

İNSAN ve SOSYAL BİLİMLER DERGİSİ

Journal of Humanities and Social Sciences

Cilt/Volume 7

Sayı/Number 1

ISSN 2667-4343

Mayıs / May- 2024





Journal of Human and Social Sciences (JOHASS)

Publishing Date: May, 2024

2024, Volume 7, Issue 1

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JOHASS is published biannually (May- October)

<https://dergipark.org.tr/tr/pub/johass>

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Bilgiçağı Education Consultancy and Publishing Industry Trade Limited
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MLA

<https://www.mla.org/search?query=Journal+of+Social+Sciences+And+Education>

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<http://www.i2or.com/9.html>

Academic Resource Index

<https://journalseeker.researchbib.com/view/issn/2667-4343>

IAD

<http://openaccess.izmirakademi.org/journal/johass/673>

Scientific Indexing Services

<http://www.sindexs.org/JournalList.aspx?ID=7230>

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Publisher: Bilgiçağı Eğitim Danışmanlık ve Yayıncılık Sanayi Ticaret Limited Şirketi

Journal Administrator & Assistant Editor: Sibel ÇAĞIR

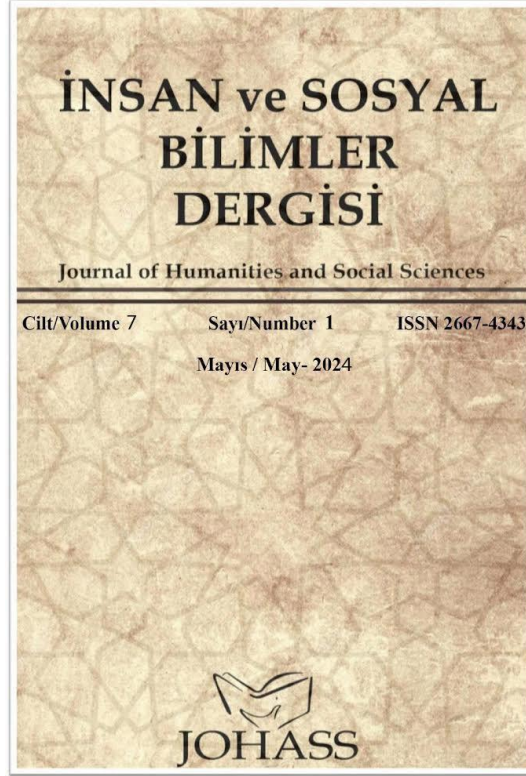
Phone: 0531 404 17 57

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JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)



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**Comparison of 9th Grade History Textbooks Used in 2013 and 2023 in
Terms of Women's History***

**This study was presented as a paper at the IXth International History Education Symposium on September 6-8, 2023.*

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Article Type: Research Article

Received: 25.03.2024

Accepted: 23.05.2024

Published online: 29.05.2024

Citation: Köse, M. (2024). Comparison of 9th grade history textbooks used in 2013 and 2023 in terms of women's history. *Journal of Human and Social Sciences*, 7(1), 1-33.

Comparison of 9th Grade History Textbooks Used in 2013 and 2023 in Terms of Women's History*

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Abstract

As an extension of women's history and gender equality studies, the level of visibility of women in history textbooks and the reflection of their historical roles in textbooks has become an important area of research. The language, information, and visuals used in history textbooks are considered very important data tools for these studies. In this research, which has a qualitative approach, the 9th grade history textbooks taught in 2013 and 2023 were compared in terms of women's history. The aim of the research is to make a comparison of the 9th grade history textbooks taught in 2013 and 2023 in terms of women's history and to reveal the point reached regarding women's history. In line with this purpose, document analysis was preferred as the method. The 9th grade history textbooks were selected through the purposive sampling method. Content analysis was used to analyze the data. According to the findings of the study, history textbooks reveal a regression in terms of women's history. Most of the female names identified in the history textbooks taught in 2013 are not included in the history textbooks used in 2023. The visuals in the book are not sufficient in terms of women's history. It can be thought that the changing history programs have an impact on this outcome since textbooks are written within the framework of history programs. It can also be argued that not enough sensitivity has been shown to the inclusion of women's history in textbooks.

Keywords: History textbook, women's history, gender, textbook, women's roles

Research Article

*Received: 25.03.2024
Accepted: 23.05.2024
Published online:
29.05.2024*

* This study was presented as a paper at the IXth International History Education Symposium on September 6-8, 2023.

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Introduction

History is a social science that investigates all the activities of human communities, the developments they have experienced, and the events that have taken place between them by showing place and time in a cause-and-effect relationship based on documents and transferring them to the present day (Özçelik, 1993). Although this general definition includes the phrase “all the activities of human societies”, practically, traditional historiography was more concerned with political events, wars and political leaders. Due to this tendency of traditional historiography, groups such as women, slaves, merchants, children, and land workers were generally excluded from historiography. Social historians were the first to become interested in the history of these ordinary people, focusing on everyday life, sexuality, family, and social rituals (Birey et al., 2014; Çakır, 2011). The Annales School, which examines the whole of human activities with an interdisciplinary approach, also acted differently from the historical approach that centers political events and began to show interest in people outside of political history (Çarkçı, 2021). Despite these new approaches in historiography, women's history has not attracted enough attention and has continued to be neglected (Çakır, 2011).

Women's history began to come to the fore as a field in the 1970s. The initial aim of this field was to reach the past experiences of women who could not find a place in the traditional historiography and to make them visible. Women's history researchers who want to shed light on women's experiences in history have acted with an interdisciplinary approach by utilizing the social and human sciences such as sociology, anthropology and literature (Birey et al., 2014; Çakır, 2021). The belief that traditional historiography ignores women's experiences has formed the background of women's history studies (Purvis, 2004; Scheiner-Fisher, 2013). As an extension of women's history studies, research on how patriarchy and power relations were shaped in different historical periods has been carried out with a feminist approach (Çakır, 2021; Scheiner-Fisher, 2013). As a result of research in the field of women's history, a large corpus has emerged and significant progress has been made since the 1970s (Birey et al., 2014).

The extent to which women are included in history textbooks and which images and roles are attributed to the women in the textbooks have been brought to the agenda as a field of gender studies, and women's history research has begun to be carried out together with this field (DeWolf, 2021). Those working on women in history education have primarily made

efforts to include women's experiences in history programs and history textbooks because history textbooks, which maintain their power in education at a significant level, have a profound effect on students' attitudes (Nene, 2014). The information given or not given about the historical roles of women will induce students to build a certain impression about women. Through teaching history that excludes women, students will receive the message that women's stories, problems and concerns are unimportant for history (Crocco, 2008; Scheiner-Fisher, 2013). Therefore, it will only be possible to give accurate messages to students about the roles of women in history by including women's stories in history textbooks.

Primary studies within the framework of women's history and gender studies questioned the level of visibility of women and the language used in history textbooks (Brugar et al., 2014; Dilek, 2012; Foster, 2011; Kay, 2006; Schocker & Woysner, 2013). The problem of teaching women's history and integrating it into history textbooks has emerged as a result of the above discussions. Despite the efforts made to include women in history programs and the abundance and accessibility of resources in the field of women's history, it is quite difficult to say that history programs devote enough space for women (Apaolaza-Llorente et al., 2023; Brugar et al., 2014; Chiponda & Wassermann, 2011; Hahn, et al, 2007; Delaney, 1996; Fine-Meyer, 2012; Kay, 2006; Scheiner-Fisher, 2013). In this context, history programs and textbooks need to be improved in accordance with this purpose. A similar situation exists for Türkiye. History programs/history textbooks are quite inadequate in terms of including women (Akay Şahin & Açıkalın, 2023; Aydın, 2022; Can, 2009; Çelik, 2020; Demircioğlu, 2011; Köse, 2023a, 2023b, 2023c).

This study, which aims to compare the 9th grade history textbooks taught in 2013 and 2023 in the context of women's history, is significant in terms of revealing the level achieved in this field in the last decade by addressing the extent to which history textbooks cover women's history. During the analysis of the books, answers to the following problems were sought. The findings are presented within the framework of these problems:

- How do the 9th grade history textbooks taught in 2013 and 2023 differ in terms of the units they contain?
- Do the 9th grade history textbooks taught in 2013 and 2023 differ in terms of the female names they contain?
- Do the 9th grade history textbooks taught in 2013 and 2023 differ in terms of the images of women they contain?

- How does the information given about women differ in the 9th grade history textbooks taught in 2013 and 2023?
- Have the 9th grade history textbooks made any progress in terms of covering women's history?

Method

Model

This study, which compares 9th grade history textbooks taught in 2013 and 2023 in terms of women's history, is conducted with a qualitative approach. Qualitative research allows realistic and holistic observation of events and phenomena in their natural environments through methods such as observation, interview, and document analysis (Baltacı, 2019; Büyüköztürk et al., 2019; Karataş, 2015).

The method of the research is document analysis. In this method, data is obtained by analyzing written documents containing information about facts and events (Kıral, 2020). The conducting researcher decides which document to examine in line with the purpose. In this process, the originality of the documents should be checked, and methods such as understanding the documents, analyzing the needed data and using the data should be followed sequentially (Yıldırım & Şimşek, 2008).

Data Collection Tool

This study based on document analysis does not require ethical permission. 9th grade history textbooks were primarily used for this study since it is the first level of high school education. However, it can be said that textbooks used at different levels of education need to be analyzed in a similar way. In the study, The 9th grade history textbooks taught in the 2013-2023 academic year were determined by purposive sampling method. Purposively selected small sample in qualitative research allows the researcher to focus on the subject in depth (Patton, 2002). Additionally, purposive sampling offers the opportunity to examine in detail the situations that provide rich information about the subject under investigation (Şahan & Uyangör, 2021; Yıldırım & Şimşek, 2008). For this study, which aims to compare 9th grade history textbooks in detail in terms of women's history, purposive sampling method was preferred. Information about the textbooks used in the study is given in Table 1.

Table 1

The Textbooks Analyzed

No	Name of the Book	Year of Publication	Authors	Number of Pages	Publisher
1	History 9	2013	Okur, Y., Genç, İ., Özcan, T., Yurtbay, M. & Sever, A.	193	Ministry of Education (MoNE)
2	History 9	2021	Yüksel, E., Kapar, M., Bağcı, Ö., Bildik, F., Şahin, K., Şafak, L., Ardiç, M. & Yıldız, S	222	Ministry of Education (MoNE)

Collection of Data and Analysis

The textbooks were analyzed using the content analysis method. In content analysis, the information contained in written and oral sources can be classified objectively and systematically, and inferences can be made by converting the data into numbers (Tavşancıl & Aslan, 2001). This method focuses on the actual meaning and the content of the printed materials such as textbooks. In the content analysis process, certain coding should be done on the text and categories should be determined (Bernard, Wutich & Ryan 2017). In this study, three categories were identified for content analysis of the 9th grade history textbooks taught in 2013 and 2023. These are 1. Names of women in the textbooks 2. Visual images of women in the textbooks 3. Information about women in the texts in the textbooks. The comparison of the textbooks in terms of women's history was made in the light of the data obtained.

In order to ensure coding consistency during data analysis, an associate professor in the field of education was asked to code, apart from the researcher, and the coding comparison was made with this method. In coding consistency, different coders should code the same text in the same way or the same coder should code the text in the same way at two different times (Bilgin, 2014). Miles and Huberman's (1994) formula $[(\text{Reliability} = \text{agreement} / (\text{agreement} + \text{disagreement}) \times 100)]$ was used to compare the two separate codings made by the researcher and an associate professor. As a result of the comparison, the agreement rate between the two codings was found to be 0.92. Direct quotations, visuals and sample data presented in the study provide the internal reliability of the study in accordance with the research that presenting the data with direct quotations with a descriptive approach is

considered one of the most important strategies to ensure the internal reliability of the research (Yıldırım & Şimşek, 2008).

Findings

Comparison of 9th Grade History Textbooks Taught in 2013 and 2023 in Terms of the Units They Contain

The first problem of the research is how the 9th grade history textbooks taught in 2013 and 2023 differ in terms of the units they contain. Thus, it was determined whether the books contain the same topics. The findings on how the books differ in terms of units are given in Table 2.

Table 2

Units in the 9th Grade History Textbooks in 2013 and 2023

Unit Name	History 9 (2013)	History 9 (2023)
Unit 1	History Science	History and Time
Unit 2	The Birth of Civilization and the First Civilizations	Early Periods of Humanity
Unit 3	First Turkish States	World in the Middle Ages
Unit 4	Islamic History and Civilization (Until the 13th Century)	Turkish World in the Early and Middle Ages
Unit 5	Turkish-Islamic States (10th-13th Centuries)	The Birth of Islamic Civilization
Unit 6	History of Türkiye (11-13th Centuries)	Turks' Acceptance of Islam and the First Turkish Islamic States

According to Table 2, the 9th grade history textbooks taught in both 2013 and 2023 consist of 6 units. Although the names of the units in the 9th grade history textbook, which was prepared with a thematic approach and taught in 2023, partially differ, it can be said that 9th grade history textbook has nearly the same content as the textbook used in 2023. For example, the first unit of the 9th Grade history textbook taught in 2013 is “Historical Science”, and the first unit of the 9th Grade history textbook taught in 2023 is “History and Time”. When the content of the books is analyzed, it is observed that similar topics are covered in them. Similarly, Unit 2 titled “The Birth of Civilization and the First Civilizations” of the Grade 9 history textbook published in 2013 and Unit 2 titled “The Early Periods of Humanity” of the Grade 9 history textbook published in 2023 encapsule similar topics in terms of their content. It is also the case that some units have changed places in the books. In

the table, "Islamic History and Civilization (Until the 13th Century)" is given as the 4th Unit in the 9th Grade history textbook taught in 2013. In the 9th grade history textbook taught in 2023 however, Islamic history topics are included in the 5th Unit titled "The Birth of Islamic Civilization." In general terms, although the topics are presented in different units, it can easily be observed with a wholistic view that both books cover the same topics and periods-

Comparison of 9th Grade History Textbooks Taught in 2013 and 2023 in Terms of the Female Names They Contain

The second problem of the research is how the 9th grade history textbooks taught in 2013 and 2023 differ in terms of the names of women they contain. Details such as the historical roles and nationalities of the women whose names appear in the books are also reflected in the tables. To determine the nationality of the women, the state and period they lived in were taken into consideration. The findings are presented in Table 3 and Table 4.

Table 3

Women Names in History 9 textbooks taught in 2013

No	Unit Name	Women Mentioned	Their Historical Roles	Their Nationality	Page Number
1	Unit 1: History Science	Ms. Bahriye (Hanım)	Halil İnalçık's mother	Turkish	19
2		Ms. Şevkiye (Hanım)	Halil İnalçık's wife	Turkish	20
3		Nefertiti	Queen of Egypt	Egypt	27
4	Unit 2: The Birth of Civilization and the First Civilizations	Princess Amytis	Wife of Babylonian King Nebuchadnezzar and the one who caused the Hanging Gardens of Babylon to be built	Babylon	46
5		Honorina	The Western Roman Emperor's sister and the cause of war	Rome	82
6	Unit 3: First Turkish States	Aminah (Amine)	Hız. Muhammed's mother	Arab	106
7		Halima (Halime)	Hız. Muhammed's wet nurse	Arab	106
8		Khadija (Hatice)	Hız. Muhammed's wife	Arab	106
9		Mary (Meryem)	Mother of Jesus	Nazareth (Nasıra)	107
10		Aisha (Ayşe)	Hız. Muhammed's wife and her role in the Jamal Incident	Arab	119
11	Unit 5: Turkish-Islamic States	Terken Khatun	Melikşah's wife and her role in the fights for the throne	Turkish	154
12	(10th-13th Centuries)	Fatma Bacı	Wife of Ahi Evran and leader of Bachıyan-ı Rum	Turkish	184
13	Unit 6: History of Türkiye (11-13th Centuries)	Gevher Nesibe	Daughter of Kılıçarslan II and the reason for the construction of Gevher Nesibe Hospital	Turkish	188

According to Table 3, a total of 13 women's names are included in the History 9 textbook taught in 2013. Among these women, Ms. Bahriye, Ms.Şevkiye, Terken Khatun, Fatma Bacı and Gevher Nesibe are Turkish. Amine, Khalime, Khadija and Aisha are Arabs, Nefertiti is Egyptian, Princess Amytis is Babylonian, Honoria is Roman and Mary is Nazarene. Ms. Bahriye, Ms. Şevkiye, Aminah, Halima, Khadija, Mary are included in history textbooks because they are relatives, wives or daughters of a man. In other words, 6 of the 13 women in the textbooks are included in the history textbooks only as relatives of men. Nefertiti appears in the book with the title of Queen. The Hanging Gardens of Babylon were built for Princess Amytis and the Gevher Nesibe Hospital was built in the name of Gevher Nesibe. However, both Amytis and Gevher Nesibe do not play an active role in the making. Honoria, the sister of the Western Roman Emperor, is presented as a cause for war in the book. Aisha, who was personally involved in the Camel Incident, Terken Khatun, the wife of Melikşah, who was involved in the throne fights, and Fatma Bacı, the leader of the Bacıyan-ı Rum organization, are presented in the textbook with their active roles. According to Table 3, the unit containing the most female names is Unit 4 titled “Islamic History and Civilization (Until the 13th Century).”

Table 4*Women Names in History 9 Textbooks Taught in 2023*

No	Unit Name	Women Mentioned	Their Historical Roles	Their Nationality	Page Number
1	Unit 5: The Birth of Islamic Civilization	Aisha (Ayşe)	Hızret Muhammed's wife and her role in the Camel Incident	Arab	147
2		Isabella	Queen of Castile	Castilian	151
3	Unit 6: Turks' Acceptance of Islam and the First Turkish Islamic States	Terken Khatun	Melikşah's wife and her role in the fights for the throne	Turkish	196

According to Table 4, there are 3 women's names in the 9th grade history textbook taught in 2023. These are Aisha, Isabella and Terken Khatun. Among the women, Terken Khatun is Turkish, Aisha is Arab and Isabella is Castilian. Aisha plays an active role in the book as the wife of Muhammad and the perpetrator of the Camel Incident. Isabella is presented as the Queen of Castile with her activities in Spain. Terken Khatun is included in the history book with her role in the struggle for the throne.

When Table 3 and Table 4 are compared, it is seen that the number of women's names decreased considerably in the 9th grade history textbook taught in 2023. While 13 women's names are included in the 9th grade history textbook taught in 2013, only 3 women's names are included in the 9th grade history textbook taught in 2023.

Among these women, Aisha and Terken Khatun have similar roles in both textbooks. The main reason for the inclusion of these women in the textbooks is that they were both involved in political events. While Isabella was not mentioned in the 9th grade history textbook used in 2013, her activities are partially included in the 9th grade history textbook used in 2023. The names of Ms. Bahriye, Ms. Şevkiye, Nefertiti, Princess Amytis, Honoria, Aminah, Halime, Khadija, Mary and Gevher Nesibe are excluded from the 9th textbook taught in 2023. These women are the ones who are presented in the 9th grade history textbook taught in 2013, mostly as the wife, daughter or relative of a male leader.

Comparison of 9th Grade History Textbooks Taught in 2013 and 2023 in Terms of the Images of Women They Contain

In this problem of the research, it is discussed whether the 9th grade history textbooks taught in 2013 and 2023 differ in terms of the images of women they contain. The findings are presented in Table 5 and Table 6.

Table 5

Images of Female Figures in History 9 Textbooks Taught in 2013

No	Unit Name	Image Name	Subject name	Group/single (one)	Page Number
1	Unit 1: History Science	The works of the Historical Society and Atatürk	The Importance Atatürk Attaches to History Education	Group	16
2		Historiography / Let's Think Section	Group	21
3	Unit 2: The Birth of Civilization and the First Civilizations	Egyptian Civilization (Interpret Section)	Group	50
4		Hindus bathing in the Ganges River, considered sacred according to Hinduism	Indian Civilization	Group	52
5		Social classes in medieval Europe / Bourgeoisie	Feudalism	Group	80
6		Social classes in	Feudalism	Group	80

7	Unit 3: First Turkish States	medieval Europe/ Peasants Turkish women in history	The Role of Women in Turkish Society (Interpret Section)	Group	89
8	Unit 6: History of Türkiye (11-13th Centuries)	Gevher Nesibe Hospital-Kayseri	Modern Hospital of the Era: Darüşşifa (Interpret Section)	...	188
9		A view from Kayseri Castle	Mongols in Anatolia (Interpret Section)	Group	192

According to Table 5, there are 9 images containing female figures in the 9th grade history textbook taught in 2013. None of these images includes a sole female figure. As it can be understood from the image names in Table 5, these images provide visuals for the subject texts and do not directly draw attention to a female figure. The following image is an example of this situation:



Image 1. *The works of the Historical Society and Atatürk (Okur et al., 2013, p. 16).*

The visual shows the activities of the Historical Society. There is also a female historian in the image with low image quality. The visual used in the subject “The Importance Attached to History Education by Atatürk” is used to create visuality for the subject (Okur et al., 2013, p. 16). This is valid for almost all the visuals featuring women in the textbook.

The following image given at the beginning of the 2nd topic titled “Historiography” is a good example of using women images just to create visuality for the subject without aiming to give information about the women themselves.

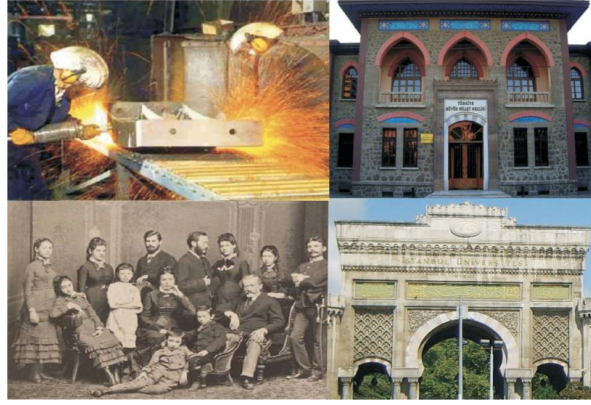


Image 2. *Let's Think Section (Okur et al., 2013, p. 21).*

Students are asked to think about the image above by asking the following question: “Examine the visuals. Using visuals, tell us in which areas historiography might have improved?” (Okur et al., 2013, p. 21). This question focuses on the development areas of historiography. The image with female figures points to family history. The question is quite general. It does not directly offer an idea about women's history.

In Unit 3 titled “First Turkish States”, it is seen that the issue of women is emphasized through the visual used in the scope of “The Role of Women in Society in Turks (Interpretation Section)” (Okur et al., 2013, p.89). The following image was used regarding the subject:



Image 2. *Turkish Women in History (Okur et al., 2013, p.89)*

The purpose of using the image is to create a visual for the role of women in Turkish society. However, the image quality of the visual is quite low.

As can be seen from the examples, the images containing women in the 9th Grade history textbook taught in 2013 were not used to reveal women's history. It sheds little to no light on women's roles and experiences in history.

Table 6

Images of Female Figures in History 9 textbooks taught in 2023

No	Unit Name	Image Name	Subject name	Group/single (one)	Page Number
1	Unit 1: History and Time	Image 1.4	What is the method of historical science?	Group	15
2		Image 2.3: Lifestyle of the first people (Illustration)	Lifestyle and Livelihoods of the First People	Group	30
3	Unit 2: Early Periods of Humanity	Image 2.18: Example of hieroglyphs on papyrus	The Beginning of Written Culture	Group	37
4		Image 2.25 : Living environment of the nomads	People and Migration	Group	43
5		Image 2.27: Oil painting titled "Flight of the Prisoners" depicting Jewish immigration	People and Migration	Group	45
6	Unit 3: The World in the Middle Ages	Image 3.16: Statue of justice representing the Laws of Justinian	Laws are Evolving	Single/one	84
7	Unit 4: Turkish World in the Early and Middle Ages	Image 4.9: Uyghur State flag	Source of Legitimacy of Power in Turkish States	Group	98
8		Image 4.19: Migration	Migrations of Turks from the Motherland	Group	108
9		Image 4.30: Empress of China	First Turkish States and Their Neighbors	Single/one	121
10	Unit 5: The Birth of Islamic Civilization	Image 5.5: Hijra/Migration (Leon Belly)	Islam is Spreading	Group	136
11		Image 5.9: Kaaba (Mecca)	Conquest of Mecca (630)	Group	140
12	Unit 6: Turks' Acceptance of Islam and the First Turkish Islamic States	Image 6.12	July 15 Democracy and National Unity Day /Reading Text	Group	188
13		Image 6.13	July 15 Democracy and National Unity Day /Reading Text	Group	189
14		Image 6.27: A tile from the Great Seljuk Period	Culture and Civilization in the Great Seljuk Empire	Group	203

According to Table 6, the 9th grade history textbook taught in 2023 contains 14 visual female figures. The two images belong to a single/one female figure. One of them is the below image named “The statue of justice representing the Laws of Justinian” is included in the 3rd Unit titled “The World in the Middle Ages”.



