanced nutrition, of the consumption of fruits and vegetables, of some animal foods, of paying attention to mealtimes and of the food plate, the benefits of foods and the harm of packaged foods, the place of some foods in our culture, nutrients that must be consumed for our organs to function properly, eating rules, examining the structure of various foods and culinary studies are included in general. In the study of Carraway-Stage et al. (2014), they stated that the nutrition education of teachers and administrators should consist of content should support cultural foods, the benefits of food and the ability to make healthy food choices, the amount of food we need to consume, food groups, food preparation, cleaning rules in food preparation and consumption process, healthy habits and lifestyle. It is seen that there is a parallelism between the views in the study and the learning processes of the activities with food and nutrition content in the PABFT (2018). In the preschool period, it is important for children to consume foods with protein value such as milk, yogurt and eggs for bone and tooth development (T.C. Halk Sağlığı Genel Müdürlüğü, 2020b). In the activities within the PABFT (2018), it is thought that emphasizing the benefit of yogurt and eggs and their freshness and making yogurt together will support children to consume foods by developing a positive attitude towards these foods. In a study, it was observed that some of the children participating in the study skip meals, do not consume vegetables

and tend to ready-made food (Akar, 2006). In one of the results obtained in the study of Uzakgiden (2015) examining the nutritional perceptions of children, it was found that children expressed the number of meals as three, but they lacked information about snacks. Children need to consume five to six meals a day, and when the number of meals decreases, the amount of nutrients required per day cannot be fulfilled. In addition, when meals are served without skipping and considering that it is a behavior acquired in the early period (Nutritional Suggestions and Menu Programs for Preschool and School-Age Children, 2013; TÜBER, 2016), it is understood that it is important to mention the mealtimes in the activities. It is known that consuming various foods is necessary for a healthy diet. The Childhood Obesity Research Turkey was carried out with Primary School 2nd Grade Students. As a result of the study, the consumption frequency of recommended food groups in the Turkey Nutrition Guide was detected as low for the children and it was stated that correct information and training should be provided on this subject (COSI-TUR, 2017). In TÜBER (2016), the Turkey specific dietary pattern has been expressed in two ways and one is formed by "Healthy Food Plate". The Healthy Food Plate includes food groups in order to increase awareness about healthy life and make it easy to understand, and it is expected to choose 1 food from each food group at meals. Finding activities that emphasize the harm of packaged foods, encourage eating vegetables and include mealtimes and food plates in the activities within the PABFT (2018), make think that children will transform these behaviours into habits, understand the importance of healthy nutrition and that their knowledge and awareness about adequate and balanced nutrition will increase.

In line with the third sub-objective of the study, the status of the learning process of activities that do not represent the outcomes and indicators related to food and nutrition, in the PEPAB (MEB, 2013b) and the PABFT (2018) have been examined. It has been determined that concepts related to food and nutrition are not included in the learning process of the activities in the PEBAP (MEB, 2013b) in the meantime eighter learning processes related to food and nutrition in the PABFT (2018). In their work in (2016), Sönmez and Seyhan examined the MoNE 2013 Preschool Education Program in terms of the concept of health. As a result of the study, it was determined that the program emphasizes physical health. Physical health; includes physical condition, nutrition and hygiene issues. In this case, it can be said that the program emphasizes the importance of nutrition. The obtained result suggests that food and nutritional contents should be included in the PEPAB (MEB, 2013b) activities prepared in line with the program. In the PEP, one of the aims of Preschool Education is stated as *"To ensure that children develop physical, mental and emotional development and gain good habits (MEB, 2013)"*. Considering the basic principles of preschool education, it is seen that one of the principles is *"Preschool Education should support the child's motor, social and emotional, language and cognitive development, provide self-care skills and prepare him/her for primary school (MEB, 2013)"*. In light of the information given above; it is understood that in preschool education, it is necessary to make children acquire good habits and achieve self-care skills. However, it is observed that the content related to food and nutrition is lacking in the outcome, indicator and learning processes of the activities, which are presented with the PEP (MEB, 2013a) book and whose purpose is to guide the teacher. The preschool period has an important place in gaining nutritional habits, during this period, problems with nutrition negatively affect mental

development and cause future health problems (obesity, chronic diseases, etc.) (TÜBER, 2016). To prevent obesity and diseases caused by obesity, one of the goals in the "Action Plan on Prevention of Childhood Obesity" is *to encourage healthier environments in schools and pre-school*. It is aimed to start the school meal program, to increase the consumption of healthy food in schools, to direct children to health institutions according to their weight, the inclusion of nutrition and physical activity programs from Preschool Education is stated as necessary (Türkiye Sağlıklı Beslenme ve Hareketli Hayat Programı, 2019). When we look at the PEPAB (MEB, 2013b), it is understood that it is incomplete in terms of the expressions stated in the Action Plan on Prevention of Childhood Obesity. Diab (2015) investigated the effect of the nutrition guide prepared for preschool teachers on the healthy growth of children. It was determined through the nutrition guide, that teachers' knowledge about nutrition increased and their activities improved, that malnutrition behaviours in children were prevented and this situation positively affected growth. In light of the research, the importance of the content offered in the resources that teachers use during the nutrition education, being guiding and rich in nutritional content becomes clear. In a study conducted with teachers about the difficulties and opportunities encountered in the nutrition education process, it was observed that teachers emphasized the difficulties related to the lack of appropriate curriculum, the cost of nutrition education, lack of sufficient knowledge, difficulties with food offered at home and school and lack of time in the classroom (Perera, Frei, Frei, Wong, & Bobe, 2015). While creating their activities, teachers should notice the lack of food and nutrition in the resources provided to them and accordingly, they should prepare activities with food and nutritional content. For this, it can be stated that it is important for teachers to have information about food and nutrition issues and to receive training on this subject. Considering the studies and explanations about the pre-school period, which is important for achieving healthy eating habits; it is thought that the content of the activities presented in the PEPAB (MEB, 2013b), which is a guide for teachers in the process of preparing activities, should be reviewed in terms of outcomes related to food and nutrition in the field of self-care skills.

In the 15 activities included in the PABFT (2018), it was determined that the concepts of food and nutrition were included in the learning processes of these activities although the outcomes and indicators related to food and nutrition were not discussed. When the learning processes of the activities are investigated in terms of food and nutrition, the environment of food cultivation and its place in our culture are generally mentioned and benefits of foods and consuming the seasonal foods are emphasized by introducing them. Besides, foods are grouped according to their tastes and also it includes the culinary works. On the basis of nutrition education, it is stated that children should taste healthy foods and that the likelihood of consuming foods will increase when they are tasted. It is emphasized that taste activities in the classes can be created by predicting the appearance and smell of foods (Action for Healthy Kids, 2020). The Food and Agriculture Organization of the United Nations (FAO, 2005b) stated that children should be actively involved in the process by experiencing, observing, interpreting and making choices about Nutrition Education in the classroom. When the learning process of the activities that include the concepts of food and nutrition in the PABFT (2018) is examined, it can be said that there is a parallelism between the

statements in those included in the learning processes of the activities and the expressions stated about the contents of activities in FAO (2005) and in Action for Healthy Kids. Studies on the preparation of Nutrition Education-related materials and situations encountered in the practice by both policymakers and researchers, highlight the importance of the subject. Lynch (2014) examined the Preschool Education Curriculum offered by the Ministry of Education in various states of Canada and the nutritional content of the auxiliary guides offered to implement the curriculum. In the states where there is an application guide with the study; it has been revealed that food preparation, the introduction of the Canada Food Guide, the importance of food selection and drama studies are included. In the USA, there is a Discover MyPlate nutrition training set carried out by the Ministry of Agriculture. In the preschool program of the set, healthy food choices, the variety of vegetables and fruits, observing how they grow, defining hunger and satiety status and the importance of physical activities for our health are included (USDA Food and Nutrition Service, 2020). In the study conducted by Her (2010) to develop a nutrition textbook for elementary school students, students stated that they wanted to get information on subjects such as cooking and healthy foods. In the book developed in this direction, five main titles such as traditional nutrition culture, cooking, eating habits, etc. are included (Her, 2010).