Image 3.16. (Yüksel et al., 2021, s.84).

This image is used to create a visual for the “Laws of Justinian” described in the text. It is not a real image of a woman. Although it is a sole female figure, it does not shed light on the history of women.

The other visual containing a single female figure is the following Image 4.30, titled “Empress of China” in Unit 4:



Image 4. 30. (Yüksel et al., 2021, s.121)

This image is given within the topic on the policies of the Empress of China. It is only used to visualize the expression “Empress of China” in the subject text. It has a partially functional characteristic as it is related to the subject text. It partially serves the purpose of spotlighting women in history as students can form an opinion about the Empress of China through this image.

The other 12 images in the book are used to visualize the subject matter. They are not directly related to women's history. The following image can be presented as an example for this situation:



Image 5. 5. Hijret/Migration (Leon Belly) (Yüksel et al., 2021, p.136).

The visual above is given in the subject titled “Islam is spreading.” The function of this image is to provide visuality to the “Hijrah” event mentioned in the subject. It is seen in this image that women migrated along with men. However, the purpose of using this image is not to give any information about the women's experiences in the past.

In most of images examined, the female figures in the group are hardly recognizable due to the low image quality of the visuals. Additionally, these images do not convey strong messages to students about women's history. Therefore, it can easily be said that the images of women in the 9th grade history textbook taught in 2023 are not used for functional purposes in terms of teaching women's history.

Comparison of the Information Provided About Women in 9th Grade History Textbooks Taught in 2013 and 2023

Another problem of the research is how the information given about women differs in the 9th grade history textbooks taught in 2013 and 2023. In 9th grade history textbooks, knowledge about women is included in the political history related to men. A few women also mentioned in the textbooks as wives and mothers of men. There is quite limited information about women's roles in the topics that deal with social, cultural and economic life. In consideration of the findings, information about women in the 9th grade history textbooks taught in 2013 and 2023 is collected under headings of women in politics and government, women in social, cultural and economic life and women as relatives of leaders.

Women in Politics and Government

The 9th grade history textbook taught in 2013 includes little information about the role and power of women in government in the past.

Within the topic of “Hittites (1700 BC - 700 BC)” in the 2nd Unit titled “The Birth of Civilization and the First Civilizations”, the roles of the queens called “Tavananna” in government are explained with the following sentences: “...The most authorized person after the king in the government was queen called "Tavananna. Tavananna presided at religious ceremonies and ruled the country when the king went to war” (Okur et al., 2013, p.56).

The 9th grade history textbook taught in 2023 also included information about the influence and power of Tavananna in government. In the 2nd Unit of the book titled “Early Periods of Humanity”, the following information is given about “Anatolian Civilizations”: “The Hittites constituted a council named Pankus. The queen called Tavananna among the

Hittites, had a say in the administration” (Yüksel et al., 2023, p.42). In the textbook, similar information is repeated under the topic “From Tribe to State” as follows: “In the Hittites, there was a council named Pankus (pankush) together with the king. The king consulted this assembly on his decisions. The queen called Tavananna was also effective in government” (Yüksel et al., 2023, p.49).

In the 3rd Unit titled “The First Turkish States”, some information is given about the role of khatun in the Turkish state government within the subject of “The First Turkish States Established in Central Asia.” The following information is included in the “Let's Interpret” section titled “The Role of Women in Turks in Society”:

In Turkish societies, khan and khatun have common responsibilities in state administration. Moreover, ordinances cannot be put into effect without the signature of the khatun and the khan. In addition, the khatun is definitely present with the khan in the reception of ambassadors, feasts, kengesh, congresses, worship and rituals, war and peace assemblies. In Turkish states, women are the helpers of their husbands not only in the house, but also in the field, in the market and even in state affairs, and they are at the forefront especially in social activities (Okur et al., 13, p.56).

Considering the above information, the following question is asked under the heading “Let's Answer”: “According to the above text, evaluate the position of women in society in ancient Turks and compare them with today.” Thus, it is aimed for students to think about the position of women in society in Turks.

The 9th grade history textbook taught in 2023 also includes information that sheds light on the political positions of the Khatuns. However, the issue is not discussed in terms of the position of women in society, but under the title of “Material and Fundamental Sources of Power.” The following information provided in the 4th Unit titled “Turkish World in the Early and Middle Ages” can be given as an example of this situation:

General Assembly (toy) in the Turkish state organization; It was the highest organization that made general decisions on political, cultural, legal and economic issues and formed the basis of state administration. The General assembly, which consisted of the khan, members of the dynasty, khatun, chief advisor (aygucı), and rulers of tribes (bey), usually met three times a year to discuss state affairs (Yüksel et al., 2023, p.100)

In the “Do You Know” section, the following information is given: “Women had a say in the Turkish states. Among them were those who directed the policy of the state and those who administered the state as regents. Khatuns, who had separate palaces and orders, sometimes accepted ambassadors” (Yüksel et al., 2023, p.100).

In the text of the subject, the “Understanding of Power and Management According to Turkish Inscriptions” is included and the high position of the khatun together with the khan is pointed out with the following sentences:

In the inscriptions, it is seen that the source of sovereignty in the first Turkish states was of divine origin. The following statements can be given as an example of this situation; “the Turkish Bilge Khan, who was in heaven like a god (Figure 4.15), I sat down at this time, the God who raised my father the

khagan and my mother the khatun, the God who gave the state so that the name of the Turkish nation would not be destroyed” (Yüksel et al., 2023, p.105).

There is also information about women's political roles in the history textbooks. The following information about Aisha is given within the subject of “Ali Period (656 - 661)” under the Unit 4 “Islamic History and Civilization (Until the 13th Century)”:

After Hazrat Ali became caliph, those who claimed that he did not punish Hazrat Uthman's (Osman) murderers opposed Ali's caliphate. Hazrat Ali, on the other hand, wanted to achieve complete justice. In a period of turmoil that still continues, he wanted the murderers to be punished after the events calmed down so that innocent people would not be harmed. In particular, Muawiya, Aisha, Talha and Zubayr wanted the criminals to be caught as soon as possible, no matter what. This situation caused the parties to fight (Okur et al., 2013, p.119).

After the above information, the “Camel Incident (656)” which caused divisions in the Islamic World and took place around Aisha is described as follows:

Hazrat Ali could not convince those who opposed him. Hazrat Aisha, Talha and Zubayr took action with the forces they had gathered from Iraq. Thereupon, the forces of the two sides faced each other in Kufa. Hazrat Ali won the battle. In the battle, Talha and Zubayr were martyred. This war is known as the "Camel Incident" in Islamic history since the fiercest battles of the war took place around the camel ridden by Hazrat Aisha, who participated in the war. After the war, Aisha was sent to Medina. After this event, the center of the state was moved from Medina to Kufa. (Okur et al., 2013, p.119).

Aisha is also included in the 9th grade history textbook taught in 2023, through the Camel Incident. The following information given about “The First Divisions in the Islamic World” in the 5th Unit headed “The Birth of Islamic Civilization” is also related to the “Camel Incident”:

The Prophet's wife, Aisha and those around her, wanted Uthman's murderers to be found and punished as soon as possible and the for Muslims to be saved from the chaos they were in. Some of the companions formed a force by taking sides with Hazrat Aisha. Hazrat Ali went to Kufa with the force that he formed, following Hazrat Aisha and her army. In the meetings held here, an agreement was reached to find Hazrat Osman's killers. In particular, both sides have decided not to engage in a war without attacking the other sides. However, those responsible for the murder of Hz.Osman realized that they would be punished and started the war by attacking unexpectedly. Although Ali and Aisha tried to stop the war, they did not succeed. Ali's supporters prevailed in the fight, and Aisha was sent to Medina after the war. However, Hz. Ali did not return to Medina and made Kufa the center of the state. This war was called the "Cemel (Camel) Incident" in Islamic history because it took place around Hz. Aisha's camel (Yüksel et al., 2023, p.147).

Apart from Aisha, one of the political figures and female leaders that we encounter in history textbooks is Queen Isabella (the Queen of Castile). In the 9th grade history textbook of 2013, under the heading “The State of Bani Ahmar (1232–1492)”, the following information is given about Isabella: “Catholic-Christian unity was achieved in Spain as a result of the marriage of the king of Aragon with the queen of Castile. Christians who captured Granada in 1492 destroyed many artifacts of Islamic culture and civilization. Thus, 750 years of Islamic rule in Spain came to an end” (Okur et al., 2013, p.125)

In the 9th grade history textbook used in 2023, information about Isabella is given in the 5th unit under the title “The Spread of Islam in Europe” with the following sentences: “In 1469, Queen Isabella of Castile married King Ferdinand of Aragon, and 10 years later, the two kingdoms were united. The kingdoms, which became stronger, took action to put an end

to the Muslim presence in the region and destroyed the Bani Ahmar State in 1492” (Yüksel et al., 2023, p.151).

Another woman who appears in Turkish-Islamic history in the textbook and who influenced the state administration with her activities is Terken Khatun. Information about Terken Khatun is given as follows in the 5th Unit titled “Turkish-Islamic States (10–13th Centuries)” within the subject “Great Seljuk State (1040–1157)”:

The fact that Malikshah's wife, Karakhanid princess Terken Khatun, wanted to appoint her four-year-old son Mahmut as crown prince caused a rift between Nizam al-Mulk and Sultan Malikshah because Nizam al-Mulk opposed Terken Khatun's desire. First, the death of Nizamülmülk and then the death of Melikşah became an opportunity for Terken Khatun. Concealing the death of the shah, Terken Khatun distributed the state treasury to the soldiers, hoping that they would put her son Mahmut on the throne. She had an edict read on behalf of his four-year-old son, Mahmud, and proclaimed him Sultan. This prompted her rivals (Okur et al., 2013, p. 154).

In addition to this information, the following question with an exclamation mark (!) is included in the text: “What are the activities of Terken Khatun that affected Seljuk history?” This question provides for the students to find out the negative impact of Terken Khatun on the Seljuk administration.

Terken Khatun is also found a place in the 9th grade history textbook taught in 2023. In the subject “The Fall of the Great Seljuk State” in the 6th Unit titled “Turks' Acceptance of Islam and the First Turkish-Islamic States,” the following information is given about Terken Khatun and her influence on the throne fights:

When Sultan Malikshah died at the age of 38, he left behind a vast empire that stretched from Kashgar to the Sea of Marmara, from the Caucasus to Yemen and Aden. Immediately after the death of Malikshah, the struggle for the throne began. His wife, Terken Khatun, received the approval of the caliph and had a sermon read in Baghdad on behalf of her 4-year-old son in 1092. Malikshah's other son, Berkyaruk, who was supported by the followers of Nizam al-Mulk, ascended the throne by winning the struggle with his brother. However, in order to gain the throne, Terken Khatun first made Berkyaruk's uncle Ismail Yakuti and then his uncle Tutus rebel against the administration (Yüksel et al., 2023, p. 196).

In the 4th unit of the 9th grade history textbook used in 2023, under the title “Material and Fundamental Sources of Power,” Mete Khan's letter to the Chinese empress is included. In a part of his letter, Mete Khan gives information to the empress about the first period of his life (Yüksel et al., 2023, p. 97). Through this information, which is not directly related to women's history, at least it can be obtained that the Chinese Empress corresponded with Mete Khan and existed in history as a political authority.

In the same textbook and in the same unit, under the title “The First Turkish States and Their Neighbors,” different information about the policies followed by the Chinese empress against the Turks is also included. The following information is given in the book:

From time to time, the Turks benefited from the agricultural products and tools of the Chinese. For example, the Kök Turk ruler Kapgan Khan once received 1250 tons of seed wheat and 3000 agricultural tools from China as a taxes. The Kök Turks planted the seed wheat they bought from China in the same year, but none of this wheat grew. Because the Chinese empress, who could not accept paying taxes to

Kapgan Khan (Figure 4.30), gave this wheat to the Kök Turks by cooking it. In addition, the value of gold and silver given as gifts is very low. Kapgan Khan, who understood the truth, made a great raid on China after 698. Until 703, raids were made on the northern provinces of China. Chinese armies of three hundred and four hundred thousand people were defeated by Turkish armies of forty-fifty thousand people (Yüksel et al., 2023, p. 121).

It is not possible to find their names in the information given about the Chinese empresses. However, it is noticed that empresses have an important place in Chinese administration, and they are engaged in active politics.

In Unit 1, titled “The Science of History,” in the “Let's Interpret” column named “History Hidden Under the Waters” within the subject of “Fields of Science Benefited by History,” the contribution of archeology to history is emphasized, and the following information is also included:

...Another ship that sank in Uluburun, near Kaş, in 1300 has been described as one of the most important archaeological discoveries of the 20th century. Glass ingots of various colors, ivory, gold medallions, and silver bracelets belonging to the Canaanite civilization, and the only known gold seal of the Egyptian Queen Nefertiti, were unearthed from this shipwreck (Okur et al., 2013, p. 27).

From the above sentences, which emphasize the importance of archeology, the name of the Egyptian Queen Nefertiti and the information that her only known gold seal are obtained. The fact that Nefertiti was the Queen of Egypt points to her political identity. However, it seems difficult to directly relate this information to the political role of women.

As a result, both textbooks emphasize the role of tavananna and khatuns in state administration and discuss Hazrat Aisha, Terken Khatun and Isabella as political figures. In this context, information provided in the textbooks is not different. Apart from this, the activities of the Chinese Empire are included in the textbook taught in 2023. Therefore, it can be said that there has not been a significant change in the information provided in the textbooks about women's political roles.

Women as a Means of Establishing Kinship Ties and Strengthening the State

Texts presented within the 9th grade history textbook used in 2013, mentions that there are women who took part in active politics through political marriages. One of them is included in Unit 3 titled “First Turkish States” in the subject of “Asian Hun State (Great Hun State)” with the following sentences:

Ki-ok followed his father's path and wanted to continue the state and order, which he had inherited. During his period, political and commercial relations with China were tried to be developed. Ki-ok married a Chinese princess to establish kinship with the Chinese" (Okur et al., 2013, p.76).

According to these sentences, the Chinese Princess, whose name is not given, is a means of developing political and commercial relations with China.

In the 9th grade history textbook used in 2023, the section describing Hun-Chinese policies and defined as the “Sample Text” explains the different consequences of political marriages with Chinese princesses as follows:

The Chinese emperors introduced many agents into the Hun country, especially in the entourage of Chinese princesses whom they sent as wives to the Hun kagans during times of peace. These agents created hostility between the Hun lords and their communities through various intrigues. He also made the Huns accustomed to comfort and pleasure by sending luxury goods to the Hun country through trade. This situation weakened the warrior skills of the Turks (Yüksel et al., 2023, p.100).

Honoria, in the 9th grade history textbook taught in 2013, is a woman who can be mentioned in the relationship between marriage and politics, even if the marriage does not take place. The following information in the textbook reveals this situation in the section titles as “European Hun State”:

Attila, who completely neutralized the Eastern Roman Empire, focused on Western Rome. He looked for various reasons to go to Western Rome. Attila saw the marriage proposal of Honaria, the sister of the Western Roman emperor, as an opportunity. Accepting Honoria's offer, Attila asked for half of the Roman lands as a dowry, and when this request was not accepted, he decided to go on the Gallic Expedition (Okur et al., 2013, p.76).

According to the information in the 9th grade history textbook used in 2013, the marriage between Çaka Bey's daughter and Kılıç Arslan, who was the ruler of the Seljuk State of Turkey, also had a political character. Information on this subject is given under the title “The Establishment Period of the Turkish Seljuk State” in the 6th Unit titled “History of Turkey (11–13th Centuries)”:

When Kılıç Arslan became ruler, he put the state affairs in order. He put pressure on Byzantium. He married the daughter of Çaka Bey, who founded the state in Izmir. Byzantium was disturbed by Çaka Bey's successes. The Byzantine Emperor, who did not want Çaka Bey to become stronger for his own state, caused a rift between Kılıç Arslan I and Çaka Bey. He eliminated Kılıç Arslan I and Çaka Bey (Okur et al., 2013, p.171).

Based on these sentences, it can be thought that Kılıç Arslan married Çaka Bey's daughter in order to increase his power against Byzantium.

In Unit 5 of the 9th grade history textbook used in 2013, the institution of “Atabeylik” is explained under the subject of “Culture and Civilization.” In the “Let's Interpret” section, brief information about Atabey Şemsettin İldeniz is given. Based on this information, it is understood that Azerbaijani Atabey Şemsettin İldeniz married Tuğrul's widow. But the name of this woman is not mentioned (Okur et al., 2013, p. 156). In the “Let us answer” section, the benefits and harms of Atabeylik are questioned through Şemsettin İldeniz. However, it is also possible to consider Şemsettin İldeniz's marriage with Tuğrul's widow from a political perspective.

Based on the above information, it can be seen that women are presented in history textbooks as means of establishing kinship ties and strengthening the state. The history textbook used in 2013 covered this topic more extensively. The history textbook taught in

2023 focuses only on the negative consequences of marriages with Chinese princesses for political purposes.

Women in Social, Cultural and Economic Life

The 9th grade history textbooks used in 2013 and 2023 include certain information about the position and value of women in society in different civilizations and Turks. There is a “let's interpret” section with the title “The Role of Women in Society in the Turks” within the subject of the Asian Hun State (Great Hun State) in the 9th grade history textbook used in 2013. This section provides the following information in detail:

Information about the Turks before Islam goes back to 4000 BC. According to this information, women have the ability to ride horses, use weapons, and fight. Turks have valued and glorified women throughout their history. In Dede Korkut Stories and Kutadgu Bilig, Turkish women are mentioned with respect. In Ziya Gökalp's work titled “The Fundamentals of Turkism,” the position of Turkish women in the period before the adoption of Islam is given in detail. According to the information in this work, the maternal and paternal lineages were kept equal to each other in terms of value by the ancient Turks. In the family, the property is completely shared. Mother and father have an equal right to the custody of children. In Turkish societies, khan and khatun have common responsibilities in state administration. In fact, decrees in the nature of laws can not be put into effect without the signature of the khatun and the khan. In addition, the khatun is always present with the khan at the reception of ambassadors, feasts, kengeş, general assembly (kurultay), worship and rituals, war and peace meetings. In Turkish states, a woman helps her husband not only at home but also in the field, in the market, and even in state affairs, and is especially at the forefront of social activities (Okur et al., 2013, p. 89).

With the information given above, in the “Let's Answer” section, the question is asked: “According to the above text, evaluate the position of women in society in ancient Turks and compare it with today.” With this, students are expected to question the position of Turkish women in society from past to present.

The position and value of women in pre-Islamic Arab society is also one of the topics emphasized in 9th grade history textbooks. In the 9th grade history textbook taught in 2013, in Unit 1 titled as “Science of History”, the following information is given under the section “Let's Interpret”: “...Tribes consisted of families of the same origin. The man had a say in the family. Polygamy was common among men. Girls were unimportant, and women could not benefit from inheritance rights” (Okur et al., 2013, p. 32).

In the same textbook, in the unit titled as “Islamic History and Civilization (Until the 13th Century)”, the following information in the subject “Arabian Peninsula” reveals the value of women:

Before Islam, Arabs lived in tribes. Chiefs, called sheikhs, were the leaders of the tribes. Tribes consisted of families from the same root. The man had a say in the family. Polygamy was observed in men. Girls were not valued, and women could not benefit from the right of inheritance (Okur et al., 2013, p. 105).

The 9th grade history textbook used in 2023 also contains the information about the low status of women and girls in the pre-Islamic Arabian Peninsula. This subject is covered in Unit 5, titled as “The Birth of Islam.” The information provided is as follows:

In pre-Islamic Arabia, people were divided into three social classes: free people, slaves and mawalis. The free people, the main element of the tribe, had all rights. Slaves and concubines (female slaves), who did not have any rights, could be bought and sold, inherited, and employed in daily labor. If a slave was freed, he or she would belong to the class called mawali. In pre-Islamic Arabia, adoption was common, and the adopted child could benefit from inheritance. A man could marry many women and divorce his wives easily. A woman was accepted into the family only after she had a child. Women, who were deprived of most of their human rights, could not receive a share of the inheritance. Only women and daughters of prominent people in the tribe were privileged (Yüksel et al., 2023, p. 133).

In addition to the above information, the following paragraph is presented in the “Did you know” column on the same page:

The reason why the pre-Islamic period is called the “Period of Ignorance” is not that people were illiterate. The prevalence of Bedouinism: The pre-Islamic period of Arab society was called the Period of Ignorance due to reasons such as people's backwardness in terms of civilization, their ignorance and heedlessness, their worship of idols, and their bad attitudes towards women (Yüksel et al., 2023, p. 133).

In the “Farewell Sermon/Khutbah Wada” given at the end of the subject, the Prophet Hz. Muhammad warns Muslims to improve the situation of women in society with the following words:

O people! I recommend that you respect the rights of women and fear Allah in this regard. You have taken women as a trust of Allah, and you made their honor halal for yourselves by Allah's command. You have a right over women, and women have a right over you (Yüksel et al., 2023, p.142).

After Islam, it is seen that non-Arab women along with men, were valued less society during the period when the “Mawali” policy was implemented. In the “Let's Interpret” section titled as “Mawali Politics,” the below information is included:

During the Umayyad period... it was conveyed that Arabs did not walk with the mawali on the road, did not sit at the same table with them, separated their mosques, held the professions of the mawali in contempt, and avoided giving their daughters to the men of the mawali. In addition, until the last years of the Umayyad Dynasty, the caliphate of family members whose mothers were not Arabs was not viewed positively (Yüksel et al., 2023, p. 150).

In 9th grade history textbooks, there is also information about the social roles of women as well as the value and position of women in society. The 9th grade history textbook taught in 2013 includes extensive information about the roles of Turkmen women, especially within the subject of “Akhism/Ahilik.” This information is given in the following sentences under the topic “Establishment Period of the Turkish Seljuk State” in the “History of Turkey (11–13th Centuries)” unit: “In the Akhi/Ahi community, where science, art, and morality were given great importance, women also had an important place in social and economic life” (Okur et al., 2013, p. 184). The following information is included in the “Let's Interpret” section named “Be Careful with Your Spouse, Work, and Food”:

In addition to the Ahi organization established in Kayseri during the Seljuk period, Turkmen women under the leadership of Fatma Bacı, who was Ahi Evran's wife, also organized among themselves and established a women's organization. They called this organization Bacyan-ı Rum (Anatolian Sisters).

Members of the Bacıyan-ı Rum organization mostly produced tent making, felt making, embroidery, knitting, rug and carpet weaving, and silk and cotton thread production. Anatolian women in the Bacıyan-ı Rum organization used to fight alongside their husbands in defense of the homeland against the enemy when necessary. This organization not only contributed to the adoption of helpfulness, hospitality, and honesty among women but also accelerated the spread of the Turkish language, Turkish culture, and understanding of Islam among women. They also would take orphans and lonely young girls under their protection and be responsible for their education and housing. In addition, they would take care of lonely old women and help those who were in financial difficulties. Anatolian women, the Bacıyan-ı Rum organization, as it was known at the time, used to make the women adopt the principles of "Be careful about your spouse, your job, and your food!" (Okur et al., 2013, p. 184).

In the "Let's Answer" section, the subject is discussed with the question, "According to the text above, evaluate the characteristics of Turkmen women and their role in society." From the text, it is understood that the Bacıyan-ı Rum organization contributed to the economy through tent making, felt making, embroidery, knitting, rug and carpet weaving, and silk and cotton thread production.

The subject of Bacıyan-ı Rum was not included in the history 9 textbooks used in 2023. However, in Turkish society, women's warrior roles are emphasized. The following information about the "Nomadic Army" is presented as a "Sample Text" in the 3rd Unit titled as "The World in the Middle Ages":

Rather than being a scattered crowd, the nomadic army had a structure in which everyone knew what to do and when to do it and helped each other. The army is a people on its feet, a nation on the march. In these armies, women also participated in the war when necessary (Yüksel et al., 2023, p. 82).

Women's warrior roles are mentioned again in Unit 4, titled as "The Turkish World in the Early and Middle Ages." The following information is included in the subject of "Military Culture in Turks":

Since everyone who held a gun in Turkish society was considered a soldier, there were not mercenaries in the armies of the first Turkish states, except the Caspian State. In the permanent Turkish army, men and women, young and old, were in a position to fight at any time (Yüksel et al., 2023, p. 110).

In the same unit, the "Report of the Chinese Ambassador" given in the "Let's Interpret" section provides the following information about Uyghur women:

According to the report of Wang Yen-te, the Chinese ambassador who went to Turfan Uyghurs between 981-984... Women wore some kind of hat on their heads. In their customs, most of them rode horses and shot arrows. They used to fill tubes made of silver and brass with water. They would squirt water by pressing these tubes or they would play sports by throwing water at each other (Yüksel et al., 2023, p.99).

However, based on the given text, the following question is asked: "What could be the impact of women on social life in the Uyghur State?"

The topic of "Laws Are Born" in the 2nd Unit titled "Early Periods of Humanity" of the 9th grade history textbook used in 2023 sheds light on certain law practices regarding women in history. The following information about the laws of the Hittites reveals the legal status of women: "In the Hittite Laws; family-related issues such as marriage, divorce, wedding, and engagement are included. While divorce was a right given only to men in the Asia Minor tribes, this right was also granted to women in the Hittite" (Yüksel et al., 2023,

p.58). In “Ten Commandments of the Jews,” there is the following article: “You shall honor your father and your mother” (Yüksel et al., 2023, p.59). According to this article, mother and father are equated in terms of respect.

Few examples relating to the family and criminal laws in the Genghis Code are given under the topic “Laws Are Developing.” There is the following article in the Genghis Code that points to the status of women in society: “The degree of the children is determined by the degree of their mothers” (Yüksel et al., 2023, p. 85).

Although it is very insufficient, the 9th grade history textbooks used in 2013 and 2023 contain certain information about the social and cultural life of women in history. In the 9th grade history textbook taught in 2013, women in the Roman Civilization are mentioned in the “Let's Interpret” column titled “A Day of the Roman.” The following information is provided about the daily lives of women:

...When the children of the house came home from school, they would either eat something light or immediately play in the gardens of their villas. The lady of the house, on the other hand, would put on a long-lasting make-up after breakfast and then go to her friends (Okur et al., 2013, p.66).

The following information is included in the “Let's Learn” section within the unit of “First Turkish States”: “In Bulgaria, men, not women, cried over the dead. After Bulgarians became Muslims, they changed their funeral customs.”(Okur et al., 2013, p.92). According to the information given, mourners were men, not women, in Bulgaria.

In the 9th grade history textbook used in 2023, the following information about the lives of nomadic women is given in the “Let's Interpret” column titled “The Migration of Tribes to the Plateau”:

... Migration was carried out by double-humped camels or four-wheeled, covered carts pulled by oxen. These carts were like real houses where women spun wool, sewed, gave birth, and breastfed their children. Migrating to the plateaus would become a real entertainment. Beautiful dresses were worn, and cheerful songs were sung along the way (Yüksel et al., 2023, p.107).

Some information given in the 9th grade history textbook taught in 2013 indirectly sheds light on the cultural lives of women. For example, the memory of a Kyrgyz woman named Cumagül is included in the subject of “Calendars Used by Turks” (Okur et al., 2013, p.14). The main purpose of this text is to draw attention to the “Turkish Calendar with twelve Animals” rather than the story of women. However, presenting the subject through the memory of a woman is a positive approach for women's history.

Similarly, in the “let's interpret” section of the topic, which deals with the use of ethnography by history science, the following memory of Kınalı (hennaed) Hasan, who participated in the Gallipoli War, is described: Kınalı Hasan's commander asks him why he applied henna to his hair. In order to get the answer of this question, Hasan writes a letter to his mother. This tradition is about patriotism. In the “Let's Answer” section on the subject, the

patriotism among Turks is discussed (Okur et al., 2013, p. 29). However, it is possible to get an idea about the cultural practices of mothers through Hasan's correspondence with his mother.

Darüşşifas (hospitals) are mentioned in the topics, which deal with the architectural structures of the Turkish Seljuks. The name “Gevher Nesibe” can be found in the following information about Darüşşifas: “Darüşşifas are architectural works known today as hospitals. Kayseri Gevher Nesibe Hospital was the largest hospital of that period. Next to the hospital, there was also a school providing medical education” (Okur et al., 2013, p. 188). Apart from this, the name Gevher Nesibe, who is the sister of the Seljuk sultan Gıyaseddin Keyhüsrev I, is also mentioned in the image named “Gevher Nesibe Hospital-Kayseri” (Okur et al., 2013, p. 189). Although this text focuses on the architectural works inherited from the Turkish Seljuks, using the Gevher Nesibe Hospital image as an example is meaningful in the context of women's history.

In the 9th grade history book used in 2023, it is stated that men were on average 170 cm tall and women were 157 cm tall, and the average lifespan varied between 29 and 30 years in the Çayönü community, one of the folks living in the Mediterranean (Yüksel et al., 2023, p. 33). With this information, it is possible to put forward an idea about the physical characteristics of Çayönü women who lived in Anatolia in the early periods of humanity.

Apart from the above information, the goddess “Cybele,” who is not a real identity but is included as a feminine figure in the history textbook, offers clues about the view of women in the cultural sense. The following information is given about “Cybele” within the subject “Phrygians (800 BC–676 BC)”:

Cybele is the fertility goddess of the Phrygians, who were engaged in farming. The Phrygians accepted Cybele as the mother goddess. According to Phrygian belief, every autumn, Cybele encourages her lover Attis to die, and with the death of Attis, nature also dies. When Attis is resurrected in the spring, he meets Cybele. With the meeting of Cybele and Attis, nature comes alive (Okur et al., 2013, p.58).

Both textbooks contain information about the social position of women in Turkish society and Jahiliyyah Arab society. The strong position of women in Turkish society and the low social position of women in the Jahiliyyah Arabs are emphasized. The textbooks include similar information in this regard. Apart from these, there is also indirect and very limited information on the social and cultural life of women under different topics. However, the indirect information provided in the textbooks does not primarily aim to shed light on the history of women.

Women as Relatives of Political Leaders

There are women appear in 9th grade history textbooks with the reason that they are wives, mothers, or daughters of powerful political and religious leaders. In the “Birth and Spread of Islam,”” which is the 4th unit of the 9th grade history textbook used in 2013, the names of Hz. Muhammad's mother “Aminah” and his wet nurse “Halimah” are mentioned (Okur et al., 2013, p.106). In addition, the following information is given about his wife, Khadija:

Hz.Muhammad, as before, was famous for his trustworthiness, integrity, and honesty in his youth. He was never seen lying. A Meccan merchant named Khadijah heard of Muhammad's fame and gave him the responsibility of the trade caravans. When Hz. Muhammad was 25 years old, he married Khadijah. They had six children, two boys and four girls (Okur et al., 2013, p.106).

Khadija was a wealthy woman who owned trade caravans. But she finds a place in the textbook primarily because she was the wife of Muhammad. Within the subject of “Muslims' Activities in Mecca,” Khadijah's support for Hz.Muhammad, after the revelation came to the Prophet, is explained in the following sentences:

Hz.Muhammad, who was very worried and excited, came to his house and told his wife Khadija what he had experienced. Later, the two of them went together to see Waraka, who was the son of Hatice's uncle and an important scholar in Mecca. After listening to Muhammad, Waraka said, “Good news, O Muhammad! You are the last prophet informed by Jesus, son of Mary. “The angel sent to you is Gabriel, who also came to Moses.” (Okur et al., 2013, p.106).

Another sentence in the book that emphasizes Khadijah's support is as follows: “In the tenth year of the prophethood, Hz.Muhammad's uncle Abu Talip and his wife Khadija, who were his two great moral supports, passed away” (Okur et al., 2013, p.106). The names of Aminah, Halimah and Khadijah's and information about these people were not included in the history textbook used in 2023.

In the 9th grade history textbooks taught in 2013 and 2023, there is also certain information about women on topics that are not directly related to women. Some of this information is included in the subject of Babylon. Under the title “Babylonians (Amurru) (2100 BC–539 BC),” the following information is given in the “Let's Learn” section titled as “Hanging Gardens of Babylon”:

According to a legend, “the Hanging Gardens of Babylon” were built by King Nebuchadnezzar, the founder of the 2nd Babylonian State. Nebuchadnezzar married a princess named Amytis. Amytis, who came from a mountainous and green country, could not get used to the different geographical structure and climate of Mesopotamia. Nebuchadnezzar decided to build a replica of her hometown and built artificial mountains and lush gardens with flowing water because he wanted to please his homesick wife... (Okur et al., 2013, p.106).

It is understood that Amytis takes place in the history textbook since she was the wife of Nebuchadnezzar.

As can be understood from the quotes given above, only the history textbook taught in 2013 includes information about women as relatives of political leaders. These women were not mentioned in the textbook used in 2023, and their names were removed from the book.

Results and Discussion

Despite the significant research on women's historical experiences, textbooks have not developed sufficiently in the context of women's history. Today, according to studies addressing the problem of gender in history teaching, women are almost absent in history textbooks (Can, 2009; Demircioğlu, 2011). Despite the changing approaches in the field of history teaching, the way women are presented in history textbooks are not changed in comparison to the past (Köse, 2015; Nene, 2014). Women still appear in inactive roles in history textbooks.

In this study, 9th grade history textbooks taught in 2013 and 2023 were compared in the context of women's history. Additionally, it was examined how the visibility levels of women in history textbooks have changed during the last ten years.

According to the findings of the study, even though the titles and order of the units in the textbooks changed, the 9th grade history textbooks taught in 2013 and 2023 cover similar topics. Therefore, it was possible to coherently compare the two books in relation to women's history.

In the first problem of the research, the women's names covered by both textbooks have been examined. In the 9th-grade history textbook taught in 2013, a total of 13 women's names were identified. Six of these are included in the textbook as relatives of men, and they do not have active roles.

Princess Amytis, for whom the Hanging Gardens of Babylon were built, and Gevher Nesibe, for whom a hospital was built, are also presented with a passive role in the history textbook. Honoria, the sister of the Western Roman Emperor, Aisha with her role in the Camel Incident, Terken Khatun, the wife of Melikshah who was involved in the struggle for the throne, and Fatma Bacı, the leader of the Bacıyan-ı Rum organization, are partially portrayed in political roles in the textbook. In the 9th grade history textbook taught in 2023, three women's names were identified. Aisha and Terken Khatun could find a place in relation to political history. Likewise, Queen Isabella of Castile, a political figure, is one of the women mentioned in the 2023 textbook. Consequently, it appears that the number of female names in the 2023 textbook has significantly decreased compared to the 2013 textbook.

The women featured in the textbooks are entirely associated with political roles. In history textbooks that predominantly emphasize political history, it is quite challenging for women outside of the political sphere to find a place for themselves. In particular, the

suitability of traditional chronological history and concepts to men's experiences and the tendency of history programs to focus on military, political, and economic history make it difficult to reveal the contributions of women outside these areas (Apaolaza-Llorente et al., 2023; Scheiner-Fisher, 2013; Tetreault, 1986). Apart from this, it will not always be easy for students to remember women like Nefertiti, Amytis, and Gevher Nesibe, who occasionally find a place for themselves in books with just a sentence.

In the 9th-grade history textbook taught in 2013, there were 9 visual representations of female figures. However, in the book taught in 2023, there are 14 visuals featuring female figures. Among the images in the 2023 9th-grade history textbook, two of them depict only a single female figure. One of them is a visual representation of the "Statue of Justice" symbolizing "Justinian's Code," and the other is a miniature titled "Chinese Empress." In the 9th-grade history textbook taught in 2013, the image of the "Gevher Nesibe Darüşşifası" leads to the name Gevher Nesibe. However, in the book taught in 2023, visuals featuring women do not include any specific names. In both books, images featuring women are not functional for women's history. These images are used to visualize the subject matter rather than provide information on women's history. Additionally, due to their low image quality, identifying figures from these images is challenging. It is possible to say that the images used in the books do not contribute to women's history. Former studies related to women's images also supports the conclusion that visuals in history textbooks are not functionally used for women's history and are inadequate (Köse, 2023a, 2023b, 2023c; Nene, 2014).

The information about women in the 9th-grade history textbooks taught in 2013 and 2023 appears to be quite similar. Both books provide information about emphasizing the power of Hittite queens with the title Tavananna and the power of Khatuns in the Turkish government. The low social status of women in the Arab world and political events related to Aisha and Terken Khatun are also included in both books. The 9th grade history textbook taught in 2013 and the 9th grade history textbook taught in 2023 also have some differences in terms of certain information they provide regarding women. For example, in the 9th grade history textbook taught in 2023, there is no mention of Aminah, Khadijæ, and Princess Amytis unlike the textbook studied in 2013. Both books provide information about the status of women in social and cultural life. However, this information is quite limited, as it is sometimes given in one sentence. For instance, when discussing Çayönü, the average heights of both men and women are mentioned in a single sentence. In general, it can be said that both books largely present women in similar roles within related topics. However, the details about women differ slightly between these two books.

It is also observed that the images attributed to women in the textbooks have not changed from the past to the present. In a study conducted by Köse (2004), women are mostly portrayed in history textbooks with images such as “the inspiration of art, an agent, a ruler, a sacred being, a relative of a famous person, a means of establishing kinship ties and strengthening the state, a being who needs to be protected and who has suffered injustice, a woman for whom works of art are made.” According to the findings of this study, these images still persist unchanged in history textbooks. Akay Şahin & Açıkalın (2023), also state that women appear mostly as relatives of men in history textbooks. And women are not represented in history textbooks as they deserve.

As a result, it can easily be advocated that the 9th-grade history textbook has not made any progress in terms of content and visuals related to women’s history in the last decade. Furthermore, in the 9th-grade history textbook taught in 2023, there is a regression in terms of the included names of women. The images used do not serve any purpose related to teaching women’s history. Therefore, despite the wealth of information about women’s experiences and roles in the past presented by women’s history studies, it would be accurate to say that women are gradually disappearing from history textbooks. It is not easy to claim that students will learn significant information about the historical roles of women, especially in the history textbook taught in 2023. In such a case, teachers should be expected to draw attention to the women history. In this regard, history teachers' awareness of women's history is important. The teachers themselves must be engaged and instructed in women’s history (Apaolaza-Llorente et al., 2023). In the study conducted by Aktaş (2020), teachers' opinions were taken about the history programs used in 2018. According to teachers, simplifying the curriculum and emphasizing thinking skills is a positive approach. However, the thematic structure and complexity of the curriculum are problems. In these findings, it is noticeable that the teachers did not express any opinion about the inclusion of women's history in the curriculum or textbook. Therefore, it does not seem possible to think that history teachers have high awareness on the inclusion of women's history in textbooks.

Recommendations

It is possible to offer the following recommendations based on the findings. Women’s history-related gains should be added to history curricula. Authors of textbooks should be sensitive to including women’s historical experiences and roles in the textbook. Information about women in history textbooks should be provided with a constructivist approach. The

images and information used in the book should be selected to shed light on women's history and actively employed with teaching techniques. Representational and quality images commonly used for male historical figures can be extended to include female characters as well.

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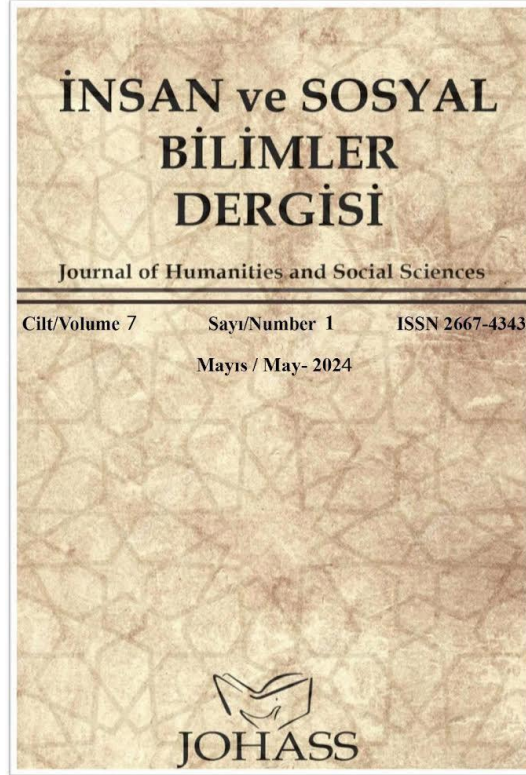
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JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)



<https://dergipark.org.tr/tr/pub/johass>

**The Effect of Intelligence Games on Primary School 4th Grade Students'
Mental Skill Levels**

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Article Type: Research Article

Received: 15.03.2024

Accepted: 23.05.2024

Published online: 29.05.2024

Citation: Balcı, E. & Cenk, G. (2024). The effect of intelligence games on primary school 4th grade students' mental skill levels. *Journal of Human and Social Sciences*, 7(1), 34-51.

The Effect of Intelligence Games on Primary School 4th Grade Students' Mental Skill Levels

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Abstract

This research was aimed to analyze the effects of intelligence games on the mental skill levels of fourth grade students. The research was carried out in a public school located in Manavgat district of Antalya province. The study group of the research consists of 40 volunteer students (20 in the experimental group, 20 in the control group) studying in two different branches of the 4th grades in the spring term of the 2021-2022 academic year. The research was designed in the form of a pre-test and post-test control group and the quantitative data of the research were collected through the 'Mental Skill Assessment Test' developed by Marangoz (2018). The experimental group was given a total of 16 hours of intelligence games training for eight weeks, two lessons per week (80 minutes). In the research, a valid and reliable ready-made test developed by Marangoz (2018) (Mental Skill Assessment Test) was used to evaluate students' mental skill levels (concentration of attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues). This test was applied to the experimental and control groups as a pre-test and post-test. The Normality Test was conducted to investigate the normal distribution of the data as a result of the research. In the research, 6 different intelligence games were used for eight weeks. In order to examine the relationship between the pre-test and post-test scores of the experimental and control groups before the application, the dependent sample t-test was performed. In the research, it was observed that there was a significant increase in the mental skills of the experimental group students, who were played 6 different intelligence games for eight weeks. According to the results of the research, we can say that intelligence games improve the mental skills levels of students.

Keywords: Intelligence games, mental skills, game, intelligence, primary school.

Research Article

Received: 12.03.2024.

Accepted: 23.05.2024

*Published online:
29.05.2024*

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Introduction

Children can play anytime, anywhere and in any situation, regardless of time, place or circumstances they play. Although game seems like a simple and childish word, it is actually very important. There is no child who does not play. Because for them, the game is much more than what adults think. While the child playing they have fun also thinks, learns, applies, comprehends, cooperates, develops strategy, reason, seeks solutions, adapts. Play is the child's purest and most spiritual occupation (Akandere, 2003). Vygotsky emphasized the importance of games and thought that children are free to experiment, try to play a role and make use of the materials during the game and therefore they can exceed normal skill limits. (Aksoy & Dere Çiftçi, 2018). For the child, play is as important and effective as nutrition, love, care and development (Koçyiğit, Tuğluk and Kök, 2007). So what is the game that is so important for children? According to Karaman (2012), play can be carried out with or without a specific purpose, with or without rules, but in any case, the child participates willingly and enjoys it; It is the most effective learning process, which is the basis of physical, cognitive, language, emotional and social development, is a part of real life and allows the child to express himself. In another definition; It is an activity that enables the child to learn on his own by experiencing, for the purpose of having fun and being internally motivated, sometimes with defined and known rules, sometimes developing spontaneously, and consisting of behaviors that include feelings of happiness, enthusiasm, excitement and curiosity (WEB1).

Based on the definitions, the effect of games on learning becomes more evident day by day. In today's educational approaches, it is frequently emphasized that games should be used in effective and permanent learning, scientists such as Donald Winnicott, Jean Piaget, Lev Vygotsky, Jérôme Bruner they state that the game is effective in their physical development (Marangoz, 2018). When we look at the education approach of both our country and other countries in the world, we can see how effectively games are included, especially at the primary school level. In the game, the child is constantly as a mental activity. In other words, the game can also be called the mental training of the child (Özer et al. 2006).

The individual must have mental skills such as problem solving, analysis, reasoning, critical, reflective and strategic thinking in order to keep up with this world where information, science and technology are rapidly growing and their importance increases day by day, and to have a share in this development. The education-teaching process is effective

in having these skills and developing them. It can be said that games, which are effective in the development of mental skills as well as their effect on learning, should be included more in education and training. Game is a more effective method than other teaching techniques because it moves the student from a passive state to an active state (Aytekin, 2001; Darwish et al. 2001; Gazezoğlu, 2007). In general terms games and intelligence games in particular, can be described as tools that can serve this purpose (Dempsey et al. 2002).

In general, intelligence is defined as the capacity to think and reason in both concrete and abstract ways, utilising perceptions and the ability to apply these mental functions to a specific purpose (Devecioğlu and Karadağ, 2016). Intelligence games are learning material that require the use of skills such as reasoning, problem solving, spatial relations and strategic thinking and support their development (Taş ve Yöndemli, 2018). Intelligence games referred to as learning material hat help students recognize and develop their intelligence potential, develop different and original strategies in the face of problems, make fast and accurate decisions, develop a systematic mindset and working skills individually, create a positive attitude towards problem solving (MEB, 2013). Intelligence games allow the individual to use his existing intelligence, enables its development and implementation.

Ministry of National Education 2012-2013 education with the elective mind games course included in the curriculum in 2009. It is aimed for students that realise their intelligence development potential, perceive and evaluate problems and develop different and original strategies for these problems, gain different perspectives, develop their potential by using reasoning and logic effectively, develop the ability to focus on a subject or problem, learn to make the right decision, develop a systematic thinking structure, develop individual and team working skills, and develop a positive attitude towards problem solving. Developing mental skills and capacity as well as in turn, thanks to mind games, students can develop their own abilities and skills with individual or group work. They will know and develop their potential better and increase their self-confidence (Marangoz, 2018). Intelligence games consist of 3 steps and it is necessary to progress gradually.

STEP 1-Beginner Level: Learning the rules of the games, basic knowledge and skills it includes winning, playing beginner games, and solving puzzles.

STEP 2–Intermediate: Making logical inferences, from the right place in puzzles start, apply basic strategies in strategy games, play intermediate games and Includes solving puzzles.

STEP 3-Advanced: Thinking creatively, analyzing, putting forward original strategies, includes high-level knowledge and skills such as evaluation and generalization. Playing advanced games solving puzzles and benefiting from the experiences of others are included in this step (MEB, 2013).

The main purpose of teaching is to enable students to use what they learned at school in daily life. According to İpşiroğlu (2002), it enables students to overcome the problems they face with their own efforts (Şimşek, 2007) and learning how to improve themselves throughout their lives is to teach (Özden, 1997). Individuals who make mind games a part of their lives, not only with numbers and shapes, but also with real-life materials will be required. This gives them different ways of solving problems when faced with real-world problems will teach them to use methods, will enable them to develop solutions against problems (Devecioğlu and Karadağ, 2014). Cognition, which refers to the mental processes involving the perception, interpretation and learning of the environment in which the individual lives, is evaluated within the scope of many areas such as perception, attention, memory, reasoning, problem solving and creativity (Aydın, 1999; Bayhan San ve Artan, 2009). In the literature, it is seen that intelligence games are effective in the mental skills of the individual (concentration of attention, strategic thinking, analysing, establishing a part-whole relationship, visual perception and using clues). For this purpose, it is very important to use intelligence games in the education curriculum (Demirel ve Yılmaz, 2016).

When the researches on intelligence games are examined, the studies mostly students; academic achievements, spatial skills, problem solving skills, attention gathering and communication skills (Alkaş Ulusoy, Saygı, & Umay, 2017; Altun, 2017; Altun, Hazar and Hazar, 2016; Baki, 2018; Bottino, & Ott, 2006; Demirkaya, 2017; Zirawaga, Olusanya & Maduku, 2017). On the other hand, primary school level intelligence games studies investigating the effect on mental skills are very limited. Because; In this study, the effect of intelligence games on the mental skills of 4th grade students made to research. In line with these purposes, answers to the following questions were sought in the study.

1. Is there a difference between the pretest scores of the experimental group and the control group in terms of mental skills sub-levels (concentration of attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues)?
2. Is there a difference between the post-test scores of the experimental group and the control group in terms of mental skills sub-levels (concentration of

attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues)?

Method

Model

Experimental research design, one of the quantitative research methods, was used in this study. Experimental research, in order to test the cause-effect relationship, the data suitable for the valid criteria are collected by the researcher. It is an environment arrangement under the control of which variables are produced, evaluated and variables are constructed. Datas the researcher produces and does not use previously produced data. Quasi-experimental artificial or natural takes place in environments under the control of the researcher (Karasar, 2016). Experimental research the sub-headings of the model were created with a random pre-test post-test control group design. This within the scope of the research, 6 different intelligence games determined by the researcher were played in the 4th grade of primary school. This design was used because it was aimed to determine whether the mental skills of the students developed after the application of 6 different intelligence games determined by the researcher to the experimental group of 4th grade primary school students.