When the activities determined to be related to the concepts of food and nutrition in the PABFT (2018) are generally examined; it is seen that children are given the opportunity to cook and take part in kitchen activities, that the discovery of nutrients with sense organs is provided, that the place of some foods in our culture is explained, that children are actively involved in the process and gain through playing games and that the consumption of fruit and vegetables is encouraged in most of the activities. Nutrition education has aims such as supporting society and environment by gaining a healthy eating habit that children can maintain in their lives. In order to achieve the goals, it is necessary to ensure that children actively participate in nutrition education, to provide studies where they can apply what they have learned (cooking etc.) and to ensure that they understand the importance of nutrition for health (Food and Agriculture Organization of the United Nations, 2005b). Through the food tasting and classroom meal preparation activities, children are actively involved in the process and become more willing to consume healthy foods. When it is not known exactly how the food is cooked, distrust may occur in children and this may cause children to turn to convenience foods (The Nutrition Education Resource Guide for California Public Schools, 2017). In the Healthy Eating Guidelines (2004), it is stated that mealtimes and regular meals are important in gaining healthy eating habits, that implementing programs that encourage fruit and vegetables and spending time every day for nutrition in the program will positively affect healthy food preferences and that various opportunities should be created for tasting new foods. Although the duration of teachers' involvement in food and nutrition activities is outside the scope of this study, it is seen that other expressions emphasized as important in the Healthy Eating Guidelines take place in the activities in the PABFT (2018). In a study, it was found that the frequency of children consuming vegetables was low and that vegetables ranked last in food preferences (Kabacık & Gül, 2016). For this reason, it is important to have applications that will encourage them to consume fruit and vegetables and to include them in the curriculum. In the study of Demiriz and Özgen (2019), it was found that the

reason why children do not prefer fruit and vegetable consumption according to the opinions of the mothers and children is related to their taste or to the fact that they have never eaten it at all. It has been stated that children can actively participate in the food preparation process or consume foods they do not like with different presentations in school and home activities. In their study with children between 12 and 36 months of age, Dazeley and Houston-Price (2015) found that the inclusion of fruits and vegetables during games and their tactile recognition of these fruits and vegetables can lead them to be more willing to eat. And in another study, it was stated that early childhood is a critical period for interventions that will affect food preferences and that the recognition of foods will affect preferences. The study aiming to develop positive attitudes towards vegetables in children with play-based education revealed children's desire to taste and discover vegetables (Whiteley & Matwiejczyk, 2015). Consistent with the results of the research and literature, the activities in the PABFT (2018), which include the content related to food and nutrition in the outcome, indicators and learning processes, are believed to make teachers aware of the healthy eating habits of children and will also guide how to plan activities related to food and nutrition.

Result and Suggestions

At the end of the study carried out in order to evaluate the activities in the PEPAB (MEB, 2013b) and PABFT (2018), in terms of food and nutrition outcomes and learning processes; we can notice that in the PEPAB (MEB, 2013b) the activities determined under the heading of self-care skills outcome 4, 6 and 8 were not included. On the other hand, when examining the inclusion of concepts related to food and nutrition in the learning processes of the PEPAB (MEB, 2013b) activities, no concept related to food and nutrition has been found. In the activities included in the PABFT (2018), we can notice that the outcomes 4, 6 and 8' determined under the title of self-care skills of the program book, are taking place in 15 activities, however, when the learning processes of these activities were examined, it was seen that only eight activities had concepts related to food and nutrition in the learning process. In addition, in the activities included in the PABFT (2018), it was found that food and nutrition-related content took place in the learning process of 15 activities although the outcomes 4, 6 and 8 are not included. At the end of the study, it is considered as important that;

1. In other studies; more in-depth analysis can be done with content analysis; data can be collected more in-depth through observations and interviews by using the data diversification method in different studies,
2. The PEPAB (MEB, 2013b) can be reviewed in a way to include the outcomes and activities related to food and nutrition by re-examining the scope of activities,
3. In-service trainings can be carried out for teachers to realize the importance of the subject and to enrich their practices in terms of nutrition education and activities
4. Nutrition education programs and activities can be created along with an interdisciplinary approach by using the Turkey Dietary Guidelines (TDG) leading the way in order to form healthy food habits and the Turkey Nutrition and Health Research (TNHR) mentioning health problems caused by nutrition.

Statement of Responsibility

Gülşah İnalcık; methodology, resources, data collection, validation, analysis, writing - original draft, writing - review & editing, visualization. Duriye Esra Angın; design of the project, conceptualization, methodology, resources, validation, writing - original draft, writing - review & editing, supervision.

References

Ackerhelden. (2020). *Ackerhelden Machen Schule*. Obtained on 29.11.2020 from https://www.ackerhelden.de/ams-english/

Action for Healthy Kids. (2020). Obtained on 01.06.2020 from https://www.actionforhealthykids.org/activity/host-a-taste-test/#.

Akar, A. S. (2006). *Özel ve resmi okul öncesi eğitim kurumlarına devam eden 4-6 yaş grubu çocuklarının beslenme alışkanlıklarının karşılaştırılması* (Yayınlanmamış yüksek lisans tezi). Gazi Üniversitesi, Ankara.

Aktaç, Ş. (2016). *Okul öncesi çağ çocuklar için aile katılımlı beslenme eğitim modelinin geliştirilmesi ve çocukların beslenme bilgi ve davranışları üzerine etkisinin değerlendirilmesi* (Yayınlanmamış doktora tezi). Başkent Üniversitesi, Ankara.

Aktaş, N. (2011). İlköğretim 1-3. sınıf hayat bilgisi ders programının besin ve beslenme ile ilgili kazanım ve etkinlikler açısından incelenmesi. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 26*, 23-31.

Aktaş, N., & Angın, D. E. (2015). Erken Çocukluk Döneminde Beslenme Eğitimi. *3. Uluslararası Helal ve Sağlıklı Gıda Kongresi. "Helal ve Sağlıklı Beslenmede Farkındalık ve Sürdürülebilirlik" Kongresi* içinde (s. 171-172). Konya: Necmettin Erbakan Üniversitesi.

Al-Hussein, R. Y., & Kano, A. E. K. (2018). Relationship between family life-style and nutritional status among kindergarten children in Nineveh Governorate. *Mosul Journal of Nursing, 6*(2), 62-71.

Alay, F. (2019). *Okul çağı çocuklarına verilen beslenme eğitimi programının beslenme alışkanlıkları besin tüketim sıklıkları ve beslenme bilgi düzeyi üzerine etkisinin değerlendirilmesi* (Yayınlanmamış yüksek lisans tezi). Aydın Adnan Menderes Üniversitesi, Aydın.

Angın, D. E., Aktaş, N., & Cebirbay, M. A. (2015). A Nutrition guide for early childhood active stakeholders. *The Journal of International Education Science* (*Uluslararası Eğitim Bilimleri Dergisi), 4*, 419-426.

Aydın, O., Madi, B., Alpanda, S., & Sazcı, A. (2012). MEB okul öncesi eğitim programının nörogelişimsel açıdan değerlendirilmesi. *M.Ü. Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, 36*, 69-93.

Aytekin, K. Ö. (2013). *Aile içi etkileşim ve masallarla desteklenmiş beslenme eğitiminin 5-6 yaş çocukların beslenme biçimlerine etkisinin incelenmesi* (Yayınlanmamış doktora tezi). Selçuk Üniversitesi, Konya.

Başkale, H. (2010). *Okul öncesi çocuklara verilen beslenme eğitiminin çocukların beslenme bilgisine, davranışlarına ve antropometrik ölçümlerine etkisi* (Yayınlanmamış doktora tezi). Dokuz Eylül Üniversitesi, İzmir.

Başkale, H. (2016). Nitel araştırmalarda geçerlik, güvenirlik ve örneklem büyüklüğünün belirlenmesi. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi*, *9*(1), 23-28.

Benton, D. (2008). The influence of children's diet on their cognition and behaviour. *European Journal of Nutrition, 47*(3), 25–37.

Food and Agriculture Organization of the United Nations [FAO]. (2005a). *Nutrition education in primary schools.* Obtained on 15.05.2020 from http://www.fao.org/3/a-a0333e.pdf

Food and Agriculture Organization of the United Nations [FAO]. (2005b). *Nutrition education in primary schools.* Obtained on 15.05.2020 from http://www.fao.org/3/a0333e/a0333e01.pdf

Carraway-Stage, V., Henson, S. R., Dipper, A., Spangler, H., Ash, S. L., & Goodell, S. (2014). Understanding the state of Nutrition Education in the Head Start classroom: A qualitative approach. *American Journal of Health Education, 45*(1), 52-62. http://dx.doi.org/10.1080/19325037.2013.853000

Curriculum Development Council. (2017). *Kindergarten education curriculum guide*. Obtained on 04.06.2020 from https://www.edb.gov.hk/attachment/en/curriculum-development/major-level-of-edu/preprimary/ENG_KGECG_2017.pdf.

Curriculum Pentru Educatia Timpurie Romania. (2019). Obtained on 29.11.2020 from https://www.edu.ro/sites/default/files/Curriculum%20ET_2019_aug.pdf

Dazeley, P., & Houston-Price, C. (2015). Exposure to foods' non-taste sensory properties. A nursery intervention to increase children's willingness to try fruit and vegetables. *Appetite, 84*, 1–6. http://dx.doi.org/10.1016/j.appet.2014.08.040.

de Vlieger, N., Riley, N., Miller, A., Collins, C. E., & Bucher, T. (2018). Nutrition Education in the Australian New South Wales primary school curriculum: An exploration of time allocation, translation and attitudes in a sample of teachers. *Health Promotion Journal of Australia*, *30*(1), 94-101. http://dx.doi.org/10.1002/hpja.188

Demiriz, S., & Özgen, L. (2019). Çocukların sebze ve meyve tüketim durumu: Anne ve çocuk görüşleri. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, *39*(2), 681-701.

Diab, S. S. E. M. (2015). Effect of nutritional guideline for kindergarten teachers on healthy physical growth of preschool children. *IOSR Journal of Research & Method in Education*, *5*(4), 17-25. http://dx.doi.org/10.9790/7388-05411725

Eğitim Bilişim Ağı (EBA). (2020a). *Etkinlik Havuzu Neden Oluşturuldu?*. 05.04.2020 tarihinde http://okuloncesi.eba.gov.tr/Haber/Detay/2 adresinden alınmıştır.