Table 1

Pre-Test and Post-Test Control Group Model

Groups	Pre-Test	Process	Post-Test
Experimental Group	x	8-week intelligence games training	x
Control Group	x	-	x

As seen in Table 1, pretest-posttest control group design was used in the study and it lasted 8 weeks. While the control group received training with intelligence games in the specified period, the control group received training with the traditional method.

The research consists of two dependent and independent variables. Dependent variable in the research mental (concentration of attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues) skill levels. If the independent variable affects students' mental skills (concentration of attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues) are intelligence games.

Study Group

Multi-stage sampling technique was used to determine the study group of the research (Cohen, Manion and Morrison, 2002). First of all, the schools where the research will be carried out are sampling determined by the method. From the Turkish Statistical Institute (TSI) with Antalya province Manavgat district center in line with the relevant data, schools with a middle socio-economic level were determined. As a result of the interviews, the schools that participated voluntarily were determined. These schools are the study was started with "A" Primary School, which was selected by using random sampling method among the students. More then, the fourth-grade teachers of "A" Primary School were interviewed and the volunteers to participate in the study were interviewed branches are determined. Data collection tools were applied to the branches and there was no significant difference between them among the branches that do not have the same gender, age and teaching experience are close the study was completed with two fourth grade branches belonging to teachers. One of these branches is the experimental group, the other was assigned as the control group. The study group of the research consisted of Antalya province in the spring term of 2021-2022 academic year. 40 students (20 of them in the experimental group and 20 of them in the control group) attending the 4th grade of a primary school in the town of Manavgat.

Table 2

Distribution of Students in Experimental and Control Groups by Gender and Research Group

Groups	Gender					
	Girl		Boy		Total	
	f	%	f	%	f	%
Experiment group (4-A)	12	60	8	40	20	50
Control group (4-B)	9	45	11	55	20	50

When the distribution of students in the experimental and control groups by gender and research group is examined, the number of girl students in the experimental group was 12 (60%), the number of boy students was 8 (40%), while the number of girl students in the control group was 9 (45%), and the number of boy while it was determined as 11 (55%).

Intelligence Games Used in Research

Information about the independent variable of the study, intelligence games and the rules of the games are given in Table 3 Intelligence games used in this study: Mangala, Sumo Küpü, 3 Taş, 9 Taş, Reversi, Hedef 5 (TBT, 2014).

Before determining the intelligence games to be used in the research, a literature review was conducted by examining domestic and foreign studies. A pool of intelligence games and related skills was created. This list was submitted to the approval of 2 field experts, a language expert and 3 classroom teachers and the intelligence games to be used in the study were determined.

Table 3

The Characteristics of the Intelligence Games Used in the Research and the Contributed to Its Development Skills

Intelligence Games	Rules	Skills
Mangala	In the game, the player tries to protect his territory and seize the opponent's territory. While doing this, it takes into account the 4 basic game rules. The player who captures one or more of the half of the 48 pieces in the game wins the set. A total of 5 sets are played.	Using clues, Analysing, Concentration of attention
Sumo Küpü	The aim of the Soma cube game is to create the visual perception, shapes given in the instruction using the pieces.	Part-whole relationship Strategic thinking, Analysing
3 Taş	In 3 Taş, each player has three pieces, the aim is to form the first three on the game board and prevent the opponent from forming a three while doing so.	Analysing Strategic thinking, Part-whole relationship
Reversi	The game always starts with a formation of four in the center. Both players choose their colors. Black always starts the game. A new disk is placed in an empty cell. This empty cell must be adjacent to any cell occupied by a disk of the opposite color. The placed disk has to take some of the opponent's disks between it and another disk of the same color already on the floor in any direction (horizontal, vertical, diagonal). As soon as this is done, the opponent's discs between these two discs are inverted and become the disc of the player who made the move and are returned to his color. It is reminded that the aim of the game is to try to turn the opponent's discs into their own color in this way. If a player does not have a valid move, he must pass. If one player has a valid move, he cannot pass. If neither player has a valid move, the game is over, even if there are empty cells on the board.	Part-whole relationship Concentration of attention Strategic thinking, Analysing
Hedef 5	The game is played between two people. The next player drops their checkers down any gap. The first quintet, provided that the aim is to make the first five on the condition that it is horizontal, vertical and diagonal is to do.	Visual perception, Part-whole relationship Concentration of attention Strategic thinking

9 Taş Logical thinking when placing pieces or when all placements have been made, the each player's goal is to strategically think along the lines on the game board, lines to form a trio and make sure their opponent's to prevent the formation of a trio. Analysing Strategic thinking, Part-whole relationship

Data Collection Tools

For data collection, an achievement test developed by Marangoz (2018) measuring six different mental skills (concentration of attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues) was used. While using this test, necessary permissions were obtained from the test owner. The validity of the test has been confirmed by the expert opinions received by the Marangoz. The reliability of the test was calculated using the KR-20 test. The test result was 0.71, which shows that the test to be used is reliable. For each question in the 1st part of the test, time was kept and all students were asked to answer the questions at the same time, at the specified time. Thus, it was tried to measure how much the students could concentrate their attention in the given time. In the second part of the test, students were asked to solve the test at their own pace. Information about the questions aiming to measure the sub-dimensions of the 29-question test is given below.

Table 4

Questions Aiming to Measure the Sub-Dimensions of the Test

<i>Sub-Dimensions</i>	Concentration of attention	Strategic Thinking	Analyzing	Part-Whole Relationship	Visual Perception	Use of Clues
Items of the Scale	1, 2, 3, 4, 5, 6, 8, 11, 12, 13, 15, 18, 21, 26, 28 ve 29.	9, 13, 14, 18, 22, 23 ve 29.	9, 11, 12, 14, 15, 16, 19, 20, 22, 23, 24, 25, 26, 27 ve 28.	7, 10, 14, 16, 17, 19, 20 ve 27.	2, 3, 5, 7, 8, 10, 11, 12, 17, 18, 19, 20, 21, 24, 28 ve 29.	7, 8, 10, 11, 12, 17, 22, 24, 25, 26 ve 27.

Data Collection

For the research, an application for ethical permission was made to Alanya Alaaddin Keykubat University and necessary permissions were obtained. In this research, in the second semester of the spring term of 2021-2022 academic year, Antalya province Manavgat. The study was carried out with 4th grade students studying in a public school located in the district of Antalya. Intelligence games were determined by the researcher to improve the mental skills (concentration of attention, strategic thinking, analysing, part-whole relationship, visual

perception and use of clues) in the research. The determined intelligence games were covered by the Manavgat Science and Art Center. A 8-week daily plan has been prepared to determine how and in what order the games will be played. After the preparations were completed, a pre-test was applied to the experimental and control groups and the applications were started with the experimental group in line with the plan. No application was made to the control group.

Analysis of Data

The raw data from the pre-test and post-test applied to the experimental and control groups were analyzed using the SPSS 22 package program. In the study, the normal distribution was investigated in order to determine the analysis method. In this study, the normality values of the data were measured using the Shapiro-Wilk and Kolmogorov-Smirnov tests. After examining the normality distributions of the data, the independent sample t-test was calculated and tabulated using the SPSS program.

Ethical Committee Approval

Ethical permission for the study was obtained from Alanya Alaaddin Keykubat University by the researchers. The compliance of the study with ethical principles was approved by the decision numbered 2022/05 taken by the Scientific Research Ethics Committee of Alanya Alaaddin Keykubat University in the field of Social and Human Sciences at the meeting held on 11/10/2022.

Findings

In this study, it was aimed to examine the effects of intelligence games on the mental skill levels of fourth grade students. In the pre-test and post-test results of the experimental and control groups, each sub-step of mental skills (concentration of attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues) were examined to see whether there was a statistical difference. The findings obtained are presented in Table 5.

1.1. The Mental Skill Levels of the Experimental and Control Group Students and Values of the Pretest Normality Test Average Scores

Table 5

The Mental Skill Levels of the Experimental and Control Group Students and Values of Pre-Test Normality Test Mean Scores

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	df	Shallow.	Statistics	df	Shallow.
Experimental Group Pre-Test	,132	20	,200 *	,967	20	,687
Control Group Pre-Test	,152	20	,200 *	,933	20	,176

In the test performed to understand whether it comes from a normal distribution in Table 5., it was seen that the p value was greater than 0.05. Therefore, it was understood that the data came from a normal distribution. Since the data came from a normal distribution, paired sample t-test (dependent two-sample t-test) was applied in order to examine the relationships between the variables.

1.2. Mental Skill Levels of the Experimental and Control Group Students and Values of the Posttest Normality Test Average Scores

Table 6

The Mental Skill Levels of the Experimental and Control Group Students and Values of the Posttest Normality Test Average Scores

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	df	Shallow.	Statistics	df	Shallow.
Experimental Group Post-Test	,159	20	,199	,926	20	,129
Control Group Post-Test	,169	20	,138	,926	20	,128

In Table 6., it was observed that the p value was greater than 0.05 in the test performed to understand whether the post-test mean scores of the experimental and control groups came from a normal distribution. Since the data came from a normal distribution, the independent sample t-test was applied to examine the relationships between the variables.

1.3. Mental Skill Levels of Experimental and Control Group Students Pre-Test Scores Findings Regarding Averages

In order to determine whether there is a difference between the mental skill levels of the experimental and control groups, an independent sample t-test was performed on the results of the pre-test applied and shown in Table 7.

Table 7

Values of the Mental Skills Levels of the Experimental and Control Group Students and their Pre-Test Mean Scores

Mental Skills Sub-Dimensions		N	Average	SS	t	p
Pre-test	control	20	34	10,74097	0.041	0.515
	experiment	20	34.15	12,37687	0.041	
Concentration of attention	control	20	26.3	8.74252	0.032	0.348
	experiment	20	26.4	10,98516	0.032	
Part-whole relation	control	20	4.45	1,66938	0.188	0.837
	experiment	20	4.55	1,70062	0.188	
Analysing	control	20	8.6	3.31504	0.049	0.553
	experiment	20	8.65	3.13344	0.049	
Visual perception	control	20	22.35	7,70014	0.411	0.592
	experiment	20	23.3	6,89088	0.411	
Use of cues	control	20	7.65	2,34577	0.505	0.26
	experiment	20	8	2,02614	0.505	
Strategic thinking	control	20	3.15	1,56525	0.283	0.862
	experiment	20	3	1,77705	0.283	

The t-test results for the significance of the difference between the pre-test mean scores of the control and experimental groups are given in Table 7. According to the pre-test results of the control and experimental groups, no statistically significant difference was found in the dimensions of concentration of attention, strategic thinking, analysing, part-whole relationship, visual perception and use of clues ($p > 0.05$). Accordingly, it is seen that there is no significant difference between the experimental and control groups. According to these data, it can be said that the groups were taken from the same universe, that is, they are equivalent. The pre-test scores in the control group was $X=34$ and the average of the students in the experimental group was $X=34.15$. The close values in the pre-test averages in the Part-Whole Relationship sub-dimension can be interpreted that the students' ability to establish a part-whole relationship was at the same level before the study. While the average of the analysis skills of the students in the control and experimental groups in the pre-test was $=8.6$

in both groups X; In the visual perception dimension, the average of the students in the control group is $X= 22.3$, and the average of the students in the experimental group is $X=23.3$. In the dimension of use of clues, the average of the students in the control group is $X= 7.6$, and the average of the students in the experimental group is $X=8$. In the strategic thinking dimension, while the control group average is $X= 3.1$, the experimental group average is $X=3$. The closeness of the mean values means that there is no significant difference between the experimental and control groups in terms of dimensions.

1.4 Findings Regarding Mental Skill Levels Post-Test Scores of Experimental and Control Group Students

The post-test scores of the experimental and control groups are given in Table 8.

Table 8

Values of Mental Skill Levels Post-Test Mean Scores of Experimental and Control Group Students

Mental Skills Sub-Dimensions		N	Average	SS	t	p
Post-test	Control	20	38,4000	9,62125	-7,441	,000
	experiment	20	63,6500	11,7351	-7,441	,000
Concentration of attention	control	20	31,0000	8,05899	-7,803	,000
	experiment	20	54,2000	10,57604	-7,803	,000
Analysing	control	20	7,6000	2,64376	-4,129	,000
	experiment	20	10,6500	1,98083	-4,129	,000
Part-whole relationship	control	20	4,5000	1,76218	-1,678	,102
	experiment	20	5,3500	1,42441	-1,678	,102
Strategic thinking	control	20	3,2000	1,50787	-2,494	,017
	experiment	20	4,4000	1,53554	-2,494	,017
Visual perception	control	20	24,0500	5,63331	-6,665	,000
	experiment	20	36,0500	5,75349	-6,665	,000
Use of Clues	control	20	7,3000	1,86660	-3,828	,000
	experiment	20	9,1500	1,08942	-3,828	,001

Table 8 shows the post-test averages of the experimental and control groups. The difference in the sub-dimensions of concentration of attention, strategic thinking, analysing, visual perception and use of clues obtained as a result of the independent groups t-test to determine whether there is a significant difference between the post-test mean scores of the

groups, was found to be statistically significant ($p < 0.05$). Only the "part-whole relationship" sub-dimension of mental skills was found to be large ($p > 0.05$). According to these results, while there was no significant difference only in the "part-whole relationship", the experimental group showed a significant difference compared to the control group in all other sub-dimensions.

While the average of the concentration of attention skills at the students in the control group in the post test was $\bar{X}=31$, the average of the students in the experimental group was $\bar{X}=54$. The close values in the pre-test averages in the part-whole relationship sub-dimension and the averages of the students' ability to part-whole relationship were found to be $\bar{X}=4.5$ for the control group and $\bar{X}=5.3$ for the experimental group after the study. While the average of the analysis skills of the students in the control group in the post-test was $\bar{X}=7.6$ it was observed that it was $\bar{X}=10.6$ in the experimental group. In the visual perception dimension, the average of the students in the control group is $\bar{X}=24$, and the average of the students in the experimental group is $\bar{X}=36$. While the average of the students in the control group is $\bar{X}=7.3$, In the dimension of use of clues, the average of the students in the experimental $\bar{X}=9.1$. In the strategic thinking dimension, while the control group average is $\bar{X}=3.2$, the experimental group average is $\bar{X}=4.4$.

Result and Discussion

In this study, while investigating the effect of intelligence games on mental skills, it is aimed to draw attention to the importance of the effect of intelligence games on children's cognitive skills and to create an awareness for intelligence games at the same time. In his study, Kurbal (2015) mentions that the intelligence games course improves the reasoning and problem solving skills of the students. Demirel (2015), on the other hand, revealed that lesson activities with intelligence games have a positive effect on students' academic success and problem solving skills. The results of the tests applied before and after the games training revealed that there was a significant difference in favor of the post-test. When we analyzed the independent sample t-test results applied to the pre-test and post-test data of the experimental and control groups, no significant change was observed only in the "part-whole relationship" sub-skill. According to this result, although the control group did not receive intelligence game training, they showed a slight improvement in this sub-skill. However, when the averages of the data were examined, it was seen that the experimental group showed

more improvement than the control group.

When the studies on intelligence games are examined, Marangoz and Demirtaş (2017) talk about the effect of intelligence games on the mental skills of 2nd grade students. In this study, it has been proven by the analyzes that intelligence games improve mental skills. Keskin (2009) concluded that visual games strengthen attention. In the study conducted by Devecioğlu and Karadağ (2014), it was revealed that if the goals and behaviors to be determined with the mind games course are taught to students, it can contribute to the development of students' cognitive, affective and psychomotor competencies. Çetinbaş Gazeteci (2014) mentions the positive effect of science teaching supported by game activities on critical thinking and academic achievement. When we scan the literature on the effect of intelligence games on mental skills, we come across Marangoz (2018) investigated the effect of intelligence games on the mental skills of 2nd grade students. The results of these studies are in parallel with our study. In our study, only "establishing a part-whole relationship" did not show a significant improvement, but in all other sub-dimensions (concentration of attention, strategic thinking, analysing, visual perception and use of clues), the experimental group showed a significant difference compared to the control group.

Through play, the child learns to use his intelligence, discovers the world and the environment, acquires knowledge, satisfies his sense of curiosity, learns to reason and make choices (Uğurlu et al. 2012). For this reason, giving more play in the field of education can be applied in different classroom levels and for different lessons, and it can be examined whether children develop in other mental sub-skills or not. It is seen that TTKB prepared the Intelligence Games Course Curriculum in 2013. However, during this study, it was observed that there were not enough course materials, the necessary environment and a sufficient number of trained instructors in schools. All of the materials used in this study were provided by the researcher. This limited the variety and number of games. The content of these applications made in schools can be examined. Apart from intelligence games, it can be researched which activities will improve mental skills. At the same time, the effect of intelligence games on different dimensions of mental skills can be investigated.

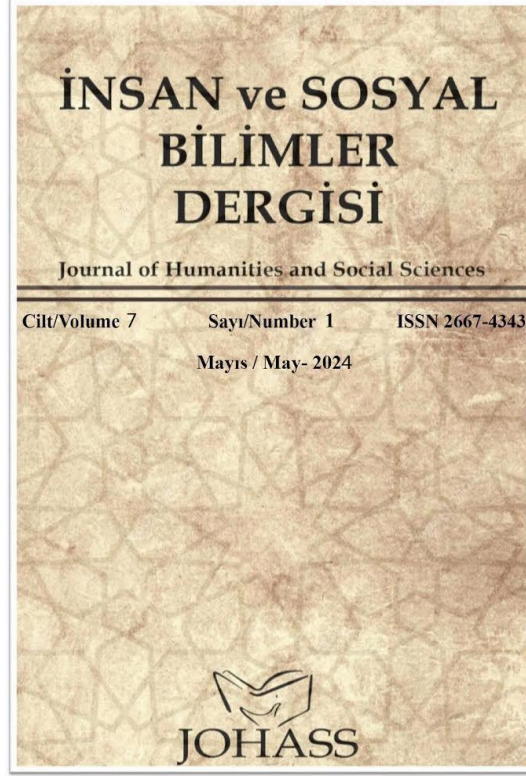
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26.01.2022

JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)



<https://dergipark.org.tr/tr/pub/johass>

The Effect of Flipped Classroom Model Application on Academic Achievements and Attitudes of Secondary School Sixth-Grade Students Towards Social Studies Courses*

* This study is derived from the master's thesis titled " The Effect of Flipped Classroom Model Application on Academic Achievements And Attitudes of Secondary School Sixth-Grade Students Towards Social Studies Courses ".

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Article Type: Research Article

Received: 08.23.2024

Accepted: 23.05.2024

Published online: 29.05.2024

Citation: Şahin, İ., & Çiftçi, B. (2024). The effect of flipped classroom model application on academic achievements and attitudes of secondary school sixth-grade students towards social studies courses. *Journal of Human and Social Sciences*, 7(1), 52-72.

The Effect of Flipped Classroom Model Application on Academic Achievements and Attitudes of Secondary School Sixth-Grade Students Towards Social Studies Courses

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Abstract

With the development of technology in our age, rapid change and development is observed in the field of information technology. This change is also observed in the field of educational technologies and beside this new teaching model has emerged. One of them is the Flipped Classroom model. This teaching model is defined as a model that provides the opportunity to learn the theoretical information at home and practice it at school via homework. The flipped classroom model is integrated with the technology. The students can study as they want in terms of time duration or rate instead of just listening. They can view courses on their mobile devices whenever they want. This research examines 'whether the application of flipped classroom model have an effect on the secondary sixth grade students' academic success in 'Culture and Heritage' unit' and 'what is their attitudes towards social studies lessons? Qualitative research approach is used in the research. The method of the research is quasi-Test design with pretest-posttest control groups. The application was carried out in 5 weeks and 20 lesson hours. The study group of this research consists of 25 students who are chosen via simple random sampling method. The data collection tools of this research are academic achievement test and attitude scale. The dependent sample t-test and Mann Whitney U Test were used in quantitative analysis. According to the findings of the study, the students' academic achievement in social studies lesson increased significantly compared to the pre-test post-test results. There is no significant difference between the students' attitudes towards social studies lesson.

Keywords: Flipped classroom model, social studies course, academic success.

Research Article

Received: 08.05.2024

Accepted: 23.05.2024

*Published online:
29.05.2024*

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Introduction

Today, the rapid development of science and technology has initiated the process of change and development in many areas. The most important area where this process begins is - undoubtedly - education. Ertürk, (1975) “The process of making voluntary changes in one's behavior through one's life.” The benefits of technology are undeniable in achieving permanent learning in education, which he defines as: Technology used in learning and teaching environments also increases the quality of education. In this way, education and training are blended with the developments in the information age.

New research and studies on learning with the developments in technology and science put forward many new techniques and methods in education and training in order to raise people suitable for today's needs. During this process, classical perspectives based on education and training are undergoing changes, paving the way for different models and methods (Erdogan, 2009).

As stated by Karadeniz (2015), traditional perspectives include students being passive and constantly listening in the classroom, the teacher being accepted as the center of education, lessons being continued only with the guidance of the teacher, and one-sided communication; It is replaced by models in which the student is more active. Today, changes in the qualifications of students, ongoing technological innovations and perspectives open to development, and changes in the expectations and needs of both the country and humanity; It ensures the acceptance of student-centered models in education. In new perspectives, the student does not memorize the already existing knowledge by writing it down in his notebook under the supervision of an instructor, but rather acquires the knowledge through research and different learning methods at his own will and acts responsibly. It is an undeniable fact that through education and training, people who are researchers, questioners, better able to understand social events, able to obtain knowledge through Test means and responsible people can be raised.

According to the constructivist approach, which is the most important approach in the education system today; The knowledge entrepreneurship that the student learns as a result improves the relationship between the learner and the teacher and gives the student the opportunity to express himself. In this way, the student's interest in the lessons increases over time with the knowledge he acquires and he acts with more clear determination about what he will do in the future. Thus, the student who actively participates in the learning process constructs knowledge himself. For this reason, it is of great importance to choose the correct

methods and techniques planned to be applied in the course. Correct techniques can produce more productive results both in and out of school.

Education and training methods have separated from their usual structures with the changes they have experienced over time; It has moved beyond its teacher- and classroom-centered structure and become more independent and general (Taşpınar and Tuncer, 2008).

For future learning, educators and students should be guided to embrace technology (Fulton, 2012).

All developments reveal the use of time outside the classroom with technology. With the inclusion of technology in new education models, an education system called flipped was born.

It is envisaged that the Flipped Classroom model, which is a new model, is a new understanding that will contribute to achieving the general objectives of the Social Studies course. The student receiving education in flipped learning learns the subject he wants to learn through virtual technology help and videos before the course starts. The teacher guides the student to better learn the subject he has studied and learned before. In this system, the teacher has the opportunity to adapt the education program face to face according to the students' education levels and aptitude for the subject. Students can also organize their own learning processes. Considering the difficulties encountered in the process of teaching Social Studies, it is understood how useful this learning can be. As a result of the studies conducted, the problems encountered in teaching the Social Studies course are as follows:

- Insufficient course hours despite the intensity of the course content,
- The necessity of imparting certain values in each unit within the course,
- Students' attitudes and perceptions towards the course are not sufficient,
- Having problems with doing homework,
- Having problems in using methods and techniques appropriate to the constructivist approach in the classroom,
- Having problems in completing research assignments,
- Insufficient lesson time due to crowded classes. (Yılmaz and Tepebaş, 2011., Çalışkan 2010, Akşit 2011, Tangülü and Çıdaçı 2014.)

In eliminating these problems and creating an efficient teaching process in accordance with the constructivist approach, flipped learning, which has become an increasingly popular approach to achieve learning, as stated by Phillips and Trainor (2014), comes to the fore. In this study, the effect of the Flipped Classroom application on the students' academic success

and attitudes towards the Social Studies course in the 6th grade Social Studies course unit called "Culture and Heritage" will be revealed.

Today, due to the consequences of the development and widespread use of technology, the way technology is applied in education also varies. With the reflection of these changes and developments on education, communication tools such as the internet and computers have become an indispensable tool that is used extensively from kindergartens to higher education institutions. Technological innovations have made possible many new methods in education. Educators who actively benefit from these create new educational processes so that students can learn more efficiently. There are studies on flipped learning in other fields, including Erdoğan (2018) and Karaman (2018) in the field of social studies teaching in the country (Akdeniz, 2019., Ök, 2019., Yurdagül, 2018., Çavdar, 2018., Bolatlı, 2018., Koçak, 2019.) is gradually increasing. An example of the educational processes in question is (Flipped Classroom). Flipped classrooms and the opportunities provided by technology are among the different types of education that reverse the traditional concept of taking lessons and then reinforcing learning with homework and various exercises. It is important to take students outside the classroom walls in education and training environments and make them active. On the basis of this understanding, the student has the opportunity to study at home with materials prepared using the computer and internet technology he is familiar with, before starting the course he wants to learn or will learn.