Eğitim Bilişim Ağı (EBA). (2020b). *Etkinlik Kitabının Özellikleri Nelerdir?*. 05.04.2020 tarihinde http://okuloncesi.eba.gov.tr/Haber/Detay/3# adresinden alınmıştır.

Franciscato, S. J., Janson, G., Machado, R., Lauris, J. R. P., Andrade, S. M. J., & Fisberg, M. (2019). Impact of the Nutrition Education program Nutriamigos® on levels of awareness on healthy eating habits in school-aged children. *J Hum Growth Dev*, *29*(3), 390-402. https://doi.org/10.7322/jhgd.v29.9538

Healthy Eating Guidelines. (2004). Obtained on 15.05.2020 from https://www.education.sa.gov.au/sites/default/files/healthy_eating_guidelines.pdf?v=1465356381.

Her, E. (2010). Development of practical dietary education textbook and teaching manual in elementary school students. *Korean Journal of Community Nutrition*, *15*(5), 636-647.

Hu, C., Ye, D., Li, Y., Huang, Y., Li, L., Gao, Y., & Wang, S. (2008). Evaluation of a kindergarten-based nutrition education intervention for pre-school children in China. *Public Health Nutrition*, *13*(2), 253–260. http://dx.doi.org/10.1017/S1368980009990814

Ilaş, S. (2015). Nutritional education in kindergarten - An analysis of the Romanian preschool curriculum. *Revista de Ştiinţe ale Educaţiei*, *31*(1), 62-72.

Kabacık, S. Ç., & Gül, E. B. (2016). Anasınıfına devam eden çocukların sebzelere ilişkin tepkilerinin incelenmesi: Proje yaklaşımı örneği. *Kastamonu Education Journal*, *24*(5), 2323-2334.

Kandır, A., & Türkoğlu, D. (2015). MEB 2013 Okul Öncesi Eğitim Programının müzikal becerilerin gelişimi yönünden değerlendirilmesi. *Hacettepe University Faculty of Health Sciences Journal*, *2*, 339-350.

Karaoğlu, N., & Samur, G. E. (2017). *Anne Çocuk Beslenmesi.* Ankara: Pegem.

Kartal, H., & Güner, F. (2017). Okul öncesi eğitim programı etkinlik kitabındaki etkinliklerin ses bilgisi farkındalığı açısından incelenmesi. *Journal of Mother Tongue Education*, 5(1), 14-30.

Kerkez, F. İ. (2018). 4-5 yaş çocukların sağlıklı besin bilgisi ve tercihinin incelenmesi. *E-Journal of International Educational Researches, 9*(3), 47-59. http://dx.doi.org/10.19160/ijer.405535

Kobak, C., & Pek, H. (2015). Okul öncesi dönemde (3-6 yaş) ana çocuk sağlığı ve anaokulundaki çocukların beslenme özelliklerinin karşılaştırılması. *Hacettepe University Journal of Education*, *30*(2), 42-55.

Kocalar, E. (2019). *2013 Okul Öncesi Eğitim Programının karakter eğitimi açısından değerlendirilmesi* (Yüksek lisans tezi). Gaziantep Üniversitesi, Gaziantep.

Köroğlu, S. (2009). *Okul öncesi dönem 4-6 yaş arası çocuklarda aileden kaynaklanan beslenme bozukluklarının incelenmesi* (Yayınlanmamış yüksek lisans tezi). Selçuk Üniversitesi, Konya.

Küçükkömürler, S. (2015). Okul öncesi dönemde çocuğun beslenmesi (1-6 yaş). *Anne ve çocuk beslenmesi* içinde (ss.185 -191). Ankara: Pegem Yayıncılık.

Liu, H., Xu, X., Liu, D., Rao, Y., Reis, C., Sharma, M., ... & Zhao, Y. (2018). Nutrition-related knowledge, attitudes, and practices (KAP) among kindergarten teachers in Chongqing, China: A cross-sectional survey. *International Journal of Environmental Research and Public Health*, *15*(4), 615.

Lynch, M. (2014). Developing long-term healthy eating behaviours in Canadian Kindergarten Curricula. *Revue PhénepS/Phenex Journal*, *6*(2), 1-28.

Marotz, L. R. (2012). *Health, Safety, and Nutrition for the Young Child*. Wadsworth, Cengage Learning. Obtained on 15.04.2020 from https://college.cengage.com/early_childhood_education/course360/health_safety_and_nutrition_1111942250/ebook/marotz_1111298378_ch01.pdf

Matvienko, O. (2007). Impact of a Nutrition Education Curriculum on Snack Choices of Children Ages Six and Seven Years. *Journal of Nutrition Education and Behaviour*, *39*(5), 281-285. http://dx.doi.org/10.1016/j.jneb.2007.01.004

Merdol, T. K. (2008). *Okul Öncesi Dönem Çocuklarının Beslenmesi*. 15.04.2020 tarihinde https://sbu.saglik.gov.tr/Ekutuphane/kitaplar/A%2010.pdf adresinden edinilmiştir.

Milli Eğitim Bakanlığı [MEB]. (2013a). *Okul Öncesi Eğitim Programı*. 20.03.2020 tarihinde https://tegm.meb.gov.tr/dosya/okuloncesi/ooproram.pdf adresinden edinilmiştir.

Milli Eğitim Bakanlığı [MEB]. (2013b). *Okul Öncesi Eğitim Programı Etkinlik Kitabı*. 20.03.2020 tarihinde http://tegm.meb.gov.tr/dosya/okuloncesi/okuloncesietkinlikkitabi.pdf adresinden edinilmiştir.

Milli Eğitim Bakanlığı Dijital Eğitim Platformu Eğitim Bilişim Ağı (EBA) *Öğretmenler için Okul Öncesi Etkinlik Kitabı*. (2018). 20.03.2020 tarihinde http://www.eba.gov.tr adresinden edinilmiştir.

Musaoğlu, E. B. (2012). *MEB 36-72 aylık çocuklar için okul öncesi eğitim programının (2006) çocuk hakları açısından incelenmesi* (Yayınlanmamış yüksek lisans tezi). Ankara Üniversitesi, Ankara.

Nguyen, K. A., de Villiers, A., Fourie, J. M., Bourne, L. T., & Hendricks, M. K. (2013). The Feasibility of Implementing Food-based Dietary Guidelines in the South African Primary-School Curriculum. *Public Health Nutrition, 18*(1), 167-175. http://dx.doi.org/10.1017/S1368980013003194

Obalı, H. (2009). *Okulöncesi eğitimi almakta olan altı yaş grubu çocuklarına verilen proje yaklaşımıyla beslenme eğitimin beslenme bilgi düzeyine etkisi* (Yüksek lisans tezi). Selçuk Üniversitesi, Konya.

Ocak, I., Duban, N., & Yağıcı, G. (2016). İlkokul öğrencilerinin kişisel bakım, temizlik ve beslenme ile ilgili görüşleri. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *20*(4), 1249-1263.

Oğuz, Ş. (2011). *Konya il merkezinde okulöncesi eğitim kurumlarına devam etmekte olan 60-72 aylık çocukların beslenme alışkanlıkları* (Yayınlanmamış yüksek lisans tezi). Selçuk Üniversitesi, Konya.

"Okul Öncesi ve Okul Çağı Çocuklara Yönelik Beslenme Önerileri ve Menü Programları" Türkiye Halk Sağlığı Kurumu Yayın No: 915, Ankara 2013.

Özcan, B. A. (2019). *Doğrudan veya dolaylı verilen beslenme eğitiminin çocukların beslenme durumlarına etkisi* (Yayınlanmamış doktora tezi). Başkent Üniversitesi, Ankara.

Perera, T., Frei, S., Frei, B., Wong, S. S., & Bobe, G. (2015). Improving nutrition education in U.S. elementary schools: Challenges and opportunities. *Journal of Education and Practice*, *6*(30), 41–50.

Proclamation of the Ministry of Education and Human Resources Development. (2007). Obtained on 05.06.2020 from http://ncm.gu.se/media/kursplaner/andralander/koreaforskola.pdf.

Skolverket. (2020). Obtained on 24.05.2020 from https://www.skolverket.se/undervisning/forskolan/laroplan-for-forskolan/laroplan-lpfo-18-for-

forskolan?url=1530314731/compulsorycw/jsp/curriculum.htm?tos=fsk&sv.url=12189c87ae1623366ff371f3f.

Sönmez, S., & Seyhan, G. B. (2016). Meb 2013 Okul Öncesi Eğitim Programının sağlık kavramı açısından incelenmesi. *Turkish Online Journal of Qualitative Inquiry (TOJQI), 7*(1), 146-174.

Şenturan, B. (2017). *Okul öncesi dönem çocuklarına matematik eğitimi içerikli beslenme eğitimi verilmesinin yeterli ve dengeli beslenme bilgisine etkisi* (Yüksek lisans tezi). Necmettin Erbakan Üniversitesi, Konya.

Tayar, M., Korkmaz, N. M., & Özkeleş, E. (2017). Beslenme ve sağlık. *Beslenme ilkeleri* içinde (ss. 1-21). Bursa: Dora.

T.C. Halk Sağlığı Genel Müdürlüğü. (2020a). 26.05.2020 tarihinde https://hsgm.saglik.gov.tr/tr/okul-sagligi/liste/okul-beslenme-ve-fiziksel-aktivite-egitim-materyalleri.html adresinden edinilmiştir.

T.C. Halk Sağlığı Genel Müdürlüğü. (2020b). 26.05.2020 tarihinde https://hsgm.saglik.gov.tr/tr/beslenme/okul-oncesi-saglikli-beslenme.html adresinden edinilmiştir.

T.C. Sağlık Bakanlığı (2014). Türkiye Beslenme ve Sağlık Araştırması 2010: Beslenme durumu ve alışkanlıklarının değerlendirilmesi sonuç raporu, Sağlık Araştırmaları Genel Müdürlüğü, Sağlık Bakanlığı, https://hsgm.saglik.gov.tr/depo/birimler/saglikli-beslenme-hareketli-hayat-db/Yayinlar/kitaplar/diger-kitaplar/TBSA-Beslenme-Yayini.pdf. 20.04.2020

Tepe, E. (2010). *Okul öncesi kurumlarındaki çocukların ailelerinin ve öğretmenlerinin çocuk beslenmesine ilişkin görüşleri* (Yayınlanmamış yüksek lisans tezi). Afyon Kocatepe Üniversitesi, Afyonkarahisar.

The Nutrition Education Resource Guide for California Public Schools, Kindergarten Through Grade Twelve. (2017). [e-book version] https://www.cde.ca.gov/ls/nu/he/documents/nergcomplete.pdf

Tuğluk, M. N., & Özkan, B. (2019). MEB 2013 Okul Öncesi Eğitim Programının 21. yüzyıl becerileri açısından analizi. *Journal of Primary Education, 1*(4), 29-38.

"Türkiye Beslenme Rehberi [TÜBER] 2015", "T.C. Sağlık Bakanlığı Yayın No: 1031, Ankara 2016."

"Türkiye Çocukluk Çağı (İlkokul 2. Sınıf Öğrencileri) Şişmanlık Araştırması – COSI-TUR 2016" Sağlık Bakanlığı, Halk Sağlığı Genel Müdürlüğü, Milli Eğitim Bakanlığı, Dünya Sağlık Örgütü Avrupa Bölge Ofisi, Sağlık Bakanlığı Yayın No: 1080, Ankara 2017

"Türkiye Sağlıklı Beslenme ve Hareketli Hayat Programı" Sağlık Bakanlığı, Halk Sağlığı Genel Müdürlüğü, Sağlık Bakanlığı Yayın No: 773, Ankara 2019.

USDA Food and Nutrition Service. (2020). Obtained on 01.06.2020 from https://www.fns.usda.gov/tn/discover-myplate-nutrition-education-kindergarten#anchor1.

Uzakgiden, D. (2015). *Okul öncesi eğitime devam eden çocukların beslenme algılarının incelenmesi* (Yayınlanmamış yüksek lisans tezi). Ege Üniversitesi, İzmir.

Ünver, Y. (2004). *Beş-altı yaş okul öncesi dönemi çocukları için geliştirilecek, besin gruplarına yönelik beslenme eğitimi programlarının, çocukların beslenme bilgisi ve davranışlarına etkisi* (Yayımlanmamış yüksek lisans tezi). Selçuk Üniversitesi, Konya.

Yalçın, F. A., & Yalçın, M. (2018). Okul öncesi öğretmenlerin okul öncesi eğitimin sorunlarıyla ilgili görüşleri: Ağrı ili örneği. *Primary Education Online, 17(1),* 367-383. http://dx.doi.org/10.17051/ilkonline.2018.413784

Yıldırım, A., & Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri.* Ankara: Seçkin.

Whiteley, C., & Matwiejczyk, L. (2015). Preschool program improves young children's food literacy and attitudes to vegetables. *Journal of Nutrition Education and Behaviour, 47*(4), 397-98. http://dx.doi.org/10.1016/j.jneb.2015.04.002.

World Health Organization [WHO]. (2020). *Malnutrition***.** Obtained on 28.11.2020 from https://www.who.int/news-room/fact-sheets/detail/malnutrition

Journal of Theoretical Educational Science, 14(1), 64-78, January 2021
Kuramsal Eğitimbilim Dergisi, 14(1), 64-78, Ocak 2021
[Online]: http://dergipark.gov.tr/akukeg
DOI number: http://dx.doi.org/10.30831/akukeg.736568

An Analysis of the Relationship Between Perceived Parental Attitudes and Close Relationship Experiences of Teacher Candidates

Öğretmen Adaylarının Algılanan Ebeveyn Tutumları ile Yakın İlişki Yaşantıları Arasındaki İlişkinin İncelenmesi

Simel PARLAK* **Bahar ŞAHİN-SARKIN****

Received: 13 May 2020 **Research Article** **Accepted:** 08 January 2021

ABSTRACT: The study aimed to analyze whether there is a significant relationship between perceived parental attitudes and experiences in close relationships of the individuals in the emerging adulthood period. The study group of this research, which is in the relational screening model, consisted of 272 teacher candidates attending the first, second, third and fourth grades of different departments in the Faculty of Education at a foundation university in Istanbul in the 2018-2019 academic year. Of the students in the study group, 144 (53%) are female and 128 (47%) are male. The study group who participated in the study was formed by using the appropriate sampling method out of the non-random sampling methods. In the collection of the data of the study, Experiences in Close Relationships Inventory adapted to Turkish by Sümer (2006) and Perceived Parental Attitudes Scale adapted to Turkish by Dirik, Yorulmaz, and Karancı (2015) were used. The correlations between the variables studied were calculated by the Pearson Moments Multiplication Correlation coefficient. As a result of the research, a positive and high-level significant relationship was determined between rejecting maternal attitudes and rejecting paternal attitudes regarding perceived paternal attitudes (r=.736, p<.01). Rejecting maternal attitudes showed a positive and low-level significant relationship with the anxiety subscale of the close relationships scale (r=.181, p<.01). Rejecting father attitudes of the perceived parental attitudes showed a positive and low-level significant relationship with the anxiety subscale of the close relationships scale (r=.174, p<.05). The findings obtained were discussed in line with the literature and recommendations were made.

Keywords: Perceived parental attitudes, experiences in close relationships, emerging adulthood.

ÖZ: Bu araştırmanın amacı, beliren yetişkinlik dönemindeki bireylerin algılanan ebeveyn tutumları ile yakın ilişki yaşantıları arasında anlamlı bir ilişki olup olmadığını incelemektir. İlişkisel tarama modelinde olan bu araştırmanın çalışma grubunu, 2018-2019 eğitim-öğretim yılında İstanbul'da bir vakıf üniversitesinin eğitim fakültesinde farklı bölümlerin birinci, ikinci, üçüncü ve dördüncü sınıfa devam eden toplam 272 öğretmen adayı oluşturmuştur. Çalışma grubunu oluşturan öğrencilerin 1442'ü (%53) kadın 128'i (%47) erkektir. Araştırmanın çalışma grubu oluşturulurken seçkisiz olmayan örnekleme yöntemlerinden olan uygun örnekleme yöntemi tercih edilmiştir. Araştırmada veri toplama amacı ile Sümer (2006) tarafından Türkçe'ye uyarlanan Yakın İlişkilerde Yaşantılar Envanteri ve Dirik, Yorulmaz ve Karancı (2015) tarafından Türkçe'ye uyarlanan Algılanan Ebeveyn Tutumları Ölçeği kullanılmıştır. Ele alınan değişkenler arasındaki ilişkiler Pearson Momentler Çarpımı Korelasyon katsayısı ile hesaplanmıştır. Araştırmanın sonucunda, algılanan ebeveyn tutumlarından reddedici anne tutumları, reddedici baba tutumları arasında yüksek düzeyde pozitif yönlü anlamlı bir ilişki (r=.736, p<.01) olduğu belirlenmiştir. Reddedici anne tutumları ile yakın ilişkiler ölçeğinin kaygı alt boyutu arasında pozitif yönlü, düşük düzeyde anlamlı bir ilişki (r=.181, p<.01) olduğu belirlenmiştir. Algılanan ebeveyn tutumlarından reddedici baba tutumları ile yakın ilişkiler ölçeğinin kaygı alt boyutu arasında pozitif yönlü, düşük düzeyde anlamlı bir ilişki (r=.174, p<.05) olduğu belirlenmiştir. Elde edilen bulgular alanyazın doğrultusunda tartışılmış ve önerilerde bulunulmuştur.

Anahtar kelimeler: Algılanan ebeveyn tutumları, yakın ilişkilerde yaşantılar, beliren yetişkinlik.

* *Corresponding Author*: Asst. Prof. Dr., Okan University, İstanbul, Turkey, simelparlak@gmail.com, https://orcid.org/0000-0002-8651-2693
** Asst. Prof. Dr., Okan University, İstanbul, Turkey, bahar.sarkin@okan.edu.tr, https://orcid.org/0000-0002-1155-6114

Citation Information
Parlak, S., & Şahin-Sarkın, B. (2021). An analysis of the relationship perceived parental attitudes and close relationship experiences of teacher candidates. *Kuramsal Eğitimbilim Dergisi [Journal of Theoretical Educational Science], 14*(1), 64-78.