The main problem statement of the research is "Does flipped classroom practices have an effect on the academic success and attitudes of 6th grade students in the social studies course?" It constitutes the question.

- Is there a significant difference between academic achievement pretest and posttest scores in terms of the group variable?
- Is there a significant difference between the pre-test and post-test scores of the Social Studies course attitude scale in terms of the group variable?
- Is there a significant difference between the pre-test and post-test scores among the sub-dimensions of the Social Studies course attitude scale in terms of the group variable?

Method

Model

This section includes what needs to be done for the Flipped Classroom model, the research model, the tools used to collect data, the working group, data analysis and the implementation process.

In the experimental design model with pretest-posttest control group, there are two groups formed by unbiased assignment. One of the groups is used as the experimental group and the other as the control group. Measurements are made before and after the experiment in both groups (Karasar, 2009). The pretest-posttest control group design is stated as a two-factor experimental design, one of which shows repeated measurements (pretest-posttest) and the other shows subjects in different categories (experimental-control groups). In this design, a subject is included in only one of the experimental or control groups (Büyüköztürk, 2007).

The research is a quasi-Test design with a pre-test - post-test control group and was carried out with quantitative methods. The main purpose of the research is to determine the effect of the Flipped Classroom application on the students' attitudes towards the course and academic success in the "Culture and Heritage" unit of the Secondary School 6th Grade Social Studies course. Attitude scale and academic achievement tests were used as data collection tools throughout the research.

Sample and Population

The study group of the research consists of 25 6th grade students selected by simple random sampling method. Pre-test - post-test and attitude scale were applied to the mentioned group. Research; It was conducted with 13 students in the control group and 12 students in the Test group, with a total of 25 students.

Data Collection Tools

After determining the method to be used in the research, an academic achievement test was prepared and applied with the guidance of two Social Studies teachers experienced in their field, by taking expert opinion in order to obtain quantitative data. Two groups, named Test and control, were created for the experiment. These two groups were pre-tested and during the following 5 weeks, the Test group was given training using the Flipped Classroom method, while the control group continued to be given training using the constructivist training method prescribed by the curriculum. At the end of the experiment, a posttest was

applied to evaluate whether there was a difference between the Test and control groups. Five weeks after the end of the experiment, a test called "Social Studies Course Attitude Scale" was applied to the Test and control groups in order to evaluate their attitudes towards the Social Studies course. In this way, it was possible to have an idea about the changes in these students' attitudes towards the Social Studies course.

Academic Achievement Test

The academic achievement test used in this study (Appendix-4) was developed for the "Culture and Heritage" unit of the Social Studies course. This test is administered by the researcher to measure their success in the subjects of "Turks in Central Asia", "The Birth of Islam", "Turks Accept Islam", "Anatolia becoming the Turkish Homeland" and "Trade Routes", which are included in the Culture and Heritage Unit. It is a test consisting of multiple choice questions. In the multiple choice test, which is one of the most preferred exams, the correct answer is found among other options. How many options the exam will consist of may vary depending on the grade of the class in which it will be applied. Multiple-choice tests, which have a much greater potential for measuring gains, are also more reliable (Başol, 2016).

The first thing to do in the test plan is to determine exactly what the test targets and measures. In order to determine this, the target behaviors must be determined along with which units the test will cover (Sönmez, 2019). When determining the goals and behaviors of any course, it is necessary to consider a gradual division into three steps. This division is called Bloom's Taxonomy and includes affective, cognitive and psychomotor learning of goals and behaviors (Demirel, 1997).

A table of specifications was prepared during the preparation of the academic achievement test. The 40-question multiple-choice test, prepared in line with the above objectives that will cover the determined goals and behaviors, has been prepared in its first form. The prepared test was applied to 2 students before the application, and was presented to experts in the subject and some experienced teachers, and based on the feedback, some words were simplified and some words were removed from the test.

A preliminary application was made to 400 students to conduct item analysis to determine the suitability of the prepared test for measurement and evaluation features before the research. Item analyzes of the results were made. By looking at the difficulty and discrimination levels of the questions in the test, 15 questions with a discrimination level below 0.30 were removed from the test. As a result of item analysis, the 40-question achievement test was reduced to 25 questions. The items highlighted in bold in the table

below were removed from the test as a result of the analyzes carried out in the research. Item discrimination and item difficulty values are given below.

In line with the data in the table, the Cronbach Alpha value was found to be 0.78 at the end of the item analysis. If this value is above 0.70, it can be said that the test is reliable.

The difficulty level of a question item is the ratio of the number of correct answers to any question in the exam and the number of people taking the exam. This rate is an indicator of how correctly each item is answered.

As a result, the "Academic Achievement Test" prepared for the 6th Grade "Culture and Heritage Unit" unit consists of 25 questions in its final form. A 25-question test was applied to the Test and control groups as pre-test and post-test.

Social Studies Attitude Scale

In the study, the "Social Studies Course Attitude Scale" developed by Gömleksiz and Kan (2013) was used to measure students' attitudes towards the Social Studies course. (Appendix-3) KMO (.96) and Bartlett's test (8.990) values were calculated for the suitability of the items for factor analysis, and the chi-square value ($p = 0.000$) was found to be significant. As a result of the analysis, five different elements were revealed: liking ($\alpha=.87$), benefit ($\alpha=.88$), interest ($\alpha=.77$), desire ($\alpha=.76$) and trust ($\alpha=.74$). The total variance stated by this five-item scale is 55.95 percent. Additionally, the factor loadings of the items vary between 48 and 78. The scale consists of a total of 29 items, 14 of which measure positive and 15 negative attitudes, and as a result of the analysis, it was revealed that the attitude scale is a valid and safe tool that can be used to measure student attitudes towards the Social Studies course (Gömleksiz, Kan 2013).

Collection of Data and Analysis

Quasi-Test design with pretest-posttest control group, which is a quantitative research, was used in the analysis of the data. The achievement test created for this purpose was applied to the students as a pre-test and post-test in the "Culture and Heritage" unit of the 6th grade Social Studies course. Attitude scale was applied to the students in the "Culture and Heritage" unit of the 6th grade Social Studies course as a pre-test and post-test to measure their attitudes towards the Social Studies course. The results were analyzed with the SPSS program, and whether there was a significant difference between the Test and control groups of male and female students in terms of academic achievement was examined using the Independent Sample t Test and Mann-Whitney U Test.

Ethical Committee Approval

This study was prepared as a master's thesis on "The Effect of Flipped Classroom Model Application on Academic Achievements and Attitudes of Secondary School Sixth-Grade Students Towards Social Studies Courses " at Nevşehir Hacı Bektaş Veli University, Institute of Social Sciences, with the ethics committee decision numbered 2018.13.156.

Findings

Findings Regarding the Problem Comparing the Pre-Test and Post-Test Data of the Students in the Test and Control Groups

Is there a significant difference between academic achievement pretest and posttest scores in terms of the group variable? For your problem;

Pre-test results were analyzed to understand whether there was a significant difference between the Test and control student groups in terms of academic achievement levels in the Social Studies 6th grade Culture and Heritage unit and are given in the table below.

Table 1

Mann-Whitney U Test Results for Academic Achievement Pretest Scores of Test and Control Group Students

	N	SO	ST	U	P
Test	13	11,73	152,50	61,500	,366
Control	12	14,38	172,50		

According to the results of the Mann Whitney U test, which was conducted to reveal whether there is a significant difference between the achievement pre-test scores of the Test group where the flipped learning method was applied and the control group, the achievement pre-test scores of the Test group (Median = 11.73) and the achievement pre-test scores of the control group. No statistically significant difference was observed between (Median = 14.38). (U= 61.500 p>.05) According to this result, it is seen that there is no difference in success level between the groups.

Is there a significant difference between academic achievement posttest scores in terms of the group variable? For your problem;

Post-test results were analyzed to understand whether there was a significant difference between the Test and control student groups in terms of academic achievement levels in the Social Studies 6th grade Culture and Heritage unit and are given in the table below.

Table 2

Mann-Whitney U Test Results for Academic Achievement Post-Test Scores of Test and Control Group Students

	N	S. O.	S. T.	U	P
Test	13	15,77	205,00	42,000	,049
Control	12	10,00	120,00		

According to the results of the Mann Whitney U test, which was conducted to reveal whether there is a significant difference between the achievement post-test scores of the Test group where the flipped learning method was applied and the control group, the achievement post-test scores of the Test group (Median = 15.77) and the achievement post-test scores of the control group. A statistically significant difference was observed between (Median = 10.00). (U= 42.000 p<.05) According to this result, it is seen that there is a difference in the success level between the groups in favor of the Test group.

Findings for the Second Sub-Problem

Is there a significant difference between the pre-test and post-test scores of the Social Studies course attitude scale in terms of the group variable? For your problem;

In order to understand whether there was a significant difference between the Test and control groups in the Social Studies 6th grade Culture and Heritage unit in terms of their attitudes towards the Social Studies course, the pre-test results were analyzed and given in the table below.

Table 3

Mann-Whitney U Test Results Regarding the Social Studies Course Attitude Scale Pre-Test Scores of the Students in the Test and Control Group

	N	S. O.	S. T.	U	p
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Test	13	13,04	169,50	77,500	,978
Control	12	12,96	155,50		

According to the results of the Mann Whitney U test, which was conducted to reveal whether there is a significant difference between the total pre-test scores of the Test group where the flipped learning method was applied and the control group's Attitude Scale, the attitude scale of the Test group was compared to the total pre-test scores (Median = 13.04). No statistically significant difference was observed between the group attitude scale total pretest scores (Median = 12.96). (U= 77.500, $p>.05$) According to this result, it is seen that there is no difference between the groups at the total pre-test level of the Attitude Scale.

Is there a significant difference between the posttest scores of the Social Studies course attitude scale in terms of the group variable? For your problem;

In order to understand whether there was a significant difference between the Test and control groups in the Social Studies 6th grade Culture and Heritage unit in terms of their attitudes towards the Social Studies course, the post-test results were analyzed and given in the table below.

Table 4

Mann-Whitney U Test Results for Social Studies Course Attitude Scale Post-Test Scores of Students in the Test and Control Groups

	N	S. O.	S. T.	U	p
Test	13	14,27	185,50	61,500	,369
Control	12	11,63	139,50		

According to the results of the Mann Whitney U test, which was conducted to reveal whether there was a significant difference between the total post-test scores of the Test group in which the flipped learning method was applied and the control group Attitude Scale, the attitude scale of the Test group was compared with the total post-test scores (Median = 14.27) and the control group. No statistically significant difference was observed between the group attitude scale total posttest scores (Median=11.63) (U= 61.500, $p>.05$). According to this result, it is seen that there is no difference between the groups at the total post-test level of the Attitude Scale.

Findings for the Third Sub-Problem

Is there a significant difference between the pre-test and post-test scores among the sub-dimensions of the Social Studies course attitude scale in terms of the group variable? For your problem;

Pre-test and post-test results were analyzed to understand whether there was a significant difference between the Test and control groups in the sub-dimensions of the attitude scale towards the Social Studies course in the Social Studies 6th grade Culture and Heritage unit and are given in the table below.

Table 5

Results of the Answers Given by the Test and Control Group Students to the Social Studies Course Attitude Scale in terms of sub-factors

Faktörler		N	S. O.	S. T.	u	p
Liking Pretest	Test	13	13,12	170,50	76,500	,935
	Control	12	12,88	154,50		
		N	S. O.	S. T.	u	p
Liking Posttest	Test	13	14,81	192,50	54,500	,200
	Control	12	11,04	132,50		
		N	S. O.	S. T.	u	p
BenefitPretest	Test	13	13,19	171,50	75,500	,889
	Control	12	12,79	153,50		
		N	S. O.	S. T.	u	p
Benefit Posttest	Test	13	12,96	168,50	77,500	,977
	Control	12	13,04	156,50		
		N	S. O.	S. T.	u	p
Interest Pretest	Test	13	14,54	189,00	58,000	,264
	Control	12	11,33	136,00		
		N	S. O.	S. T.	u	p
Interest Posttest	Test	13	14,54	189,00	58,000	,267
	Control	12	11,33	136,00		
		N	S. O.	S. T.	u	p

		N	S. O.	S. T.	u	p
Request Pretest	Test	13	12,12	157,500	66,500	,526
	Control	12	13,96	167,500		
Request Posttest	Test	13	13,27	172,500	74,500	,847
	Control	12	12,71	152,500		
Trust Pretest	Test	13	12,42	161,50	70,500	,680
	Control	12	13,63	163,50		
Trust Posttest	Test	13	13,38	174,00	73,000	,784
	Control	12	12,58	151,00		

As seen in the table, according to the results of the Mann Whitney U test, which was conducted to reveal whether there is a significant difference between the pre-test and post-test scores of the Attitude Scale sub-dimensions of the Test group where the Flipped Learning method was applied and the control group, the attitude scale of the Test and control group students towards the Social Studies course There was no significant difference between the pre-test and post-test scores in the sub-dimensions. ($p>0.05$).

Results and Discussion

The results of this research, which was conducted to determine the effect of the Flipped Learning model for the "Culture and Heritage" unit of the Secondary School 6th Grade Social Studies Course, on students' attitudes towards the course and academic success, are explained below:

According to the findings obtained in the research, before the Test process for the students, a pre-test was first applied for academic achievement and analyzes were made with the independent samples t test and Mann and Whitney U test. Looking at the result scores in terms of gender variable and Test control group, no significant change or difference was found between them. This can be interpreted as the Test control groups and their prior knowledge in terms of gender variable are equivalent to each other in terms of academic success before the Test procedure.

The students' attitudes towards the Social Studies course were investigated and no significant difference was found in the pre-test and post-test results of the Social Studies course between male and female, Test and control groups. Güç (2017), who reached the same result as our research, did not find a significant difference between the students' attitudes towards the social studies course, and could not find a significant difference in the students' attitudes towards the course according to the Flipped Classroom model in his research on operations with rational numbers in the 7th grade mathematics course.

In his research, Perçin (2019) investigated the effect of students' academic achievements and attitudes towards technology and stated that at the end of the research, there was no statistically significant difference between the attitudes towards technology in both groups.

In addition, considering the attitude scale results of our research, there are studies in the literature that support the data obtained as a result of this study, as well as studies that do not support the data obtained as a result of this study and see a significant difference in their attitudes towards the course. Among the factors affecting these results: Considering the technological readiness levels of students and the results may differ in different classes and branches, it is natural that the results may yield different results in the literature.

Şahin (2020) researched the effect of flipped applications as a classroom model on the academic success and attitudes of 7th grade students in secondary school towards the Social Studies course and concluded that the FLIPPED CLASSROOM model has a positive effect on the academic level of the students and develops attitudes towards the course.

Özdemir (2019) investigated the effect of flipped classroom practices in flipped geometry teaching on the attitudes of prospective mathematics teachers towards geometry and revealed that the participating students developed positive attitudes towards the Flipped Classroom model. When the literature is examined, it does not coincide 100% with the results of our research. This situation is quite normal, but there are some factors that affect it. These; Students' predisposition and ownership of technology, students, teachers, parents and school administration may have perspectives on the FLIPPED CLASSROOM model, and the difference in these perspectives is reflected in the results of the research.

In terms of the results obtained by the Test group in the academic achievement posttest with the Flipped Classroom model, there is a significant difference between the control group that studied with the traditional classroom method. This difference was in favor of the Test group. It shows that the Flipped Classroom model has a positive impact on students' academic success.

When the literature was examined, Sağlam (2016), who reached the same conclusion as our study, concluded that flipped learning applied in English lessons increased the academic success of students.

Şerefli (2020) concluded that flipped learning in the field of Social Studies increased students' academic success compared to the traditional method. In terms of success, it has been observed that the students who take lessons with the Flipped Classroom application are more successful than the students who use traditional lesson teaching methods.

When the literature is examined, it is seen that there are many studies that support the results of this research. Boyraz (2014), in his research with the flipped classroom model he applied in English education, concluded that the academic achievement levels of the students increased more than the traditional education method to which the Flipped Classroom model was compared.

Söğüt (2019) examined the field of active citizenship with the Flipped Classroom model in the 5th Grade Social Studies course and its effect on the academic success of the students. It was concluded that the FLIPPED CLASSROOM model increased the academic success of the students according to the learning style prescribed by the National Education.

Another study supporting the FLIPPED CLASSROOM model was conducted by Uzun (2019), who examined the effect of the production, distribution and consumption unit application with the Flipped Classroom model in the 7th Grade Social Studies course on the academic success of the students, and as a result of the research, production, distribution and consumption with the Flipped Classroom model It has been determined that the teaching of the unit has a positive effect on the academic success of students.

Bursa (2019) examined the effect of Flipped Classroom applications on students' academic success and responsibility levels in the Social Studies course, and the result was observed to increase academic success in favor of the FLIPPED CLASSROOM model. Dursunlar (2018) investigated the effect of the Flipped Classroom applications model of the living democracy unit of the 7th Grade Social Studies course on the academic success of students. As a result; It has been revealed that the FLIPPED CLASSROOM model has positive results in terms of usefulness, efficiency and making the student more active in the lesson. Nayci (2017) examined the evaluation of the Flipped Classroom model application in Social Studies teaching and stated that the FLIPPED CLASSROOM model increased the readiness of students and at the same time, the model gave them time and space flexibility in terms of studying, reviewing or following lessons.

McLaughlin et al. (2014) in this research conducted on nursing students, they used Flipped Classroom applications in their courses. As a result of their research, they found that the applications increased students' academic success and students' interest in the course.

Mason, Shuman, Cook (2013) investigated the effectiveness of the Flipped Classroom model in engineering education in their study on engineering students and stated that the Flipped Classroom applications method increased student success and more content could be accessed during the course.

Wiginton (2013) conducted his research on 9th grade students for a mathematics course. In his research, he investigated the effect of using the Flipped Classroom model in mathematics lessons on course success. The research was conducted in three groups: traditional education area, flipped active learning area, and flipped mastery learning model. As a result of the research, a significant difference was found between students educated in the flipped model compared to students educated in the traditional environment. It has been observed that students who receive education with the Flipped Classroom model in mathematics lessons are more successful than other students.

As a result of the research conducted by Touchton (2015), Strayer (2012), and Stone (2012), we see that the Flipped Classroom model obtains results that support this study. See and Conry (2014) aimed to reveal a development program in their studies on clinical pharmacy practices. They carried out their studies in collaboration with 34 faculties. In their studies, 20 faculties stated that assignments, 23 faculties in-class workshops, and 28 faculties stated that flipped learning model and assignments and workshops positively affected academic success. Prefume (2015) concluded that the students participating in the research developed positive attitudes towards the course with the FLIPPED CLASSROOM model.

It can be said that the increase in students' academic success with the FLIPPED CLASSROOM model increases the success in the FLIPPED CLASSROOM model, where students need the teacher more, there is more student-teacher interaction during the process of doing homework, and high-level cognitive skills are realized during the process of doing homework and activities. It is thought that students being in touch with technology and having the opportunity to listen to the lesson at their own learning pace and in the time period they want, and having more teacher-student interaction, are another factor that increases success in the FLIPPED CLASSROOM model.

Ethical Committee Approval

This study was prepared as a master's thesis on " The Effect of Flipped Classroom Model Application on Academic Achievements and Attitudes of Secondary School Sixth-Grade Students Towards Social Studies Courses " at Nevşehir Hacı Bektaş Veli University, Institute of Social Sciences, with the ethics committee decision numbered 2018.13.156.

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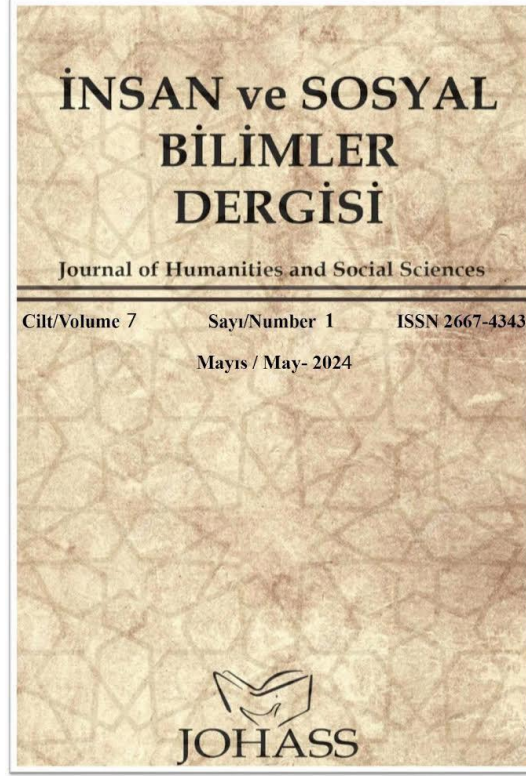
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JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)



<https://dergipark.org.tr/tr/pub/johass>

**Comparative Analysis of Higher Education Financing Policies Used by
OECD Member Countries and Financing Policy Proposal for Türkiye**

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Orcid ID: 0000-0002-1522-8775

Article Type: Research Article

Received: 12.05.2024

Accepted: 28.05.2024

Published online: 29.05.2024

Citation: Çetinkaya, R., & Çavdar, E. (2024). Comparative analysis of higher education financing policies used by OECD member countries and financing policy proposal for Türkiye. *Journal of Human and Social Sciences*, 7(1), 73-103.

Comparative Analysis of Higher Education Financing Policies Used by OECD Member Countries and Financing Policy Proposal for Türkiye

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Abstract

The Turkish higher education system has developed remarkably in parallel with the developments and changes in the world today. With the ease of access to higher education for students and the increase in the number of students, higher education costs are increasing. This situation puts the higher education system under financial pressure in countries that provide higher education financing from public sources. In this study, higher education financing methods used worldwide are compared and the most appropriate financing method for Türkiye is discussed. For this purpose, the Entropy method was used in weighting the criteria determined for the evaluation of financing policies, and the performance analysis of the alternatives was carried out with the TOPSIS method, which is one of the multi-criteria decision-making methods. Alternative decision options for financing higher education are based on "No Fee", "Pre-charging" and "Income-Contingent Loan-ICL" methods and the main criteria are enrollment, education expenditures and labor force. In this context, sub-criteria were created and the financing methods used by OECD countries were analyzed. Within the scope of the study, it has been determined that the financing methods used by Norway, the Netherlands and the United Kingdom in higher education systems are in the top three. In this context, it has been determined that the "Income-Contingent Loan" method used by the first and third ranked countries is the most preferred method in terms of performance.

Keywords: Higher education, financing, TOPSIS, ICL

Research Article

Received: 12.05.2024

Accepted: 28.05.2024

*Published online:
29.05.2024*

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Introduction

Education is seen as consumption in the sense that it provides immediate benefits on the one hand and investment in the sense that it determines the future production and earning capacity of the individual on the other (Gölpek, 2013, 43). The expansionary and diversification policies used by countries differentiate higher education, which is the highest level of education (Martin, 2016, 351).

Countries are faced with the issue of financing higher education in line with the increasing demand and costs of higher education and are looking for solutions to these problems. In general, the increase in demand leads to a rapid increase in the number of institutions and students, but developing countries do not have the means to meet these costs because they do not have enough resources. Therefore, there is a need for changes in education financing policies or models, especially in these countries.

As in economic activities, the costs incurred in providing education services reflect the relationship between the factors of production and the product. However, the concept of costs in educational services is quite different from the costs incurred in the production of general economic goods and services.

The value of resources consumed in the production of education is the cost of education. The cost of education consists of social and private (personal) costs (Xia et al. 2022, 1). The social cost of higher education is that countries invest more in higher education. Another social cost is the cost to society resulting from the fact that university graduates do not participate in the labor market during their studies (Özekicioğlu, 2013, 15). Apart from the tuition fees charged to higher education students, other financial and administrative costs increase in parallel with the increase in the number of higher education students (Jongbloed, 2004; Özekicioğlu, 2013). Private costs include the expenditures made by the individual in the process, starting before becoming a higher education student, and the costs after becoming a higher education student (Özekicioğlu, 2013, 15). The cost of education to society consists of public and private education expenditures and alternative/opportunity/avoidance costs.

Considering the costs of higher education, there have been major changes and developments in the provision of higher education before and after 1980. Higher education service, which is offered "free of charge" by many countries in consideration of social returns (YÖK, 2007, 57- 60), has been implemented in Türkiye under the name of tuition/tuition fee/student contribution in small amounts of 5-10% of the current costs in order for students to share the cost.