ISSN: 1308-1659

The family environment in which the individual is born, taken care of and raised, the types of interaction in this environment, and attitudes of the parents towards each other and the child define the child's character and life pattern in the future (Perris, 1994). From the perspective of object relations theory, the direct influence of the attitudes of the caregiver on the personality organization of the individual is emphasized. The relationship established with the caregiver in the early periods and internal representations formed by the individual regarding these relationships affect his/her interpersonal relationships, emotions and thoughts at the conscious and unconscious level (Calabrese, Farber, & Westen, 2005).

One of the pioneers of the object relations theory, Klein explains the child's internal world within the framework of object relations. The first phase at this stage is the paranoid-schizoid position. The child uses a split mechanism in order to purge the good internal objects from the bad ones. The second phase is the depressive position. The object is purged from its excessively good and excessively bad aspects and assumes a more realistic position. However, in this phase, the child experiences a depressive anxiety resulting from the damage caused on the liked object by his/her aggressive and paranoid emotions (Klein, 2008). Kernberg, on the other hand, divides the relationship between the caregiver and the child into phases. In the symbiotic phase, there are primary merged self-object representations. In the next phase, self-representations and object-representations are separated. With the integration of self- and object-representations, the process is completed (Kernberg, 2008). Kohut focuses on "good enough" parenting in the development of the individual. He dwells on the relationship between parenting attitudes and the individual's narcissistic structures. He states that as a result of losing the idealized parental image in the early period in a traumatic way, narcissistic disorders occur in the personality of the individual (Kohut, 1998). In the study conducted by Bedel & Işık, (2015), they determined students from single-parent families approached more negatively when compared with their counterparts.

Another theory studying the effects of the relationship between the parents and the child on the individual's well-being, personality organization and mental health is Bowlby's (1973, 1980) attachment theory. Emphasizing the search for a close bond, secure base and a monotropic interaction between the infant and the caregiver, Bowlby (1973, 1980) argues that two basic attachment forms develop as a result of the interaction between the parent and the child. While a secure attachment develops as a result of the child being raised by the parent in an uninterrupted, consistent and sensitive relationship, the child develops an insecure attachment in case of an opposite situation, and thereby she/he cannot develop positive internal models related to self and others. While the securely attached child has a loving and caring self-functioning model, the child with an insecure attachment sees himself/herself as inefficient and not worthy of being loved.

When the theories explaining the relationship between the caregiver and the child are examined, it is seen that the interaction between the parents and the child plays an important role in the individual's personality structure and mental health. When perceived parental attitudes are considered from this perspective, the determinacy of emotional warmth, over-protection and rejection factors can be seen. Emotional warmth that defines the physical and verbal expression of the emotion felt by the parent for the child builds a supportive and healthier atmosphere for the child. Over-protective

behaviors of the parent in the over-protection dimension and anxious attitudes regarding his/her security prevent the child from being autonomous. In the rejection dimension, the parent's critical and judging attitude causes the child to be deprived of the warmth and supportive attitude s/he needs and to be exposed to negligence (Arrindell & Engebretsen, 2000; Rohner, Khaleque, & Cournoyer, 2005).

When looking at the studies on the close relationships in terms of emerging adults; It is seen that studies are carried out in many areas such as irrational beliefs, (Çavdar, 2013; Metts, & Cupach, 1990), relationship satisfaction and investment (Korkmaz, 2020), self-esteem (Duramaz, 2020) ways of dealing with jealousy (Hoşoğlu, 2017), love attıtude styles (Şahin-Sarkın & Parlak, 2020) attachment styles (Sümer, 2006; Towler & Stuhlmacher, 2013), attachment styles, conflict resolution strategies and negative moods (Bahadır, 2006), gender, attachment styles, irrational beliefs and attitudes towards love (Beştav, 2007), conflict behavior (Russell-Chapin, Chapin, & Sattler, 2001), communication styles (Olderbak & Figueredo, 2009), perfectionism (Stoeber, 2012), intimate partner violence (Parlak, 2018).

University students in the emerging adulthood period experience identity discovery, indecision, focusing on the self, feeling in-between, and analyzing opportunities as necessitated by their life period. Being in the phase of living separately from their parents and gaining their independence, emerging adults (Arnett, 2004) experience separation from their first objects in order to form their identity, and the effect of their perceptions regarding these in this process is observed (Santrock, 2012). Emerging adults, who are in the phase of intimacy versus isolation, are in the process of establishing emotionally intense and long-lasting relationships along with a romantic relationship (Öztürk, 1994; Santrock, 2012). Romantic relationships are a fundamental dynamic that enables the individual to develop relationship skills and establish intimacy in the emerging adulthood period and provide a healthy transition to adulthood. Behavior patterns of the caregiver affect the individual's close relationship style, expectations, beliefs and attitudes throughout his/her life. In this respect, attachment style directly affects the romantic relationship process experienced in adulthood (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987). Problems that can be experienced in romantic relationships bring the risk of affecting the individual's other living areas. The study aimed to examine the relationship between perceived parental attitudes and experiences in close relationships in terms of emerging adults.

Method

Research Design

Since the study aimed to determine whether there is a significant relationship between Perceived Parental Attitudes scores and Experiences in Close Relationships scores of teacher candidates, the research was conducted with relational screening model. Relational researches are research patterns aimed at determining whether there is a significant relationship between two or more variables or not (Karasar, 2009). Ethics Committee approval numbered 56665618-204.01.07 was obtained for the research. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee. The purpose and scope of the research was explained to the participants.

Study Group

The study group who participated in the study was formed by using the appropriate sampling method out of the non-random sampling methods. Appropriate sampling is mostly preferred when the researcher cannot make use of other sampling methods due to limited conditions such as time and labor (Yıldırım & Şimşek, 2013). In appropriate sampling, the sample is created beginning from the most accessible answerers until the group with the required size is set (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz, & Demirel, 2010). In addition, it is thought that it is important to examine the affective feelings of the teacher candidates who will guide the society, especially in the close relationships that will be affected by the future student relations. The study group of the research was composed of a total of 272 teacher candidates, 169 of whom were in Guidance and Psychological Counselling program, 53 were in Pre-school Teaching program, 34 were in Special Education Teaching program, and 16 were in English Teaching program, and 65 of the students studying in these programs were first-year students, 36 were second-year students, 89 were third-year students and 82 were fourth-year students in the faculty of education of a foundation university in Istanbul in the 2018-2019 academic year. Of the students in the study group, 144 (53%) are female and 128 (47%) are male. The mean age of the study group was determined as 21.3 (*s*=3.72).

Data Collection Tools

In the collection of the data of the study, Experiences in Close Relationships Inventory adapted to Turkish by Sümer (2006) and Perceived Parental Attitudes Scale adapted to Turkish by Dirik et al. (2015) were used.

Experiences in close relationships inventory (ECRI). The inventory developed by Brennan, Clark, and Shaver (1998) and adapted to Turkish by Sümer (2006) determines two basic dimensions of attachment, which are anxiety experienced in close relationships and avoidance from individuals. The inventory includes 36 items, and each dimension is measured with 18 items. While the mean score values of add numbered items are taken in order to calculate avoidance score, in order to calculate anxiety score, the mean score values of even numbered items are taken. High scores from the subscale indicate that the level is high in the relevant subscales. The respondents are asked to choose the option in each item that describes themselves on a 7-point rating scale ranging from 1=strongly disagree to 7=strongly agree. Items 3, 15, 19, 22, 25, 27, 29, 31, 33 and 35 are reversely coded. In the factor analysis performed in order to determine construct validity, the factor representing avoidance dimension explained 22% of the total variance, and the second factor representing anxiety dimension explained 16% of the total variance. In the adaptation study, a factor structure consistent with the original scale was obtained, and the same factors were gathered under the same factor. Cronbach's alpha coefficient was calculated as .86 for anxiety dimension and as .90 for avoidance dimension, and both dimensions were determined to be highly reliable. In this study, subscales were analyzed for their reliability. Cronbach's alpha coefficient was calculated as .84 for anxiety dimension and as .85 for avoidance dimension. The reliability coefficient of the scale was found to be high for the study group.

Shortened perceived parental attitude scale - child form (SPPA-C). The scale is the 23-item short form of Egna Minnen Barndoms Uppfostran (EMBU-C) developed by Arrindell and Engebretsen (2000) that determines adults' perceptions of their parents' attitudes towards them in childhood. Validity and reliability study for the Turkish culture was carried out by Dirik et al. (2015). Individuals are asked to respond to each item for their parents on a 4-point Likert type scale (1=never, 2=sometimes, 3=often, 4=mostly), and only item 17 is reversely coded. The scale is comprised of three subscales, being over-protective attitudes, rejection, and emotional warmth. Over protective parental attitudes, rejecting parental attitudes and emotional warmth parental attitude scores were determined by taking the total scores of perceived parental attitudes towards mothers and fathers in three subscales. The rejection subscale of the scale regarding parental attitudes is composed of 7 items (1, 4, 7, 13, 15, 16, 21), over-protective attitudes subscale includes 9 items (3, 5, 8, 10, 11, 17, 18, 20, 22) and emotional warmth subscale consists of 7 items (2, 6, 9, 12, 14, 19, 23). Reliability of the scale in terms of internal consistency was determined through Cronbach's alpha coefficient, and it was found to be .79 for father emotional warmth, .73 for father over-protection, .71 for father rejection, .75 for mother emotional warmth, .72 for mother over-protection and .64 for mother rejection. Factor structure of the scale was analyzed in order to determine construct validity, and the relationship between personality characteristics that could be related to psychiatric disorders was examined. In order to determine the scale's criterion validity, two groups were formed according to the scores obtained from Short Symptom Inventory. According to the comparisons between the groups, it was determined that the group which obtained a high score from psychiatric disorder symptoms significantly differed from the other group obtaining a low score from mother-father over-protection and rejection dimensions. In this study, subscales were analyzed for their reliability. Reliability of the scale in terms of internal consistency was determined through Cronbach's alpha coefficient, and it was found to be .75 for father emotional warmth, .72 for father over-protection, .70 for father rejection, .72 for mother emotional warmth, .70 for mother over-protection and .66 for mother rejection.

Data Analysis

In the research, first of all, descriptive statistics regarding the scores obtained from the scale and inventory applied to the students were calculated. In Tables 1 and 2, variables are coded. They are coded as 1.a:emotional warmth mother, 2.a:emotional warmth father, 1.b:over-protection mother, 2.b:over-protection father, 1.c:rejection mother, 2.c:rejection father, x:avoidance, y:anxiety. Descriptive statistics for the data are presented in Table 1.

Table 1

Descriptive Statistics for ECRI and SPAA-C Scores

	1.a	2.a	1.b	2.b	1.c	2.c	x	y
N	272	272	272	272	272	272	272	272
Mean	21.88	20.68	20.24	19.50	9.14	9.21	3.28	3.69
Median	22.50	22.00	20.00	19.00	8.25	8.00	3.27	3.69
Top Value	22.35	21.00	20.18	19.48	8.12	8.78	3.41	3.84
Standard Deviation	3.77	4.46	4.86	4.98	2.62	2.88	1.10	1.20
Variance	14.24	19.92	23.62	24.87	6.87	8.29	1.19	1.43
Skewness Coefficient	-.71	-.64	.39	.55	.72	.54	.05	.06
Kurtosis Coefficient	.05	-.03	-.27	.11	.92	.81	-.72	-.36
Kolmogorov-Smirnov	.12	.14	.09	.10	.21	.22	.27	.25
Kolmogorov-Smirnov (*p*)	.80	.70	.80	.90	.70	.87	.85	.82

When Table 1 was examined, it was seen that in the descriptive statistics regarding SPAA-C and ECRI, mean, median and mod values were close to each other. In symmetric distribution, the skewness and kurtosis coefficient values being in the range of ± 1 is interpreted as proof that the distribution does not show an excessive deviation from the symmetry axis (Çokluk, Şekercioğlu, & Büyüköztürk, 2010). Skewness and kurtosis coefficients of the scores obtained from the scales can be said to be in the range of ±1. According to these findings, it can be said that the distribution of the scores is close to symmetric distribution. Büyüköztürk (2012) has stated that Kolmogorov-Smirnov test is a preferred normality test in cases where more than 50 data are present. P significance value calculated for Kolmogorov-Smirnov test being higher than α=.05 indicates that the scores do not significantly deviate from symmetric distribution at this significance level. As can be seen in the findings in Table 1, it was determined that the variables showed a normal distribution. The correlations between the variables studied were calculated by the Pearson Moments Multiplication Correlation coefficient. This coefficient is used to determine the linear relationship between two continuous variables at an at least equal interval scale level (Büyüköztürk, Çokluk, & Köklü, 2010). A correlation coefficient of .70 and above is interpreted as a strong relationship between the two variables, between .70 - .30 as a moderate relationship, and below .30 as a weak relationship (Roscoe, 1975). The correlation coefficients calculated in the study were interpreted according to this definition.

Results

The findings obtained from the examination of the relationship between perceived parental attitudes and experiences in close relationships from the perspective of emerging adults are presented in Table 2.

Table 2

The Relationships Between ECRI And SPAA-C Scores.

Variable	1.a	2.a	1.b	2.b	1.c	2.c	x	y
1.a	1							
2.a	.686**	1						
1.b	- .125*	-.108	1					
2.b	-.161**	-.121*	-.745**	1				
1.c	-.448**	-.339**	-.417**	.367**	1			
2.c	-.339**	-.493**	-.362**	-.360**	.736**	1		
x	-.195**	-.138*	-.027	.031	.096	.092	1	
y	-.131*	-.135*	.262**	.289**	.181**	.174*	.168**	1

**p<.01,*p<.05

When Table 2 is examined, it is seen that there was a positive, strong and significant relationship between mother emotional warmth attitudes and father emotional warmth attitudes (r=.686, p<.01) among perceived parental attitudes. Mother emotional warmth attitudes showed a negative and weakly significant relationship between mother over-protection attitudes and father over-protective attitudes (r=-.125, p<.01; r=-.161, p<.01), respectively. Mother emotional warmth attitudes showed a negative and middle-level significant relationship with mother and father rejection attitudes (r=-.448, p<.01; r=-.339, p<.01). Mother emotional warmth attitudes showed a negative and weakly significant relationship with the avoidance and anxiety subscale of close relationships scale (r=-.195, p<.01; r=-.131, p<.05).

Father emotional warmth attitudes from perceived parental attitudes showed a negative and weakly significant relationship with father over-protection attitudes (r=-.121, p<.01). Father emotional warmth attitudes showed a negative and middle-level significant relationship with mother and father rejection attitudes (r=-.339, p<.01; r=-.493, p<.01), respectively. Father emotional warmth attitudes showed a negative and weakly significant relationship with the avoidance and anxiety subscale of close relationships scale (r=-.138, p<.01; r=-.135, p<.01), respectively.

Mother over-protection attitudes from perceived parental attitudes showed a negative and strongly significant relationship with father over-protection attitudes (r=-.745, p<.01). Mother over-protection attitudes showed a negative and middle-level significant relationship with mother and father rejection attitudes (r=-.417, p<.01; r=-.362, p<.01), respectively. Mother over-protection attitudes showed a positive and weakly significant relationship with the anxiety subscale of close relationships scale

(*r*=.262, *p*<.01). Mother over-protection attitudes didn't show a significant relationship with the avoidance subscale of close relationships scale (*p*>.01).

While father over-protection attitudes from perceived parental attitudes showed a positive and moderately significant relationship with mother rejection attitudes (*r*=.367, *p*<.01), they showed a negative and weakly significant relationship with father rejection attitudes (*r*=-.360, *p*<.01). Father over-protection attitudes showed a positive and weakly significant relationship with the anxiety subscale of close relationships scale (*r*=.289, *p*<.01). Father over-protection attitudes didn't show a significant relationship with the avoidance subscale of close relationships scale (*p*>.01).

Mother rejection attitudes from perceived parental attitudes showed a positive and strongly significant relationship with father rejection attitudes (*r*=.736, *p*<.01). Mother rejection attitudes showed a positive and weakly significant relationship with the anxiety subscale of close relationships scale (*r*=.181, *p*<.01). Mother rejection attitudes didn't show a significant relationship with the avoidance subscale of close relationships scale (*p*>.01).

Father rejection attitudes from perceived parental attitudes showed a positive and weakly significant relationship with the anxiety subscale of the close relationships scale (*r*=.174, *p*<.05). Father rejection attitudes from perceived parental attitudes didn't show a significant relationship with the avoidance subscale of the close relationships scale (*p*>.01).

Discussion and Conclusion

The study aimed to examine whether there was a relationship between perceived parental attitudes and experiences in close relationships from the perspective of university students. When Table 2 is examined, it is seen that mother emotional warmth attitudes from perceived parental attitudes showed a positive and strongly significant relationship with father emotional warmth attitudes. In the study conducted by Gittleman, Klein, Smider, and Essex (1998), it was revealed that individuals who had a sufficiently close and warm relationship with their parents displayed a similar pattern in their romantic relationships. In the study conducted by Oktay (2016), it is determined that individuals raised by caregivers with inclusive and emotionally warm attitudes did not display avoidance behavior in their romantic relationships. In the present study, it was seen that the parents' attitudes towards their children were influenced by each other and that this influence was effective in positive attitudes. In other words, as the mother's emotional warmth attitudes increase, so do the father's emotional warmth attitudes. Mother-father attitudes support each other in terms of emotional warmth attitudes.

Mother emotional warmth attitudes show a negative and weakly significant relationship with mother and father over-protection attitudes. Similarly, father emotional warmth attitudes from perceived parental attitudes show a negative and weakly significant relationship with father over-protection attitudes. In a similar way, in the study conducted by Çamurlu-Keser (2006), it was determined that as the acceptance and interest of parents increased, there was a decrease in strict control attitude. In the present study conducted, it is seen that as mother emotional warmth attitudes increased, mother-father over-protection attitudes decreased and that in the same way, as father emotional warmth attitudes increased, father over-protection attitudes decreased.

In the study, mother emotional warmth attitudes and father emotional warmth attitudes, showed a negative and middle-level significant relationship with mother and father rejection attitudes. In the study they conducted, Wearden, Peters, Berry, Barrowclough, and Liversidge (2008) concluded that as the acceptance, interest and warm attitudes of caregivers increased, the individual developed a positive attitude towards the self and the others. In the present study conducted, consistently with the literature, it was found that as mother emotional warmth attitudes and father emotional attitudes increased, mother and father rejection attitudes decreased.