External shocks, such as policy decisions and demographic shifts, can affect government spending, as was the case during the 2008 financial crisis and the COVID-19 pandemic. Despite the potential benefits of budget cuts during these periods for productivity and economic vitality, they can affect the quality of publicly provided education, especially at times when the gains from investment in education, which are important for supporting economic development, come to the fore (OECD, 2023, 319). An increase in inflation significantly affects the costs and quality of higher education provision.

The increasing costs of higher education and who should bear these costs are among the most debated issues today. The reason for these debates stems from the social and personal returns generated by higher education. Countries have developed and implemented unique strategies to reduce the costs of higher education and the burden on public resources (Vossensteyn, 2000,56).

The issue of financing the provision of higher education services is complex and broad (Johnstone, 2009, 347). The policy of the state towards higher education varies in terms of the supply or financing of the service (Özekicioğlu, 2013,15). The methods used by states in financing higher education can be grouped under two main headings: "Public resources" and "Private Resources".

Two main situations are encountered in financing with public resources. The first one is the "Tax Financing Method", in which the costs are financed by the public sector through tax revenues, taking into account the social benefits generated by higher education services. The second method is the "Voucher Method" or the "Education Voucher" method. The voucher financing method is based on the principle that instead of transferring the taxes collected by society directly to higher education institutions for students and their families, funds are given directly to the people who benefit from the service (Aydın, 2014,31). It ensures that the resources allocated to each student are used at the initiative of students and parents through "school vouchers" or "education vouchers" (Özekicioğlu, 2013, 28). It is made within the framework of a protocol that includes the desired features of education and is based on the principle of leaving decision-making to the student.

In the case of financing with private resources, it is categorized under three main headings. The first one is "Tuition Fee Financing", which is applied as a mixed method. In this method, the state and higher education students share the costs incurred, but students pay a very small amount of the cost (Jongbloed, 2004; Özekicioğlu, 2013). The second method is the "Scholarship Financing Method". Scholarships are provided free of charge to students by both the public and private sectors and are widely used around the world (Akça, 2012, 100-

101). The third method is the "Financing by Borrowing Method". It aims to cover the costs incurred by the student receiving higher education services and is a method that has become more and more widespread especially in recent years. In general, higher education institutions either collect the costs from the recipient of the service as "Pre-charging" (Ergen, 2006, 137) or, with the "Income-Based Borrowing" method, collect higher education costs as a tax deduction in the form of a certain percentage of earnings if the individual reaches a certain income threshold in his/her earnings after graduation.

Between 2019 and 2020, most OECD countries experienced an increase in government spending, particularly on education. The increase in total government spending during the COVID-19 pandemic can be attributed to measures such as fiscal stimulus and health interventions. Investments in education, such as the development of distance learning infrastructure, contributed to the overall increase. Some countries, such as Brazil, Chile, Costa Rica, Hungary and Türkiye, experienced a 5% decrease in public spending on education between 2019 and 2020. Türkiye was the only country where total public spending decreased during this period (OECD, 2023, 320).

In this study, the higher education financing policies used by OECD member countries were investigated, and the TOPSIS methodology was used to analyze the higher education financing plans used in member countries and evaluate their performance. As a result of the data obtained in this study, recommendations were made to be used in the financing of Turkish higher education.

Student Loan Programs

The need for student borrowing programs stems from the rising costs of higher education. This cost often exceeds what students and their families can afford. Therefore, students need to borrow to cover tuition, living expenses and housing costs (Jiménez and Glater, 2020, 131).

In order to ensure access to higher education for low-income students, there is a need for a publicly supported student borrowing program. Borrowing can theoretically provide an important resource to support higher education.

It is assumed that countries have several options on how to finance higher education. The first is the use of public subsidies for higher education costs. The second option is to use some kind of charging policy to collect a certain portion of the cost of higher education from the student, such as contributions/fees etc., and to provide the remaining portion through public subsidies. However, it should be noted that not all higher education costs are covered

by public resources. When these assumptions are taken into account in the financing of higher education in countries, the main question addressed should be "What kind of state aid should be provided to prospective students who cannot pay" (Chapman and Ryan, 2002, 1). It becomes an important problem how the higher education pricing policy should be for high income and low income students in countries.

There are two types of borrowing in higher education. First, "Traditional mortgage type borrowing" is a borrowing program that allows individuals who receive higher education services to repay their loans after graduation within a predetermined fixed plan (Woodhall and Richards, 2008, 189). This type of borrowing is the first form of the higher education borrowing system and is offered to students by commercial banks or state banks and backed by the state. Repayments are predetermined on a fixed schedule (Chapman, 2014, 29). Repayments can start with a small amount and gradually increase, and the interest rate can be fixed or variable (Johnstone, 2005, 10). In addition, this type of borrowing covers both tuition fees and living expenses. The second one is "Income-Contingent Loan - ICL". In this method, the amount borrowed by individuals receiving higher education services for the cost of this service is based on their earnings after graduation. It is a borrowing program where repayments are made through the income tax system.

The importance of effective governance in ensuring the viability and successful implementation of ICLs has been emphasized by various scholars (Britton et al., 2019; Chapman, 2014; Woodhall, 2007; Shen and Ziderman, 2009; Chapman and Ryan, 2002; Johnstone 2009; Benjamin et al., 2019; Gölpek, 2013). Scholars argue that borrowing programs are not only a technical issue but also require efficient political strategies in addition to administrative procedures in restructuring the financing of higher education.

Two leading economists today, Bruce Chapman in Australia and Nicholas Barr in the UK, have been pivotal in convincing governments of the viability of income-based repayment plans for student loans. They are advocates of Income-Contingent Loans (ICL). Chapman's positive assessment of the Higher Education Contribution Scheme (HECS) in Australia was complemented by Barr's effective and efficient work in the UK. They have been influential in many countries, providing advisory services to the World Bank, various organizations and governments interested in adopting ICLs (Woodhall, 2007, 33-34).

Higher Education Loan Programs Used by Countries

United States of America

The higher education system used by the United States of America (USA) is among the best in the world (Tulip, 2007, 1). The amounts of higher education fees vary depending on the dynamics of supply and demand for higher education institutions (Dezhina & Nafikova, 2019, 24).

About 70% of college students in the United States take out loans to pay for their college education (Despard et al., 2016; Mbah et al., 2020; Mbah, 2021). While 43% of the income of public higher education institutions is covered by funds allocated from the national budget, 93% of the income of private for-profit higher education institutions is covered by fees charged to students. In order to cover the costs of higher education, students are offered two different borrowing programs: Federal and Private borrowing programs.

For the 2023-2024 academic year (annually), undergraduate students can borrow between \$5,500 and \$12,500 and graduate students can borrow \$20,500 (URL-1). As of 2023, 43 million higher education students in the United States owe over 1.6 trillion dollars. The government offers both a fixed-payment and an income-driven repayment plan, known as Income Driven Repayment (IDR), for borrowers to repay their debts. Repayments can be made at rates ranging from 10% to 15% of annual earnings with the income-driven repayment plan option or 10, 25, and 30 years with the fixed repayment plan option (Murto, 2024, 1-2).

Australia

The Higher Education Support Act was enacted in 2003 and formed the basis of the current system of higher education implementation policies used until today. Since 2005, it has been called HECS-HELP (Higher Education Contribution Scheme- Higher Education Loan Program) (Australian Government, 2024, 1).

The amount of borrowing offered to students by the Australian government varies according to the academic program they are enrolled in. As of 2023-2024, student borrowing ranges from A\$4,124 to A\$15,142 per year. If a graduate's income for 2023-2024 is below A\$51,550, there is no deduction from earnings unless they exceed the income threshold. If the graduate's annual earnings are above A\$51,550, a 1% deduction will be made to collect the repayment. If annual earnings are \$151,201 or more, a 10% tax deduction is applied (Australian Government, 2024, 1). The annual income threshold and upper payment threshold amounts are determined each year by the Australian Taxation Office (ATO) (ATO, 2024).

Germany

Student loans are regulated by the "Bundesausbildungsförderungsgesetz" (Federal Education Assistance Act) and are referred to as 'BAföG' loans. BAföG loans are means-tested, especially for borrowing for living expenses, and eligibility depends on parental income (Grave and Sinning, 2014, 112-113).

Financial support for living and care expenses is provided to students according to the Federal Education Assistance Act (BAföG). For the fall semester 2022 and onwards, if the student lives with his/her family, a total of 633 € is provided, including 511 € for basic needs, 94 € for health insurance and 28 € for care insurance. If he/she is far away from his/her family, a total of €934 is provided, including €812 for basic needs, €94 for health insurance and €28 for care insurance.

The repayment starts after the end of the maximum funding period of five years (BAföG, 2024, art. 17). For example, if students receive BAföG funding of €30,000 during their studies, approximately €20,000 is not repaid (URL-2). Here, half of the loan is in the form of a grant and the other half in the form of an interest-free state loan, and the loan part is the debt that must be repaid. In other words, the €15,000 part has to be paid by the borrower. However, since there is an upper limit of €10,010 on the repayment amount, €4,990 more is received. The amounts that the student can receive during the education period vary depending on the student and the family's asset income. As a result, only €10,010 must be repaid in a minimum of €130 and a maximum of 77 installments (BAföG, 2024, art. 17).

According to Article 18(a) of the Federal Education Assistance Act (BAföG), repayments can be made "income-dependent". Under this repayment option, the student is exempt from repayment if his/her monthly income is not more than €1,000. If the monthly income is €1,605, the payment starts at €42 and increases as the income increases.

United Kingdom

In 1989, the Student Loan Company (SLC) was established in the UK. Classified as a non-profit and state-run organization, it operates independently of the Ministry of Education and offers financial assistance to students in higher education in the form of scholarships and loans. Loans cover both living expenses and tuition costs (SLC, 2024a).

As of the 2023-2024 academic year, students can borrow between £4,221 and £13,348 for undergraduates and between £12,167 and £28,673 for postgraduates (SLC, 2024b).

Repayments are based on income and are implemented as "plans" with specified repayment thresholds and repayment amounts. The annual income thresholds for these plans

are as follows: "Plan1- £22,015, Plan2- £27,295, Plan4- £27,660, Plan5- £25,000, and the repayment threshold for graduate borrowing is £21,00 (SLC, 2024c). In this context, a certain percentage of the income generated is paid over the income threshold according to the type of borrowing. The income threshold for plans is different for each plan type.

Japan

The Japan Student Services Organization (JASSO) was established in 2004 as a core institution to comprehensively implement various student support services for higher education in Japan (JASSO, 2022, 2).

JASSO provides financial support to its citizens for students studying in all academic programs. Students in need of financial support are provided with interest-free loans, referred to as Category 1, and interest-bearing loans, referred to as Category 2.

Borrowing amounts offered to students in the 2022-2023 academic year (JASSO, 2022, 8-10);

-Category 1 has 48-month fixed payments ranging from ¥20,000 to ¥64,000, with repayments ranging from 120 to 216 months depending on the amount borrowed and the university.

-Category 2 pays a fixed amount of ¥20,000 to ¥120,000 for 48 months, with repayments ranging from 120 to 240 months. Repayment can be made on demand, either as a fixed plan or income-dependent.

Türkiye

The Higher Education Credit and Dormitory Institution (KYK) in Türkiye offers students access to financial assistance for living expenses. These funds, known as "tuition loans", are specifically designed for living expenses and do not cover tuition fees. The aim of this lending initiative is to provide financial support to students to help cover some of their living costs. Borrowing amounts are disbursed monthly to students throughout their academic program, and enrolling in a higher education institution is a prerequisite for accessing these loans.

The General Directorate of Credit and Dormitories has been providing student loans since 1962 in accordance with the Law No. 351 on Higher Education Credit and Dormitories Institution, contribution loans between 1985 and 2012 in accordance with the Higher Education Law No. 2547, and scholarships since 2004 in accordance with the Law No. 5102 on Granting Scholarships and Loans to Higher Education Students (KYK, 2024a).

In Article 46 of Law No. 2547, the heading "current service cost" covers all amounts charged to students, and the amounts charged to students for second (night) education and distance education are called "tuition fee" and the amounts charged to regular (first) education students are defined as "contribution fee". In line with the Decree of the Council of Ministers No. 2012/3584, the contribution loan offered by the Credit and Dormitories Institution exclusively to regular education students has been abolished as of the 2012-2013 academic year.

The borrowing amounts (monthly) offered to students in the 2023-2024 academic year are 2,000 TL for Bachelor's, 4,000 TL for Master's and 4,000 TL for PhD (KYK, 2024b). Repayments begin two years after graduation, with a fixed payment.

Method

In this study, Entropy method was used to calculate the criteria weights and TOPSIS method, one of the multi-criteria decision making methods, was used for the performance ranking of countries' financing policies. Brief information about the stages and processes for the application of these methods is given.

Entropy

The entropy method was developed by Rudolph in 1865 in the field of thermodynamics, followed by the concept of information entropy by Claude E. Shannon in 1948 (Zhang et al., 2011, 445). The entropy method, which is used to determine the importance of criteria, is a method in which the weights of the criteria in a multi-criteria decision problem (MCDM) are calculated by considering the data without creating a hierarchical structure in the decision problem. It is an objective evaluation method (Karaatlı, 2016, 66). It consists of five stages. These process steps are given below;

Phase 1: A decision Matrix $A_{ij} = [a_{ij}]$ is created, with rows representing alternatives and columns representing evaluation criteria.

Phase 2: In order to eliminate the effects of each index, which are different from each other in the created decision matrix, on the inequalities, the indexes are normalized using different techniques. The index created according to the benefit criteria is normalized using equation (1); $r_{ij} = a_{ij} / \max_{ij}$ ($i = 1 \dots m; j = 1 \dots n$). The index created according to the cost

criteria is normalized using equation (2); $r_{ij} = \min_{ij} / a_{ij}$ ($i=1 \dots m; j=1 \dots n$). The values after normalization are represented in the matrix $R = [r_{ij}]_{m \times n}$

Phase 3: The entropy value for each criterion is calculated by equation (3);

$$e_j = -k \sum_{i=1}^n r_{ij} \cdot \ln(r_{ij}), \quad (i=1 \dots m; j=1 \dots n).$$

In this step, \ln is the natural logarithm; $k=1/\ln(m)$ is a fixed number calculated from $0 \leq e_{ij} \leq 1$.

Phase 4: The degree of differentiation of knowledge is calculated by equation (4);

$$d_j = 1 - e_j, \quad (i=1 \dots m; j=1 \dots n).$$

Phase 5: Entropy criterion weights are calculated using equation (5);

$$W_j = \frac{d_j}{\sum_{i=1}^n d_j}, \quad \sum_{j=1}^n W_j = 1 \quad (J=1, \dots, n) \quad (5)$$

The obtained W_j shows the degree of utility of the criteria and it is concluded that the criterion with the maximum entropy value is the best decision option.

TOPSIS Method

TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) method (Agrawal et al., 1991; Cheng et al., 2003; Chen, 2000; Monjezi et al., 2012), which is the most widely used by researchers in multi-criteria decision making methods, was developed by Hwang and Yon (1981). This method allows the selection of the best alternative among alternative decision options by determining the decision option that is closest to the positive ideal solution and farthest from the negative ideal solution (Jee and Kang, 2000; Kim et al., 1997; Wang and Elhag 2005; Monjezi et al., 2012).

The stages used in the TOPSIS method are as follows;

Phase 1: A decision Matrix $A_{ij} = [a_{ij}]$ is created, with rows representing alternatives and columns representing evaluation criteria.

Phase 2: The decision matrix is normalized using equation (6);

$$r_{ij} = \frac{a_{ij}}{\sqrt{\sum_{k=1}^m a_{kj}^2}}, \quad (i=1 \dots m; j=1 \dots n) \quad R_{ij} = [r_{ij}].$$

Phase 3: At this phase, the values of the decision matrix are weighted according to the importance given to the criteria and a weighted decision matrix (V) is formed. The weight value is determined according to the importance given to the criterion ($\sum_{i=1}^n W_i = 1$). The column values of the normalized decision matrix are multiplied by W_i to obtain the V matrix. Equation (7);

$$V_{ij}=w_j.r_{ij} \quad , (i=1 \dots m; j=1 \dots n) V_{ij} = \begin{bmatrix} w_1r_{11} & w_2r_{12} & \dots & w_nr_{1n} \\ w_1r_{21} & w_2r_{22} & \dots & w_nr_{2n} \\ \cdot & \cdot & \dots & \cdot \\ \cdot & \cdot & \dots & \cdot \\ w_1r_{m1} & w_2r_{m2} & \dots & w_nr_{mn} \end{bmatrix}$$

Phase 4: At this phase, positive ideal (A^*) and negative ideal (A^-) solutions are created. The best performing values of the weighted normalized decision matrix represent the ideal solutions, while the worst performing values represent the negative ideal solutions.

The construction of an ideal solution set is shown in the following equation.

$A^* = \{ \max_i v_{ij} \mid j \in J \} . \{ \min_i v_{ij} \mid j \in J' \}$ data set to be obtained from the equations;

It is $A^* = \{ v_1^*, v_2^*, \dots, \dots, v_n^* \}$ (8)

The negative ideal solution is;

$A^- = \{ \min_i v_{ij} \mid j \in J \} . \{ \max_i v_{ij} \mid j \in J' \}$ data set to be obtained from the equations;

It is $A^- = \{ v_1^-, v_2^-, \dots, \dots, v_n^- \}$. (9)

Phase 5: Discrimination criteria are calculated using the Euclidean Distance Approach.

The distance of each decision option from the ideal solution;

$$S^* = \sqrt{\sum_{j=1}^n (v_{ij} - v_i^*)^2} \quad i=1 \dots m. \quad (10)$$

The distance of each decision option from the negative ideal solution;

$$S^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_i^-)^2} \quad i=1 \dots m. \quad (11)$$

Phase 6: Calculating the closeness of decision alternatives to the ideal solution is shown in the equation below.

$$C_i^* = \frac{S_i^-}{S_i^- + S_i^*} \quad i=1 \dots m. \quad (12)$$

This approach is the ratio of the negative discrimination measure included in the total discrimination measure calculated. According to the approach, the C_i^* value is in the range $0 \leq C_i^* \leq 1$, and $C_i^* = 1$ means that the decision alternative is at the positive ideal point, while $C_i^* = 0$ means that the decision alternative is at the negative ideal solution point.

In this study, the performance of the financing methods currently used by the member countries of the Organization for Economic Co-operation and Development (OECD) in their higher education systems was analyzed using Entropy and TOPSIS multi-criteria decision-making methods. As a result of the data obtained, suggestions were made for the use of the higher education financing method used by the countries with the highest performance in Türkiye.

Data and Data Limitations of the Research

The data set of this study consists of information on OECD countries and the criteria used. The higher education financing methods used by these countries between the years 2016-2020 and the criteria that are determined as important in the higher education system and indicating the success of the system were collected from the data published by the OECD and The World Bank Organization. The arithmetic average of the countries whose data could not be obtained in the relevant years was calculated according to the years for which data were available, and the average data for five years were tried to be obtained.

A total of 42 countries, including 38 OECD official members, 1 candidate country, 2 important partner countries and the Russian Federation, were included in this study. Argentina, a candidate country, is included in the study, while Bulgaria, Brazil, Croatia, Peru and Romania are excluded due to lack of data. China and South Africa are important partners of the OECD and both are included in the study.

Information on the financing practices currently used by OECD countries in the higher education system is presented in Table 1.

Table 1

Higher Education Financing Practices Used in OECD countries

Higher Education Financing Implementation	Countries
No Tuition Fee	Argentina, Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Netherlands, Slovakia, Slovenia, Spain, Switzerland, Türkiye, Lithuania, Luxembourg, Latvia, Costa Rica, Colombia, Poland, Romania, Estonia, Switzerland, Türkiye
Income-Contingent Borrowing	Australia, Chile, Israel, New Zealand, Norway, South Africa, Sweden, United Kingdom
Pre-charge	Canada, China, Japan, South Korea, Mexico, Portugal, Portugal, United States of America

Criteria Used in the Study

In order to select the method with the highest performance among the financing methods used by the countries, a total of 9 criteria, 3 main criteria, each consisting of 3 sub-criteria, published in the OECD and World Bank statistical databases, were determined.

In the study, the main criteria and sub-criteria for comparing the financing methods used by the countries were selected from the issues that are directly related to the higher

education financing policies used by the countries. In the analysis, the definitions of the sub-criteria are coded as "K". The main criteria and sub-criteria are coded as "Enrollment (K1,K2,K3)", "Education Expenditures (K4,K5,K6)" and "Employment (K7,K8,K9)". In the research, the cost criteria were selected as "K7" and "K8" and the other criteria were selected as benefit criteria. The main criteria and sub-criteria of the main criteria to be used in this research are presented in detail in Table 2.

Table 2

Main and Sub-criteria

Main Criteria	Sub-criteria	KOD U
Enrollment	Percentage of adults with tertiary education	K1
	Percentage of university-age population enrolled in higher education	K2
	University enrollments per capita	K3
Education Expenditures	Public expenditure per higher education student as a share of Gross Domestic Product (GDP) per capita	K4
	Total Expenditure on education as a percentage of GDP	K5
	Ratio of total education expenditures to public expenditures	K6
Employment	Total Unemployment rate	K7
	Ratio of unemployed university graduates to total population	K8
	Ratio of university graduates with a job to total population	K9

Findings

For the purpose of the study, Entropy method was used to find the weights of the criteria and TOPSIS method was used for performance analysis and the following findings were obtained.

Entropy Findings

Entropy Decision Matrix

Table 3

Country Data for The Criteria (Entropy Initial Decision Matrix (A Matrix))

	Countries	Years *	K1	K2	K3	K4	K5	K6	K7	K8	K9
			No Tuition Fee	Argentina	Avg	28.54	83.13	91.05	16.50	5.18	12.92
Austria	Avg	32.89		87.19	85.41	36.23	5.35	13.54	5.24	3.07	86.28
Belgium	Avg	40.30		98.13	78.65	32.26	6.42	12.25	6.36	3.36	85.82
Czech Republic	Avg	24.04		94.95	64.29	20.34	4.54	11.42	2.73	1.34	86.23

Income-Contingent Borrowing	Denmark	Avg	39.12	91.03	81.17	43.12	7.75	15.34	5.52	4.27	86.76
	Finland	Avg	45.38	95.98	89.59	33.93	6.49	11.98	7.85	4.52	85.61
	France	Avg	36.86	92.78	66.60	31.62	5.43	9.69	8.98	4.77	85.12
	Germany	Avg	29.42	92.30	70.92	33.58	4.90	11.06	3.64	2.08	88.77
	Greece	Avg	31.53	93.53	139.88	11.19	3.53	7.30	19.59	13.94	73.55
	Hungary	Avg	25.21	87.66	49.82	25.40	4.62	9.96	4.13	1.51	85.52
	Iceland	Avg	39.80	89.25	74.03	27.31	7.53	16.75	3.48	2.62	90.62
	Ireland	Avg	46.99	98.81	76.95	15.54	3.52	13.20	6.28	6.27	84.51
	Italy	Avg	19.10	92.60	63.30	24.32	4.03	8.29	10.52	5.85	80.70
	Netherlands	Avg	38.91	96.99	84.14	35.77	5.26	12.71	4.38	2.57	89.21
	Slovakia	Avg	24.44	88.43	46.55	27.60	3.94	9.40	7.36	3.42	82.51
	Slovenia	Avg	33.33	96.67	77.85	24.32	4.83	10.86	5.82	4.20	88.27
	Spain	Avg	37.52	89.94	89.59	21.81	4.20	10.07	16.35	9.27	80.85
	Switzerland	Avg	43.45	91.21	60.57	37.40	4.91	15.45	4.73	3.49	88.74
	Türkiye	Avg	20.53	80.01	114.13	35.28	4.29	12.41	11.87	9.88	74.54
	Lithuania	Avg	41.79	98.86	72.31	17.99	3.90	11.84	7.17	2.99	90.77
	Luxembourg	Avg	46.01	82.72	18.93	42.75	3.61	8.58	5.95	4.01	85.65
	Latvia	Avg	34.94	96.39	89.13	23.37	4.42	12.00	8.04	4.00	87.96
	Costa Rica	Avg	23.75	63.00	55.78	37.61	6.85	25.15	11.05	6.68	80.26
	Pre-charge	Colombia	Avg	23.31	54.86	55.55	20.91	4.49	14.34	10.33	10.15
Poland		Avg	30.89	95.70	68.16	25.41	4.60	11.16	4.27	2.11	88.50
Estonia		Avg	40.63	93.67	71.26	36.92	5.10	13.08	5.83	3.57	85.49
Australia		Avg	46.26	94.14	114.46	17.82	5.16	13.63	5.64	3.47	83.52
Chile		Avg	25.17	92.16	89.91	20.12	5.39	21.28	7.88	5.62	82.25
Israel		Avg	50.28	91.78	62.51	18.18	6.04	15.55	4.23	3.00	87.29
New Zealand		Avg	38.50	88.87	81.77	25.25	6.23	16.52	4.58	2.38	88.03
Norway		Avg	43.84	93.28	82.19	39.82	7.86	15.80	4.15	2.43	89.06
South Africa		Avg	15.27	80.35	22.73	47.40	6.31	18.96	27.64	11.40	77.43
Sweden		Avg	42.98	99.20	70.08	43.24	7.60	15.66	7.04	3.85	89.69
United Kingdom		Avg	46.77	93.15	61.39	37.99	5.36	13.52	4.22	2.38	85.93
Russia		Avg	55.50	91.94	83.38	19.82	4.37	12.93	5.14	3.10	82.44
Canada	Avg	58.04	82.99	70.29	31.44	5.26	12.21	6.86	4.87	81.90	
China	Avg	9.68	58.00	51.97	20.12	3.66	11.96	4.28	3.92	91.67	
Japan	Avg	51.64	94.50	63.83	20.60	3.12	9.95	2.70	2.10	84.95	
South Korea	Avg	48.83	96.93	95.67	15.02	4.37	14.86	3.76	3.33	77.39	
Mexico	Avg	17.98	64.04	40.75	29.65	4.55	17.36	3.70	4.10	79.10	
Portugal	Avg	25.46	98.51	65.19	26.90	5.34	10.93	8.04	5.54	87.30	
USA	Avg	4.57	89.97	88.29	19.42	4.99	13.38	4.97	2.55	82.03	

* In the years column, the average of the data obtained between 2016-2020 is calculated.