In the traditional social gender roles, while the male's role is to meet the family's economic needs, the female's role is to raise children, feed and maintain order in family life (Gizem & Keser, 2020). As a result of the study, it was seen that the projection of social gender roles was evident again in that mother over-protection attitudes from perceived parental attitudes showed a negative and strongly significant relationship with father over-protection attitudes. In other words, as the mother over-protection attitude comes into play with the perception of the mother being responsible for the child, the father over-protection attitude is reduced.

Mother over-protection attitudes show a positive and middle-level significant relationship with mother and father rejection attitudes. Besides, father over-protection attitudes show a negative and middle-level significant relationship with father rejection attitudes. Over-protective parent prevents the child from establishing his/her autonomous space and takes over the responsibility for the child's needs and problems without giving him/her a chance to solve them (Bozdemir, 2015). In the study conducted on university students by Demirsu (2018), it was concluded that as emotional warmth increased, the level of anxiety was diminished, and that mother-father rejection attitudes increased anxiety level. In the present study conducted, it was concluded that as mother over-protection attitudes increased, mother-father rejection attitudes decreased, and that as father emotional over-protection attitudes increased, father rejection attitudes decreased. Rohner (1975) stated that over-protective parenting would prevent the child's skills to overcome problems from developing. In their study, Clarke, Cooper, and Creswell (2013) reported that an over-protective parenting style would cause the child to perceive the world as a dangerous and insecure place and thereby hindering his/her development. A low level of rejection attitude as a result of intense interest and control of over-protecting parent is an expected outcome. However, another important point is that an increase in maternal over-protection decreases paternal rejection. This result can be thought to have resulted from the stereotype gender roles stipulating that the mother is responsible for raising the child.

Father over-protection attitudes from perceived parental attitudes showed a positive and moderately significant relationship with mother rejection attitudes. It can be thought that the reason why mother rejection attitudes increased as father over-protection attitudes increased can be that mother is responsible for the child according to traditional social gender roles and that it is often the father who makes the final decision about mother's leaving her role to the father (Amer, 2013). It is believed that the mother's leaving the role regarding raising the child to the father as the final decision maker could prepare the ground for the formation of rejecting perception related to the mother. In the study conducted by Parlak (2018), participants held the

opinion that it must be the father who should have the final say in the home and that it was as how it should be.

Mother rejection attitudes from perceived parental attitudes showed a positive and strongly significant relationship with father rejection attitudes. In the study conducted by Main, Kaplan, and Cassidy (1985), they determined that individuals who had a rejecting relationship with their parents had an insecure attachment style. Rohner (1975) emphasized that rejection attitude of the caregiver leads to a decrease in the individual's self-esteem and emotional instability. As a result of the present study conducted, the fact that as mother rejection attitudes increased, father rejection attitudes increased could be indicative of many dynamics such as a conflict between the couples etc.

In the study, mother emotional warmth attitudes and father emotional warmth attitudes showed a negative and weakly significant relationship with avoidance and anxiety sub-scales of close relationships scale. Another result of the study was that mother rejection attitudes and father rejection attitudes showed a positive and weakly significant relationship with anxiety sub-scale of close relationships scale. In avoiding attachment, the child who minimizes his needs takes precautions against rejection by the caregiver. By staying at a certain distance, the child minimizes his expectations against the possibility of rejection of the caregiver and remains on the emotional border (Bowlby, 1973, 1980). Rohner (1975) stated that the individual's being accepted or rejected by his/her parents during childhood could directly affect his/her cognitive, emotional and social development. According to Bowlby (1973, 1980), the attachment developing in the first year of an individual's life and the dissociation process of this attachment plays an important role in the individual's positioning himself/herself as a subject. The caregiver's being sufficiently good and inclusive is important for this positioning. These behavior patterns of the caregiver affect the individual's close relationship style, expectations, beliefs and attitudes throughout his/her life. While a child securely attached has a loving and caring self-functioning model, a child insecurely attached sees himself/herself inefficient and unworthy of being loved. Rohner (1986) stated that individuals, who think that their caregivers have rejected them, become anxious and feel insecure. Similarly, in the study conducted by Uyanık, Kaya, İnal-Kızıltepe & Can-Yaşar (2016), it was found that participants accepted by their parents had secure attachment styles.

The results of the research support this finding. As the mother emotional warmth attitudes and father emotional attitudes increase, avoidance and anxiety decrease. As mother rejection attitudes and father rejection attitudes increase, so does anxiety. In other words, a sufficiently inclusive caregiver ensures the infant's secure attachment throughout adulthood and decreases anxiety and avoidance, which are the components of insecure attachment. According to Yavuzer (1994), children who are raised with an over-protective attitude, lack entrepreneurship and self-confidence, are shy, passive in social relations and develop slowly in terms of certain skills compared to their peers. The overprotective attitude of the parent makes the child think that the world is an unsafe place. Therefore, the child who perceives the world as insecure develops anxious or avoidant attachment. Contrary to the literature, the relationship between over-protective parental attitudes and avoidance-anxiety did not yield a significant result.

Mother over-protection attitudes showed a positive and weakly significant relationship with anxiety sub-scale of close relationships scale. To Bowlby (1973, 1980), attachment is a primary motivational system and it is in interaction with other systems in its own functioning. Search for closeness, secure base and separation protest with the caregiver in attachment relationship are determinant factors. As a result of the research, it was seen that as mother over-protection attitudes increase, anxiety increases, that an over-protective mother does not provide the child with a secure base, and that therefore, anxiety level also increased in adulthood. Similar to the results of the study conducted, other research also shows that the relationship of the caregiver with the child directly affects attachment style (Çiftçi, 2010; Katalan, 2014; Khaleque & Rohner, 2002; Salahur, 2010).

Hazan and Shaver (1987) revealed the effects of the parent-child relationship on the child's mental structure and attachment style and concluded that the attachment pattern in childhood directly affects the attachment style experienced in romantic relationships. From this perspective, the caregiver's being sufficiently inclusive and showing an emotional warmth attitude determines the child's future and relationships. All these findings considered, it is believed that planning of psycho-educational programs regarding parenting and attachment process will be an important step for the future generations to become healthy individuals and establish healthy families. It is thought that these programs can be intended for parents-to-be or can be added to the curriculum of university students. The relationship between close relationship and parental attitude which is considered in the research with quantitative dimension can be supported by qualitative studies. Also, the development of attachment patterns can be observed with longitudinal studies.

Statement of Responsibility

Simel Parlak; conceptualization, methodology, validation, formal analysis, investigation, resources, data curation, writing - original draft, writing - review & editing, visualization, supervision, project administration. Bahar Şahin-Sarkın; conceptualization, methodology, validation, writing - original draft, writing - review & editing, visualization, supervision, project administration.

References

Amer, M. (2013). Combining academic career and motherhood: experiences and challenges of women in academia. *International Research Journal of Social Sciences, 2*(4), 12-15.

Arnett, J. J. (2004). *Emerging adulthood*. New Jersey: Prentice-Hall.

Arrindell, W. A., & Engebretsen, A. A. (2000). Convergent validity of the short-EMBU1 and the parental bonding instrument (PBI): Dutch findings. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice*, *7*(4), 262-266.

Bahadır, Ş. (2006). *Romantik ilişkileri bağlanma stilleri, çatışma çözme startejileri ve olumsuz duygu durumunu düzenleme arasındaki ilişki* (Yayımlanmamış doktora tezi). Ankara Üniversitesi, Ankara.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*(2), 226-244.

Bedel, A., & Işık, E. (2015). A comparison of interpersonal problem solving and life satisfaction level between students with single parents and two parents. *Journal of Theoretical Educational Science, 8*(1), 70-85. Retrieved from https://dergipark.org.tr/tr/pub/akukeg/issue/29356/314121

Beştav, G. F. (2007). *Romantik ilişki doyumu ile cinsiyet, bağlanma stilleri, rasyonel olmayan inançlar ve aşka ilişkin tutumlar arasındaki ilişkilerin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Hacettepe Üniversitesi, Ankara.

Bowlby, J. (1973). *Attachment and loss: Separation, anxiety and anger*. New York: Basic Books.

Bowlby, J. (1980). *Attachment and loss*. New York: Basic Books.

Bozdemir, F. (2015). *Bağlanma stilleri, anne baba tutumları ve çocukluk çağı örselenme yaşantılarının duygusal zekâ ile ilişkilerinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Mersin Üniversitesi, Mersin.

Büyüköztürk, Ş. (2012). *Sosyal bilimler için veri analizi el kitabı* (12. baskı). Ankara: Pegem Akademi Yayıncılık.

Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2010). *Bilimsel araştırma yöntemleri* (7. baskı). Ankara: Pegem Akademi Yayıncılık.

Büyüköztürk, Ş., Çokluk, Ö., & Köklü, N. (2010). *Sosyal bilimler için istatistik* (5. baskı). Ankara: Pegem Akademi Yayıncılık.

Calabrese, L. M., Farber, A. B., & Westen, D. (2005). The relationship of adult attachment constructs to object relational patterns of representing self and others. *Journal of The American Academy of Psychoanalysis and Dynamic Psychiatry*, *33*(3), 513-530. http://dx.doi.org/10.1521/jaap.2005.33.3.513

Clarke, K., Cooper, P., & Creswell, C. (2013). The parental over protection scale: Associations with child and parental anxiety. *Journal of Affective Disorders*, *151*(2), 618-624. http://dx.doi.org/10.1016/j.jad.2013.07.007

Çamurlu-Keser, C. (2006). *Annenin bağlanma düzeyi ve çocuk yetiştirme sürecinin çocuğun bağlanma düzeyine etkisi* (Yayımlanmamış yüksek lisans tezi). Uludağ Üniversitesi, Bursa.

Çavdar, D. (2013). *Üniversite öğrencilerinin toplumsal cinsiyet rollerine ilişkin tutumları ve romantik ilişkilerde akılcı olmayan inançları* (Yayımlanmamış yüksek lisans tezi). Ankara Üniversitesi, Ankara.

Çiftçi, D. (2010). *Kişinin ebeveyn ilişki algısı ile yetişkinlik bağlanma stilleri arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Maltepe Üniversitesi, İstanbul.

Çokluk, Ö. S., Şekercioğlu, G., & Büyüköztürk, S. (2010). *Sosyal bilimler için çok değişkenli istatistik: spss ve lisrel uygulamaları*. Ankara: Pegem Akademi Yayıncılık.

Demirsu, Ö. (2018). *Üniversite öğrencilerinde algılanan ebeveyn tutumları ile sürekli kaygı düzeyleri arasındaki ilişkide psikolojik dayanıklılığın ve kaygı duyarlılığının aracı rolleri* (Yayımlanmamış yüksek lisans tezi). Işık Üniversitesi, İstanbul.

Dirik, G., Yorulmaz, O., & Karancı, N. (2015). Çocukluk dönemi ebeveyn tutumlarının değerlendirilmesi: Kısaltılmış algılanan ebeveyn tutumları-Çocuk formu. *Türk Psikiyatri Dergisi, 26*(2), 123-130. Retrieved from http://www.turkpsikiyatri.com/PDF/C26S2/06.pdf on 12.03.2018.

Duramaz, A. (2020). *Evli bireylerde romantik ilişkilerde akılcı olmayan inançlar ile evlilik doyumu ve benlik saygısı arasındaki ilişkide romantik yakınlığın aracı rolünün incelenmesi* (Yayımlanmamış yüksek lisans tezi). Mersin Üniversitesi, Mersin.

Gittleman, M. G., Klein, M. H., Smider, N. A., & Essex, M. J. (1998). Recollections of parental behaviour, adult attachment and mental health: mediating and moderating effects. *Psychological Medicine, 28*(6), 1443-1455. http://dx.doi.org/10.1017/S0033291798007533

Gizem, Ö., & Keser, P. B. (2020). Annelerinin ev içi ve ev dışı rollerine yönelik okul öncesi çocukların görüşlerinin toplumsal cinsiyet açısından incelenmesi. *Değerler Eğitimi Dergisi, 18*(39), 377-413.

Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*(3) 511-524. http://dx.doi.org/10.1037/0022-3514.52.3.511

Hoşoğlu, R. (2017). *Üniversite öğrencilerinin romantik ilişkilerinde kıskançlıkla başa çıkma biçimlerinin çeşitli değişkenlerle ilişkisi* (Yayımlanmamış yüksek lisans tezi). Ankara Üniversitesi, Ankara.

Karasar, N. (2009). *Bilimsel Araştırma Yöntemi.* Ankara: Nobel Yayın Dağıtım.

Katalan, C. (2014). *The relationships between parenting styles, attachment styles and romantic relationship satisfaction, romantic relationship anxiety amoung young Turkish adults* (Unpublished doctoral dissertation). Bahçeşehir University, İstanbul.

Kernberg, O. (2008). *Ağır kişilik bozukluklarında psikoterapötik stratejiler* (A. A. Köşkdere, Çev.). İzmir: Meta Yayıncılık.

Khaleque, A., & Rohner, R. P. (2002). Reliability of measure assessing the pancultural Association between perceived parental acceptance-rejection and psychological adjustment. *Journal of Cross-Cultural Psychology, 33*(1), 87-99. http://dx.doi.org/10.1177/0022022102033001006

Klein, M. (2008). *Haset ve şükran* (O. Koçal Y. & Erten, Çev.). İstanbul: Metis.

Kohut, H. (1998). *Kendiliğin çözümlenmesi* (C. Atbaşoğlu, B. Büyükkal & C. İşcan, Çev.). İstanbul: Metis.

Korkmaz, K. (2020). *Romantik ilişkilerde ilişki doyumu ve yatırımı: Çatışma çözme ve öz-duyarlığın rolü* (Yayımlanmamış yüksek lisans tezi). Çukurova Üniversitesi. Adana.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of Thesociety for Research in Child Development, 50*(1,2), 66-104.

Metts, S., & Cupach, W. R. (1990). The influence of relationship beliefs and problemsolving responses on satisfaction in romantic relationships. *Human Communication Research*, *17*(1), 170-185.

Oktay, G. (2016). *Algılanan anne-baba tutumu ile bağlanma biçimi arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Üsküdar Üniversitesi, İstanbul.

Olderbak, S., & Figueredo, A. J. (2009). Predicting romantic relationship satisfaction from life history strategy. *Personality and Individual Differences, 46*, 604-610.

Öztürk, M. O. (1994). *Ruh sağlığı ve bozuklukları.* Ankara: Hekimler Yayın Birliği.

Parlak, S. (2018). *Gençlerde partnere yönelik şiddet ve önlenmesi: Bir karma yöntem çalışması* (Yayımlanmamış doktora tezi). Marmara Üniversitesi, İstanbul.

Perris, C. (1994). Linking the experience of dysfunctional parental rearing with manifest psychopathology: a theoretical framework. In C. Perris, W.A. Arrindeu, & M. Eisemann (Ed.), *Parenting and Psychopathology*. Chichester: John Wiley and Sons.

Rohner, R. P. (1975). *They love me, they love me not: A world wide study of the effects of parental acceptance and rejection*. New Haven: Human Relations Area Files Press.

Rohner, R. P. (1986). *The Warmth dimension: Foundations of Parental Acceptance-Rejection Theory*. Newbury Park, CA: Sage Publications, Inc.

Rohner, R. P., Khaleque, A., & Cournoyer, D. E. (2005). Parental acceptance rejection: Theory, methods, cross-cultural evidence, and implications. *Ethos, 33*(3), 299-334. http://dx.doi.org/10.1525/eth.2005.33.3.299

Roscoe, J. T. (1975). *Fundamental Research Statistics for the Behavioral Science*. New York: Holt Rinehart and Winston.

Russell-Chapin, L. A., Chapin, T. J., & Sattler, L. G. (2001). The relationship of conflict resolution styles and certain marital satisfaction factors to marital distress. *The Family Journal, 9*, 259-264.

Salahur, E. (2010). *Üniversite öğrencilerinin geriye dönük olarak çocukluklarında algılamış oldukları ebeveyn kabul veya reddinin yetişkin bağlanma biçimleri ve depresif belirtiler ile ilişkisi* (Yayımlanmamış yüksek lisans tezi). Hacettepe Üniversitesi, Ankara.

Santrock, J. W. (2012). *Yaşam boyu gelişim: Gelişim psikolojisi*. (G. Yüksel, Çev.). Ankara: Nobel Yayıncılık.

Stoeber, J. (2012). Dyadic perfectionism in romantic relationships: Predicting relationship satisfaction and long-term commitment. *Personality and Individual Differences, 53*, 300-305.

Sümer, M. (2006). *Yetişkinlerin bağlanma stillerinin duygusal zekâ, ilişkiye bağlılık, ilişkide algılanan tatmin ve bazı değişkenlere göre incelenmesi* (Yayımlanmamış yüksek lisans tezi). Maltepe Üniversitesi, İstanbul.

Sümer, N. (2006). Yetişkin bağlanma ölçeklerinin kategoriler ve boyutlar düzeyinde karşılaştırılması. *Türk Psikoloji Dergisi, 21*(57), 1-22.

Şahin-Sarkın, B., & Parlak, S. (2020). Aşka ilişkin tutumların yakın ilişkilerde yaşantıları yordayıcılığının incelenmesi. *Education Sciences, 15*(3), 63-72.

Towler, A. J., & Stuhlmacher, A. F. (2013). Attachment styles, relationship satisfaction and well-being in working women. *The Journal of Social Psychology, 153*(3), 279-298.

Uyanık, Ö., Kaya, Ü., İnal-Kızıltepe, G., & Can-Yaşar, M. (2016). An investigation of the relationship between fathers and their children at preschool level. *Journal of Theoretical Educational Science, 9*(4), 515-531. Retrieved from https://dergipark.org.tr/tr/pub/akukeg/issue/29364/314189

Wearden, A., Peters, I., Berry, K., Barrowclough, C., & Liversidge, T. (2008). Adult attachment, parenting experiences, and core beliefs about self and others. *Personality and Individual Differences 44*, 1246-1257.

Yavuzer, H. (1994). *Çocuk psikolojisi*. İstanbul: Remzi Kitabevi.

Yıldırım, A., & Şimşek, H. (2013). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Seçkin Kitabevi.