Source: Created with data obtained from OECD/Data and The World Bank databases

Entropy Normalized Matrix

Equations (1) and (2) were applied to matrix (A) and normalization was performed.

The (R) matrix was created with the calculated values.

Table 4

Normalized Matrix

	K1	K2	K3	K4	K5	K6	K7	K8	K9
Argentina	0.491643694	0.837949312	0.65091507	0.347995781	0.659351145	0.513511612	0.27784924	0.371930796	0.929209091
Austria	0.566712612	0.878909302	0.610612668	0.764345992	0.681085666	0.538362154	0.51507058	0.437142113	0.94128
Belgium	0.694383184	0.989188781	0.562231913	0.680590717	0.816369805	0.486931472	0.42479547	0.400119119	0.93624
Czech Republic	0.414266023	0.957158338	0.459590363	0.429113924	0.577184054	0.453896156	0.98973607	1	0.940647273
Denmark	0.673931771	0.917643205	0.5802831	0.909704641	0.986005089	0.609785811	0.48895328	0.314770997	0.946450909
Finland	0.78184011	0.967490739	0.640495425	0.715822785	0.825699746	0.476173508	0.34377387	0.297388225	0.933970909
France	0.635113715	0.935233487	0.476140263	0.667088608	0.690839695	0.385228325	0.30066815	0.281712584	0.928581818
Germany	0.506891799	0.930445301	0.506988133	0.708438819	0.623409669	0.439866662	0.74175824	0.647330892	0.968356364
Greece	0.543177119	0.942818981	1	0.236075949	0.449109415	0.290441807	0.13785357	0.096376209	0.802407273
Hungary	0.434321158	0.883621885	0.356144552	0.535864979	0.588100085	0.395930365	0.65375303	0.887216059	0.932901818
Iceland	0.685768436	0.899700108	0.529239348	0.576160338	0.957591179	0.66581588	0.77541643	0.513765678	0.98856
Ireland	0.809614059	0.996068647	0.550096511	0.327848101	0.448261238	0.525041995	0.43007327	0.214447601	0.921905455
Italy	0.329014473	0.933393816	0.452530741	0.513080169	0.513146735	0.329562202	0.25655644	0.22976162	0.880363636
Netherlands	0.670365265	0.977646733	0.601539415	0.75464135	0.669211196	0.505515294	0.61700183	0.523330996	0.973156364
Slovakia	0.421157822	0.891383786	0.332803117	0.582278481	0.501272265	0.373766997	0.36704731	0.392360706	0.900065455
Slovenia	0.574293591	0.974446209	0.556566343	0.513080169	0.614927905	0.431657368	0.464077	0.320179201	0.962967273
Spain	0.646381806	0.906605176	0.640495425	0.460126582	0.533927057	0.400323802	0.16517803	0.145000108	0.881978182
Switzerland	0.748656099	0.919432474	0.43299614	0.789029536	0.624681934	0.614301702	0.57106599	0.385096016	0.968116364
Turkey	0.353635424	0.806481691	0.815877895	0.744303797	0.545801527	0.493299955	0.22754087	0.136040095	0.813163636
Lit Türkiye huania	0.719986216	0.996522265	0.516960967	0.379535865	0.496183206	0.470949065	0.37677924	0.449184274	0.99024
Luxembourg	0.792660234	0.833799551	0.135348156	0.901898734	0.459287532	0.341067725	0.45362903	0.334845238	0.934385455
Latvia	0.60206754	0.971598498	0.637206892	0.493037975	0.562340967	0.477242139	0.33598805	0.335748913	0.959607273
Costa Rica	0.409269469	0.635064641	0.398788247	0.793459916	0.871755725	1	0.24425547	0.201197963	0.875607273
Colombia	0.401585114	0.553035458	0.397126108	0.441068917	0.570610687	0.570267273	0.26127347	0.132439625	0.879469091
Poland	0.5321847	0.96469343	0.487239062	0.536075949	0.584817642	0.443554883	0.63261481	0.635993562	0.965432727
Estonia	0.699965541	0.944230236	0.509400915	0.778902954	0.648430874	0.520224043	0.46328071	0.376147816	0.932618182
Australia	0.797036527	0.948917618	0.818290678	0.375949367	0.656912638	0.541910542	0.47838412	0.387070754	0.911083636
Chile	0.433666437	0.929008846	0.642747355	0.424367089	0.686174724	0.846198211	0.34263959	0.239159843	0.897272727
Israel	0.866264645	0.925203498	0.446883043	0.383544304	0.768447837	0.61839946	0.63829787	0.448464619	0.952254545
New Zealand	0.663301172	0.89586956	0.584572491	0.532700422	0.793044953	0.656813739	0.58900524	0.565393031	0.960349091
Norway	0.755375603	0.940273683	0.587592937	0.840084388	1	0.628279904	0.65060241	0.552330839	0.971585455
South Africa	0.2630255	0.809959426	0.162514298	1	0.802290076	0.753811435	0.09769865	0.117888604	0.844647273
Sweden	0.740558236	1	0.500965113	0.912236287	0.967345208	0.622549559	0.38363171	0.34884204	0.978414545
United Kingdom	0.805892488	0.938988433	0.43887618	0.801476793	0.681933842	0.537487414	0.63981043	0.56553582	0.937374545
Russia	0.956179646	0.92681636	0.596064484	0.41814346	0.555979644	0.51412711	0.52508751	0.433699161	0.899309091
Canada	1	0.836521257	0.502502145	0.663291139	0.669211196	0.4854802	0.39370079	0.27605194	0.893454545
China	0.16678153	0.584662685	0.37154704	0.424367089	0.466072943	0.475481008	0.63035019	0.343105209	1
Japan	0.889688146	0.952630562	0.456295873	0.434599156	0.39639525	0.395620638	1	0.638820872	0.926770909
South Korea	0.841247416	0.977092311	0.683925508	0.316877637	0.555555556	0.5908465	0.71808511	0.404041619	0.844298182
Mexico	0.309820813	0.645548247	0.291321132	0.625527426	0.579304495	0.690440565	0.73012439	0.327963288	0.862930909
Portugal	0.43869745	0.992994128	0.466060194	0.567510549	0.679389313	0.434735208	0.33598805	0.242387069	0.952363636
USA	0.819641626	0.906882387	0.631183872	0.409704641	0.634435963	0.532132952	0.54325956	0.527564002	0.894894545

Entropy Values

After the normalized decision matrix (R) was created, entropy weight values " e_j " were calculated according to equation (3) and degrees of differentiation " d_j " were obtained

according to equation (4). Entropy criteria weights were calculated according to equation (5) and " W_j " values were found. The data obtained are presented in Table 5.

Table 5

Entropy Matrix

	K1	K2	K3	K4	K5	K6	K7	K8	K9
Argentina	-0.07528	-0.08468	-0.10409	-0.06003	-0.08971	-0.08748	-0.05893	-0.08557	-0.08935
Austria	-0.08366	-0.08770	-0.09942	-0.10752	-0.09186	-0.09056	-0.09351	-0.09629	-0.09020
Belgium	-0.09706	-0.09560	-0.09365	-0.09894	-0.10470	-0.08413	-0.08117	-0.09028	-0.08984
Czech Republic	-0.06617	-0.09334	-0.08076	-0.07039	-0.08133	-0.07986	-0.14771	-0.17005	-0.09015
Denmark	-0.09498	-0.09052	-0.09583	-0.12156	-0.11966	-0.09914	-0.09003	-0.07561	-0.09056
Finland	-0.10571	-0.09408	-0.10290	-0.10259	-0.10556	-0.08275	-0.06929	-0.07246	-0.08968
France	-0.09097	-0.09178	-0.08291	-0.09751	-0.09281	-0.07064	-0.06260	-0.06956	-0.08930
Germany	-0.07702	-0.09144	-0.08683	-0.10183	-0.08609	-0.07802	-0.12129	-0.12716	-0.09208
Greece	-0.08108	-0.09232	-0.14042	-0.04443	-0.06740	-0.05698	-0.03402	-0.03007	-0.08019
Hungary	-0.06858	-0.08805	-0.06671	-0.08308	-0.08247	-0.07211	-0.11098	-0.15731	-0.08961
Iceland	-0.09619	-0.08922	-0.08961	-0.08764	-0.11724	-0.10559	-0.12509	-0.10813	-0.09348
Ireland	-0.10837	-0.09608	-0.09218	-0.05735	-0.06730	-0.08892	-0.08192	-0.05650	-0.08883
Italy	-0.05548	-0.09165	-0.07984	-0.08045	-0.07451	-0.06276	-0.05543	-0.05958	-0.08588
Netherlands	-0.09462	-0.09479	-0.09835	-0.10655	-0.09069	-0.08648	-0.10651	-0.10956	-0.09242
Slovakia	-0.06701	-0.08861	-0.06336	-0.08832	-0.07322	-0.06905	-0.07279	-0.08900	-0.08728
Slovenia	-0.08449	-0.09457	-0.09296	-0.08045	-0.08523	-0.07693	-0.08665	-0.07658	-0.09171
Spain	-0.09214	-0.08972	-0.10290	-0.07418	-0.07676	-0.07271	-0.03928	-0.04165	-0.08599
Switzerland	-0.10247	-0.09065	-0.07726	-0.10998	-0.08622	-0.09967	-0.10077	-0.08779	-0.09207
Türkiye	-0.05865	-0.08232	-0.12211	-0.10550	-0.07802	-0.08494	-0.05051	-0.03960	-0.08098
Lithuania	-0.09963	-0.09612	-0.08808	-0.06414	-0.07266	-0.08208	-0.07424	-0.09820	-0.09359
Luxembourg	-0.10675	-0.08437	-0.03130	-0.12083	-0.06855	-0.06443	-0.08521	-0.07917	-0.08971
Latvia	-0.08748	-0.09437	-0.10252	-0.07810	-0.07978	-0.08289	-0.06810	-0.07933	-0.09148
Costa Rica	-0.06557	-0.06885	-0.07265	-0.11042	-0.10972	-0.14017	-0.05336	-0.05379	-0.08553
Colombia	-0.06463	-0.06199	-0.07242	-0.07186	-0.08064	-0.09444	-0.05621	-0.03877	-0.08581
Poland	-0.07986	-0.09388	-0.08433	-0.08311	-0.08213	-0.07851	-0.10842	-0.12562	-0.09188
Estonia	-0.09763	-0.09242	-0.08713	-0.10897	-0.08862	-0.08832	-0.08654	-0.08628	-0.08959
Australia	-0.10717	-0.09276	-0.12236	-0.06368	-0.08946	-0.09100	-0.08860	-0.08812	-0.08807
Chile	-0.06851	-0.09134	-0.10316	-0.06980	-0.09236	-0.12501	-0.06912	-0.06143	-0.08709
Israel	-0.11369	-0.09106	-0.07910	-0.06466	-0.10025	-0.10014	-0.10911	-0.09809	-0.09096
New Zealand	-0.09389	-0.08894	-0.09634	-0.08272	-0.10255	-0.10457	-0.10303	-0.11571	-0.09153
Norway	-0.10313	-0.09214	-0.09670	-0.11496	-0.12085	-0.10129	-0.11060	-0.11382	-0.09231
South Africa	-0.04663	-0.08258	-0.03623	-0.12979	-0.10341	-0.11531	-0.02577	-0.03534	-0.08329
Sweden	-0.10168	-0.09636	-0.08607	-0.12179	-0.11807	-0.10063	-0.07524	-0.08162	-0.09278
United Kingdom	-0.10801	-0.09205	-0.07804	-0.11120	-0.09194	-0.09045	-0.10930	-0.11573	-0.08992
Russia	-0.12184	-0.09118	-0.09771	-0.06903	-0.07910	-0.08756	-0.09483	-0.09574	-0.08723
Canada	-0.12569	-0.08457	-0.08627	-0.09711	-0.09069	-0.08394	-0.07671	-0.06851	-0.08681

China	-0.03250	-0.06467	-0.06888	-0.06980	-0.06931	-0.08266	-0.10815	-0.08062	-0.09426
Japan	-0.11585	-0.09302	-0.08033	-0.07107	-0.06129	-0.07207	-0.14873	-0.12600	-0.08918
South Korea	-0.11136	-0.09475	-0.10784	-0.05587	-0.07906	-0.09690	-0.11857	-0.09093	-0.08327
Mexico	-0.05297	-0.06971	-0.05722	-0.09307	-0.08155	-0.10836	-0.11996	-0.07796	-0.08462
Portugal	-0.06910	-0.09587	-0.08160	-0.08667	-0.09169	-0.07734	-0.06810	-0.06206	-0.09097
USA	-0.10932	-0.08974	-0.10182	-0.06797	-0.08721	-0.08980	-0.09720	-0.11019	-0.08692
Criteria weights									
e_j	0.9853248	0.9979101	0.9872961	0.9858883	0.9930427	0.9916845	0.974834	0.9700579	0.9996582
d_j	0.01468	0.00209	0.0127	0.01411	0.00696	0.00832	0.02517	0.02994	0.00034
w_j	0.12839	0.01828	0.11114	0.12346	0.06087	0.07275	0.22017	0.26195	0.00299

The findings obtained as a result of calculating the weights of the sub-criteria are as follows; "Unemployment rate of university graduates" ranks first with an entropy value of 0.262. criterion (K8) with an entropy value of 0.220, "Percentage of the total unemployed labor force" criterion (K7) with an entropy value of 0.220, and "Percentage of adults with a higher education degree" criterion (K1) with an entropy value of 0.128 in third place.

Topsis Findings

The TOPSIS method was used to compare the financing methods by considering the criteria weights.

Normalized Decision Matrix

All elements of the initial matrix (A) are normalized to the values obtained by applying equation (6) and the matrix (R) is obtained.

Table 6

Topsis Normalized Decision Matrix

	K1	K2	K3	K4	K5	K6	K7	K8	K9
Argentina	0.11724	0.14320	0.18351	0.08683	0.15197	0.14600	0.17492	0.10661	0.15495
Austria	0.13515	0.15019	0.17215	0.19072	0.15698	0.15307	0.09436	0.09071	0.15696
Belgium	0.16559	0.16904	0.15851	0.16982	0.18816	0.13844	0.11441	0.09910	0.15612
Czech Republic	0.09879	0.16357	0.12957	0.10707	0.13303	0.12905	0.04911	0.03965	0.15686
Denmark	0.16071	0.15681	0.16360	0.22699	0.22726	0.17337	0.09940	0.12597	0.15783
Finland	0.18645	0.16533	0.18057	0.17861	0.19031	0.13539	0.14138	0.13334	0.15575
France	0.15146	0.15982	0.13424	0.16645	0.15923	0.10953	0.16165	0.14076	0.15485
Germany	0.12088	0.15900	0.14293	0.17677	0.14368	0.12506	0.06552	0.06126	0.16148
Greece	0.12953	0.16112	0.28192	0.05891	0.10351	0.08258	0.35257	0.41144	0.13381
Hungary	0.10357	0.15100	0.10041	0.13371	0.13555	0.11257	0.07434	0.04469	0.15557

Iceland	0.16354	0.15375	0.14921	0.14376	0.22071	0.18931	0.06268	0.07718	0.16485
Ireland	0.19307	0.17022	0.15509	0.08180	0.10332	0.14928	0.11301	0.18491	0.15373
Italy	0.07846	0.15951	0.12758	0.12802	0.11827	0.09370	0.18944	0.17258	0.14681
Netherlands	0.15986	0.16707	0.16959	0.18830	0.15424	0.14373	0.07877	0.07577	0.16228
Slovakia	0.10043	0.15233	0.09383	0.14529	0.11553	0.10627	0.13241	0.10106	0.15009
Slovenia	0.13695	0.16652	0.15691	0.12802	0.14173	0.12273	0.10473	0.12384	0.16058
Spain	0.15414	0.15493	0.18057	0.11481	0.12306	0.11382	0.29424	0.27347	0.14708
Switzerland	0.17853	0.15712	0.12207	0.19688	0.14398	0.17466	0.08511	0.10297	0.16144
Türkiye	0.08433	0.13782	0.23002	0.18572	0.12580	0.14026	0.21360	0.29148	0.13560
Lithuania	0.17170	0.17029	0.14574	0.09470	0.11436	0.13390	0.12899	0.08828	0.16513
Luxembourg	0.18903	0.14249	0.03816	0.22504	0.10586	0.09697	0.10714	0.11842	0.15581
Latvia	0.14358	0.16603	0.17964	0.12302	0.12961	0.13569	0.14465	0.11810	0.16002
Costa Rica	0.09760	0.10852	0.11243	0.19798	0.20092	0.28432	0.19898	0.19708	0.14601
Colombia	0.09577	0.09451	0.11196	0.11005	0.13152	0.16214	0.18602	0.29940	0.14666
Poland	0.12691	0.16485	0.13736	0.13376	0.13479	0.12611	0.07683	0.06235	0.16099
Estonia	0.16692	0.16136	0.14361	0.19435	0.14945	0.14791	0.10491	0.10542	0.15552
Australia	0.19007	0.16216	0.23070	0.09381	0.15141	0.15408	0.10160	0.10244	0.15193
Chile	0.10342	0.15876	0.18121	0.10589	0.15815	0.24059	0.14185	0.16580	0.14963
Israel	0.20658	0.15811	0.12599	0.09570	0.17711	0.17582	0.07614	0.08842	0.15879
New Zealand	0.15818	0.15309	0.16481	0.13292	0.18278	0.18675	0.08252	0.07013	0.16014
Norway	0.18014	0.16068	0.16566	0.20962	0.23048	0.17863	0.07470	0.07179	0.16202
South Africa	0.06272	0.13841	0.04582	0.24952	0.18491	0.21432	0.49747	0.33636	0.14085
Sweden	0.17660	0.17089	0.14123	0.22762	0.22296	0.17700	0.12669	0.11367	0.16316
United Kingdom	0.19218	0.16046	0.12373	0.19998	0.15717	0.15282	0.07596	0.07012	0.15631
Russia	0.22802	0.15838	0.16805	0.10433	0.12814	0.14618	0.09256	0.09143	0.14997
Canada	0.23847	0.14295	0.14167	0.16550	0.15424	0.13803	0.12345	0.14364	0.14899
China	0.03977	0.09991	0.10475	0.10589	0.10742	0.13519	0.07710	0.11557	0.16676
Japan	0.21217	0.16279	0.12864	0.10844	0.09136	0.11248	0.04860	0.06207	0.15454
South Korea	0.20061	0.16697	0.19282	0.07907	0.12805	0.16799	0.06768	0.09814	0.14079
Mexico	0.07388	0.11032	0.08213	0.15608	0.13352	0.19631	0.06657	0.12091	0.14390
Portugal	0.10462	0.16969	0.13139	0.14160	0.15659	0.12360	0.14465	0.16359	0.15881
USA	0.19546	0.15498	0.17795	0.10223	0.14623	0.15130	0.08946	0.07516	0.14923

Weighted Normalized Decision Matrix

The weights of the criteria and the values of the alternatives obtained by the entropy method were calculated according to equation (7) and the normalized decision matrix was obtained.

Table 7

Topsis Weighted Decision Matrix

	K1	K2	K3	K4	K5	K6	K7	K8	K9
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Argentina	0.01505	0.00262	0.02040	0.01072	0.00925	0.01062	0.03851	0.02793	0.00046
Austria	0.01735	0.00275	0.01913	0.02355	0.00955	0.01114	0.02078	0.02376	0.00047
Belgium	0.02126	0.00309	0.01762	0.02097	0.01145	0.01007	0.02519	0.02596	0.00047
Czech Republic	0.01268	0.00299	0.01440	0.01322	0.00810	0.00939	0.01081	0.01039	0.00047
Denmark	0.02063	0.00287	0.01818	0.02802	0.01383	0.01261	0.02189	0.03300	0.00047
Finland	0.02394	0.00302	0.02007	0.02205	0.01158	0.00985	0.03113	0.03493	0.00047
France	0.01945	0.00292	0.01492	0.02055	0.00969	0.00797	0.03559	0.03687	0.00046
Germany	0.01552	0.00291	0.01589	0.02182	0.00875	0.00910	0.01443	0.01605	0.00048
Greece	0.01663	0.00295	0.03133	0.00727	0.00630	0.00601	0.07762	0.10778	0.00040
Hungary	0.01330	0.00276	0.01116	0.01651	0.00825	0.00819	0.01637	0.01171	0.00047
Iceland	0.02100	0.00281	0.01658	0.01775	0.01343	0.01377	0.01380	0.02022	0.00049
Ireland	0.02479	0.00311	0.01724	0.01010	0.00629	0.01086	0.02488	0.04844	0.00046
Italy	0.01007	0.00292	0.01418	0.01581	0.00720	0.00682	0.04171	0.04521	0.00044
Netherlands	0.02052	0.00305	0.01885	0.02325	0.00939	0.01046	0.01734	0.01985	0.00049
Slovakia	0.01289	0.00279	0.01043	0.01794	0.00703	0.00773	0.02915	0.02647	0.00045
Slovenia	0.01758	0.00304	0.01744	0.01581	0.00863	0.00893	0.02306	0.03244	0.00048
Spain	0.01979	0.00283	0.02007	0.01417	0.00749	0.00828	0.06478	0.07163	0.00044
Switzerland	0.02292	0.00287	0.01357	0.02431	0.00876	0.01271	0.01874	0.02697	0.00048
Türkiye	0.01083	0.00252	0.02556	0.02293	0.00766	0.01020	0.04703	0.07635	0.00041
Lithuania	0.02204	0.00311	0.01620	0.01169	0.00696	0.00974	0.02840	0.02312	0.00049
Luxembourg	0.02427	0.00261	0.00424	0.02778	0.00644	0.00705	0.02359	0.03102	0.00047
Latvia	0.01843	0.00304	0.01997	0.01519	0.00789	0.00987	0.03185	0.03094	0.00048
Costa Rica	0.01253	0.00198	0.01250	0.02444	0.01223	0.02068	0.04381	0.05163	0.00044
Colombia	0.01230	0.00173	0.01244	0.01359	0.00800	0.01180	0.04096	0.07843	0.00044
Poland	0.01629	0.00301	0.01527	0.01651	0.00820	0.00917	0.01692	0.01633	0.00048
Estonia	0.02143	0.00295	0.01596	0.02399	0.00910	0.01076	0.02310	0.02761	0.00047
Australia	0.02440	0.00296	0.02564	0.01158	0.00922	0.01121	0.02237	0.02684	0.00045
Chile	0.01328	0.00290	0.02014	0.01307	0.00963	0.01750	0.03123	0.04343	0.00045
Israel	0.02652	0.00289	0.01400	0.01182	0.01078	0.01279	0.01676	0.02316	0.00047
New Zealand	0.02031	0.00280	0.01832	0.01641	0.01113	0.01359	0.01817	0.01837	0.00048
Norway	0.02313	0.00294	0.01841	0.02588	0.01403	0.01300	0.01645	0.01881	0.00048
South Africa	0.00805	0.00253	0.00509	0.03081	0.01125	0.01559	0.10953	0.08811	0.00042
Sweden	0.02267	0.00312	0.01570	0.02810	0.01357	0.01288	0.02789	0.02978	0.00049
United Kingdom	0.02467	0.00293	0.01375	0.02469	0.00957	0.01112	0.01672	0.01837	0.00047
Russia	0.02928	0.00290	0.01868	0.01288	0.00780	0.01063	0.02038	0.02395	0.00045
Canada	0.03062	0.00261	0.01575	0.02043	0.00939	0.01004	0.02718	0.03763	0.00045
China	0.00511	0.00183	0.01164	0.01307	0.00654	0.00983	0.01698	0.03027	0.00050
Japan	0.02724	0.00298	0.01430	0.01339	0.00556	0.00818	0.01070	0.01626	0.00046
South Korea	0.02576	0.00305	0.02143	0.00976	0.00779	0.01222	0.01490	0.02571	0.00042
Mexico	0.00949	0.00202	0.00913	0.01927	0.00813	0.01428	0.01466	0.03167	0.00043
Portugal	0.01343	0.00310	0.01460	0.01748	0.00953	0.00899	0.03185	0.04285	0.00047
USA	0.02510	0.00283	0.01978	0.01262	0.00890	0.01101	0.01970	0.01969	0.00045

Solution Sets

Equation (8) was applied to the normalized decision matrix to find the positive ideal A^+ and Equation (9) was applied to calculate the negative ideal A^- solution set.

Table 8

Positive and Negative Ideal Solution Sets

	K1	K2	K3	K4	K5	K6	K7	K8	K9
Argentina	0.01505	0.00262	0.02040	0.01072	0.00925	0.01062	0.03851	0.02793	0.00046
Austria	0.01735	0.00275	0.01913	0.02355	0.00955	0.01114	0.02078	0.02376	0.00047
Belgium	0.02126	0.00309	0.01762	0.02097	0.01145	0.01007	0.02519	0.02596	0.00047
Czech Republic	0.01268	0.00299	0.01440	0.01322	0.00810	0.00939	0.01081	0.01039	0.00047
Denmark	0.02063	0.00287	0.01818	0.02802	0.01383	0.01261	0.02189	0.03300	0.00047
Finland	0.02394	0.00302	0.02007	0.02205	0.01158	0.00985	0.03113	0.03493	0.00047
France	0.01945	0.00292	0.01492	0.02055	0.00969	0.00797	0.03559	0.03687	0.00046
Germany	0.01552	0.00291	0.01589	0.02182	0.00875	0.00910	0.01443	0.01605	0.00048
Greece	0.01663	0.00295	0.03133	0.00727	0.00630	0.00601	0.07762	0.10778	0.00040
Hungary	0.01330	0.00276	0.01116	0.01651	0.00825	0.00819	0.01637	0.01171	0.00047
Iceland	0.02100	0.00281	0.01658	0.01775	0.01343	0.01377	0.01380	0.02022	0.00049
Ireland	0.02479	0.00311	0.01724	0.01010	0.00629	0.01086	0.02488	0.04844	0.00046
Italy	0.01007	0.00292	0.01418	0.01581	0.00720	0.00682	0.04171	0.04521	0.00044
Netherlands	0.02052	0.00305	0.01885	0.02325	0.00939	0.01046	0.01734	0.01985	0.00049
Slovakia	0.01289	0.00279	0.01043	0.01794	0.00703	0.00773	0.02915	0.02647	0.00045
Slovenia	0.01758	0.00304	0.01744	0.01581	0.00863	0.00893	0.02306	0.03244	0.00048
Spain	0.01979	0.00283	0.02007	0.01417	0.00749	0.00828	0.06478	0.07163	0.00044
Switzerland	0.02292	0.00287	0.01357	0.02431	0.00876	0.01271	0.01874	0.02697	0.00048
Türkiye	0.01083	0.00252	0.02556	0.02293	0.00766	0.01020	0.04703	0.07635	0.00041
Lithuania	0.02204	0.00311	0.01620	0.01169	0.00696	0.00974	0.02840	0.02312	0.00049
Luxembourg	0.02427	0.00261	0.00424	0.02778	0.00644	0.00705	0.02359	0.03102	0.00047
Latvia	0.01843	0.00304	0.01997	0.01519	0.00789	0.00987	0.03185	0.03094	0.00048
Costa Rica	0.01253	0.00198	0.01250	0.02444	0.01223	0.02068	0.04381	0.05163	0.00044
Colombia	0.01230	0.00173	0.01244	0.01359	0.00800	0.01180	0.04096	0.07843	0.00044
Poland	0.01629	0.00301	0.01527	0.01651	0.00820	0.00917	0.01692	0.01633	0.00048
Estonia	0.02143	0.00295	0.01596	0.02399	0.00910	0.01076	0.02310	0.02761	0.00047
Australia	0.02440	0.00296	0.02564	0.01158	0.00922	0.01121	0.02237	0.02684	0.00045
Chile	0.01328	0.00290	0.02014	0.01307	0.00963	0.01750	0.03123	0.04343	0.00045
Israel	0.02652	0.00289	0.01400	0.01182	0.01078	0.01279	0.01676	0.02316	0.00047
New Zealand	0.02031	0.00280	0.01832	0.01641	0.01113	0.01359	0.01817	0.01837	0.00048
Norway	0.02313	0.00294	0.01841	0.02588	0.01403	0.01300	0.01645	0.01881	0.00048
South Africa	0.00805	0.00253	0.00509	0.03081	0.01125	0.01559	0.10953	0.08811	0.00042
Sweden	0.02267	0.00312	0.01570	0.02810	0.01357	0.01288	0.02789	0.02978	0.00049
United Kingdom	0.02467	0.00293	0.01375	0.02469	0.00957	0.01112	0.01672	0.01837	0.00047
Russia	0.02928	0.00290	0.01868	0.01288	0.00780	0.01063	0.02038	0.02395	0.00045
Canada	0.03062	0.00261	0.01575	0.02043	0.00939	0.01004	0.02718	0.03763	0.00045

China	0.00511	0.00183	0.01164	0.01307	0.00654	0.00983	0.01698	0.03027	0.00050
Japan	0.02724	0.00298	0.01430	0.01339	0.00556	0.00818	0.01070	0.01626	0.00046
South Korea	0.02576	0.00305	0.02143	0.00976	0.00779	0.01222	0.01490	0.02571	0.00042
Mexico	0.00949	0.00202	0.00913	0.01927	0.00813	0.01428	0.01466	0.03167	0.00043
Portugal	0.01343	0.00310	0.01460	0.01748	0.00953	0.00899	0.03185	0.04285	0.00047
USA	0.02510	0.00283	0.01978	0.01262	0.00890	0.01101	0.01970	0.01969	0.00045
MaxA*	0.03062	0.00312	0.03133	0.03081	0.01403	0.02068	0.01070	0.01039	0.00050
MaxA ⁻	0.00511	0.00173	0.00424	0.00727	0.00556	0.00601	0.10953	0.10778	0.00040

Calculation of Discrimination Criteria

The separation criteria were calculated by applying Equation (10) and Equation (11) to the obtained Positive and Negative ideal solution sets. The distances of alternative decision options from ideal solutions; Positive ideal S_i^* and Negative ideal S_i^- distances are calculated and presented in the table.

Table 9

Closeness to The Ideal Solution

	(S_i^*)	(S_i^-)
Argentina	0.0443940522	0.1087499260
Austria	0.0277353592	0.1249618450
Belgium	0.0307286124	0.1203631580
Czech Republic	0.0328696678	0.1394458267
Denmark	0.0313366919	0.1193837642
Finland	0.0372962802	0.1110402545
France	0.0447308180	0.1049414366
Germany	0.0274833144	0.1339245086
Greece	0.1224255488	0.0434364715
Hungary	0.0336881724	0.1346156873
Iceland	0.0252009319	0.1321684934
Ireland	0.0496658352	0.1061914616
Italy	0.0579165157	0.0933555314
Netherlands	0.0239718103	0.1302767255
Slovakia	0.0416274396	0.1152789478
Slovenia	0.0373417922	0.1165110369
Spain	0.0859861474	0.0619049662
Switzerland	0.0291240701	0.1245916309
Türkiye	0.0794289306	0.0751591735
Lithuania	0.0362371219	0.1192263224
Luxembourg	0.0402351508	0.1186067415
Latvia	0.0393155091	0.1115708455
Costa Rica	0.0593623289	0.0902763175

Colombia	0.0815554600	0.0759062262
Poland	0.0301313178	0.1314919073
Estonia	0.0306656680	0.1208978245
Australia	0.0309877225	0.1226341496
Chile	0.0477845001	0.1037982852
Israel	0.0308320171	0.1281172865
New Zealand	0.0257168500	0.1301627554
Norway	0.0202582997	0.1325654295
South Africa	0.1305350503	0.0327859804
Sweden	0.0323663736	0.1171980630
United Kingdom	0.0243573584	0.1320110145
Russia	0.0300123836	0.1258025482
Canada	0.0387199424	0.1126509330
China	0.0443096757	0.1211473847
Japan	0.0294531693	0.1370289335
South Korea	0.0304537098	0.1283077530
Mexico	0.0402295055	0.1226982315
Portugal	0.0491015431	0.1027456196
USA	0.0279678869	0.1285922575

Closeness to the Ideal

The relative closeness of the decision options to the ideal solution is calculated by applying equation (12) to calculate the closest value to (C_i^*).

Table 10

Relative Closeness to The Ideal Solution

	C^*
Argentina	0.71012
Austria	0.81836
Belgium	0.79662
Czech Republic	0.80925
Denmark	0.79209
Finland	0.74857
France	0.70114
Germany	0.82973
Greece	0.26188
Hungary	0.79984
Iceland	0.83986
Ireland	0.68134
Italy	0.61714
Netherlands	0.84459
Slovakia	0.73470

Slovenia	0.75729
Spain	0.41858
Switzerland	0.81053
Türkiye	0.48619
Lithuania	0.76691
Luxembourg	0.74670
Latvia	0.73944
Costa Rica	0.60330
Colombia	0.48206
Poland	0.81357
Estonia	0.79767
Australia	0.79829
Chile	0.68476
Israel	0.80603
New Zealand	0.83502
Norway	0.86744
South Africa	0.20075
Sweden	0.78360
United Kingdom	0.84423
Russia	0.80738
Canada	0.74420
China	0.73220
Japan	0.82309
South Korea	0.80818
Mexico	0.75308
Portugal	0.67664
USA	0.82136

Ranking Decision Options

In the last stage, the relative closeness (C_i^*) of the Alternative Decision Options obtained by TOPSIS method to the ideal solution was calculated with the help of equation (12), and the highest ranking of the obtained values was selected.

Table 11

Ranking of Alternative Decision Options

1	Norway	0.8674
2	Netherlands	0.8446
3	United Kingdom	0.8442
4	Iceland	0.8399
5	New Zealand	0.835
6	Germany	0.8297
7	Japan	0.8231

8	USA	0.8214
9	Austria	0.8184
10	Poland	0.8136
11	Switzerland	0.8105
12	Czech Republic	0.8092
13	South Korea	0.8082
14	Russia	0.8074
15	Israel	0.806
16	Hungary	0.7998
17	Australia	0.7983
18	Estonia	0.7977
19	Belgium	0.7966
20	Denmark	0.7921
21	Sweden	0.7836
22	Lithuania	0.7669
23	Slovenia	0.7573
24	Mexico	0.7531
25	Finland	0.7486
26	Luxembourg	0.7467
27	Canada	0.7442
28	Latvia	0.7394
29	Slovakia	0.7347
30	China	0.7322
31	Argentina	0.7101
32	France	0.7011
33	Chile	0.6848
34	Ireland	0.6813
35	Portugal	0.6766
36	Italy	0.6171
37	Costa Rica	0.6033
38	Türkiye	0.4862
39	Colombia	0.4821
40	Spain	0.4186
41	Greece	0.2619
42	South Africa	0.2007

Results and Discussion

In this study, the financing methods used by OECD countries in the provision of higher education services were analyzed. As a result of the analysis, the performance ranking of the financing policies examined was made and it was found that the top three countries with the highest performance in terms of financing policies used in these countries were Norway, the Netherlands, and the United Kingdom, respectively. The financing schemes used by these countries are Norway "Income Contingent Loan", the Netherlands "Tuition Fee Free" and the United Kingdom "Income Contingent Loan". In this context, it has been determined that two of the three countries with the best performance use the Income Contingent Loan

method. When the table is analyzed as a whole, it is seen that the "Tuition-Free" countries are relatively behind, while the countries that apply "Income-Contingent Loan" are ahead.

Among the higher education financing schemes used, the "Income-Contingent Loan" method has been found to be the one with the highest performance. In this context, since higher education is an expensive service that cannot be offered to everyone who wants it without imposing almost no cost on higher education students, it has become quite common for countries to offer this service for a fee on a cost-sharing basis (Vossensteyn, 2000; Jonglobed, 2004; Johnstone & Marcucci, 2007; Xia et al., 2022; Gölpek, 2011; Özekicioğlu, 2013). Within the scope of the study, it is suggested that the "Income-Contingent Loan" financing policy (Chapman, 2014; Johnstone, 2009; Özekicioğlu, 2013; Britton et al., 2019), which has been highly preferred in the financing of higher education in recent years worldwide, should be adapted to the Turkish higher education system and implemented as a new financing strategy.

Nowadays, tuition fees are demanded from those who receive education services, which causes students to take on more debt and graduate with longer-term debt. Long-term indebtedness as a result of education and training is more serious for individuals with lower socio-economic status. Benefiting a student by participating in a system that only serves the interests of the privileged and does not take into account the obstacles faced by those who cannot afford the rising costs of higher education is a long-standing social injustice in the education and training system. Therefore, evaluating the pricing schemes not only in Turkey but also globally and determining which one will create a more appropriate structure will provide higher education services on a more economical basis for students. This study, which can constitute an important road map in terms of eliminating these deficiencies, is important in research on higher education financing practices.

Acknowledgement

This study was produced from the doctoral thesis being carried out under the supervision of Assoc. Prof. Ertuğrul Çavdar named of the "*Comparative Analysis of Financing Methods Used in Higher Education*" and conducted by Kastamonu University, Institute of Social Sciences, Department of Business Administration.

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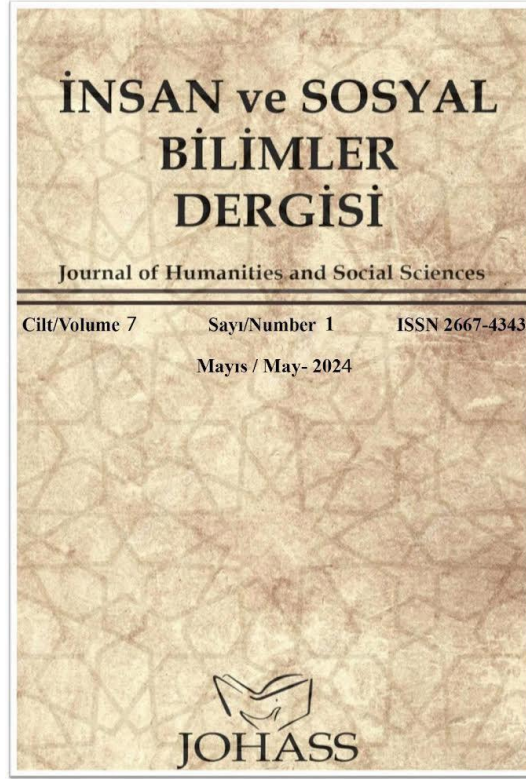
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JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)



<https://dergipark.org.tr/tr/pub/johass>

School Occupational Health and Safety Performance Scale: Validity and Reliability Study for Scale Development

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Article Type: Research Article

Received: 25.05.2024

Accepted: 28.05.2024

Published online: 29.05.2024

Citation: Bilgiç, S., & Aytac, T. (2024). School occupational health and safety performance scale: Validity and reliability study for scale development. *Journal of Human and Social Sciences*, 7(1), 104-123.

School Occupational Health and Safety Performance Scale: Validity and Reliability Study for Scale Development

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Abstract

The aim of this study is to develop a scale to evaluate the performance of occupational health and safety practices in schools. The form created for this purpose was presented to experts and the content validity rates of the items were determined in line with the feedback received. The items with a content validity ratio below .80 were excluded from the study. The 49-item trial form was applied via e-mail to 990 teachers working at primary, secondary, and high school levels in public and private schools in İstanbul, affiliated with the Ministry of National Education, and the data obtained were analyzed. With exploratory Factor Analysis (EFA), a two-dimensional structure consisting of 40 items in total revealed "Occupational Health and Safety Training Practices Applied in Schools" and "Occupational Health and Safety Practices Applied in Schools, Managerial Precautions and Precautions". It was determined that the goodness-of-fit indices of the model were quite high. Confirmatory Factor Analysis (CFA) also confirmed the EFA results. The obtained correlation coefficients were examined. Item-total score correlation coefficients were between $r = .878$ and $r = .650$, and a significant relationship was observed at the $p < .01$ level. The internal consistency coefficient obtained for the entire scale was .92. There was a significant ($p < 0.05$) difference between the items and the total score between the 27% lower and 27% upper groups. It was determined that this difference was in favor of the upper 27% group. There was high reliability in the items on the scale, and the items were distinguishable on the basis of the characteristics the scorers of the scale were looking for.

Keywords: Performance, Occupational health and safety, school occupational health and safety, school administrator, teacher

Research Article

Received: 25.04.2024

Accepted: 28.05.2024

Published online:

29.05.2024

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Introduction

Recent research on occupational health and safety (OSH) business productivity and competitiveness has shown that occupational accidents and diseases have a significant impact on the productivity, competitiveness, and reputation of enterprises. The OSH practices implemented have confirmed the social and economic benefits, as they significantly reduce compensation costs (compensations and medical expenses). It is increasingly important that OHS activities be seen as an investment made in line with the objectives of the organization rather than a financial expense and that they should be a fundamental component of the organizational management and business plans of businesses. (Boileau, 2016, 294).

In accordance with the law and regulation, commitments made regarding OHS targets in working environments and strategic management principles are included in the OHS policy. The policy is one of the first steps of the Occupational Health and Safety Management System (OHSMS). OHSMSs question performance requirements in detail and serve as direction indicators in achieving the objectives specified in the OHS policy. Purpose is a comprehensive goal of OHS practices, that is, it is an expression of intent that is not expressed numerically. (Cengiz, 2020, 1).

One of the ways for a management system to be developed and accepted is to prove that the system performance is effective. Performance evaluation is the process of obtaining data about all material and moral components of the organization and making evaluations according to this data, in order to achieve the strategic goals, mission, and goals determined by the organization. The most critical part of this process is the measurement tool and the measurements to be performed using. Performance measurement is a time-consuming and difficult process that must be repeatedly applied for the organization. In this regard, information about what, how, and with what to measure needs to be thoroughly researched. One of the primary methods used for this is to benefit from the knowledge, opinions, and experiences of experts who have studied in this field. Although this method can be used to evaluate simpler systems, it can give contradictory and even biased results for more complex systems. The ideal way to prevent mistakes in such a situation is to use mathematical or quantitative techniques (Ediz, Yıldızbaşı & Baytemur, 2017, 277).

The employer is obliged to check whether OHS-related health and safety measures are followed and to ensure that any problems that arise are resolved. In addition, the necessary control, measurement and examination must be carried out to eliminate the risk factors to

which the business is exposed. This situation is stated in Article 4 of the Occupational Health and Safety Law No. 6331 and Article 10 regarding risk assessment (Law on Occupational Health and Safety, 2012).

Performance measurement is an important aspect of OHS monitoring and evaluation. One of the primary goals of OHS practices in an organization and/or industry is to measure OHS performance and provide feedback regarding health and safety. Performance measurement values measured directly or indirectly provide feedback on the extent to which an expected result has been achieved or the quality of the processes (NOHSC, 1999: 1).

To provide a safe school environment for individuals by eliminating the dangers and risks that may occur in schools, it is necessary to create a safe education and working environment by keeping employees and students in educational institutions away from stress, anxiety, and dangers. Concept of school safety; It is expressed in the physical and psychological comfort and sense of peace of teachers, students and staff. For this reason, a safe school environment created with OHS practices is considered important for individuals to feel more comfortable and show their best performance (Çay, 2019: 3).

The goal of the school safety is to create and maintain a school climate where students thrive in an environment free from dangers, harmful addictions, and fear, where teachers can teach and students can learn (Stephens 1998:254).

This study will make a significant contribution to measuring school OHS performance, which is a crucial aspect of the Occupational Health and Safety Management System (OHSMS) used to ensure school safety, particularly during the educational process. This contribution will be beneficial for school administrators in managing OHS practices, particularly in identifying deficiencies related to school OHS.

Model

In this scale development study; creation of the item pool, determining face and content validity according to expert opinion, creating the scale structure, determining the research group for the scale study, validity studies of the scale, exploratory factor analysis, naming the sub-dimensions because of factor analysis, factors and item contents, confirmatory factor analysis, reliability studies of the scale, and the stages of sorting the scale items were carried out.

Sample and Population

In this section, information will be given about the population and sample selection.

Exploratory Factor Analysis (EFA) Sample Selection

The population of the study was determined as the schools throughout Istanbul with 50 or more employees who perform OHS practices. Since it is not possible to reach the entire population due to time and practice limitations, a sample was determined. (Yıldırım & Şimşek, 2008: 277). In the 2021-2022 academic year, 25 (64.1%) of 39 districts in Istanbul are on the European side and 14 (35.9%) are on the Anatolian side (Ministry of National Education Statistics, 2020: 22). Within this ratio, six districts from the European side and three districts from the Anatolian side were determined using the stratified sampling method at the rates of 25/39 and 14/39, which is a sampling type that aims to represent the strata or subgroups in the population in proportion to their weight in the study population. Within the proportions of the selected strata, the districts in Istanbul were selected randomly by drawing lots using simple random sampling methods. (Büyüköztürk et al., 2012 as cited in. Koç, 2017: 488) Six districts (Büyükçekmece, Başakşehir, Fatih, Bakırköy, Beylikdüzü, Sarıyer) from the European side and three districts from the Anatolian side (Kadıköy, Üsküdar, Kartal) were selected. There are 564 primary schools, 485 secondary schools, 479 secondary schools, 415 general secondary schools, and 578 vocational and technical secondary schools throughout Istanbul. In addition, there are 43391 teachers working in primary schools throughout Istanbul, 47374 in secondary schools, 58304 in secondary schools, and 28495 in science high schools, vocational high schools, and religious high schools (Ministry of National Education Statistics, 2020: 22). The large size of the population makes it difficult to reach the units that make up the population. In similar cases, cluster sampling may be more convenient. In this type of sampling, the population is divided into groups as clusters which are defined as a sample unit. A sample is created by bringing together randomly determined clusters. (Koç, 2017: 489). In the population, primary school teachers comprise 25%, secondary school teachers comprise 26%, Anatolian high school teachers comprise 33%, and other types of high schools are 16%. There are approaches that data should be collected from 10 participants per item for Exploratory Factor Analysis (EFA). However, most of the factor analysis results conducted by Costello and Osborne (2005) using this ratio were found to be incorrect. Therefore, factor analysis using more than 10 times more participants per item is thought to provide more robust results (Güngör, 2016: 106). Based on the data obtained, the number of

teachers in each type of school was considered as a cluster or group, and with these ratios, 244 teachers from primary schools, 252 from secondary schools, 284 from Anatolian high schools, and 124 from science high schools, vocational high schools, and imam-hatip high schools were determined randomly. In this study, 990 participants were reached in EFA ($49 \times 20 = 980$), 75 incorrect codings were identified, and it was decided that the sample size of ($49 \times 10 = 490$) 915 people would be sufficient for the scale development study.

Confirmatory Factor Analysis (CFA) Sample Selection

For CFA, it is generally stated that sample sizes of at least 200, 250 and 500 people or 3, 6, 20 times the number of variables should be reached (De Winter, Dodou ve Wieringa, 2009: 177). The 40 items obtained for confirmatory factor analysis (CFA) were collected from district schools other than the districts where EFA was applied, within the proportions determined in EFA, and the districts in Istanbul were selected randomly by lottery by simple random sampling methods (Büyüköztürk et al., 2012 cited in Koç, 2017: 488). Six districts were determined from the European side (Beşiktaş, Küçükçekmece, Gaziosmanpaşa, Fatih, Esenler, Yeşilköy) and three districts from the Anatolian side (Ataşehir, Maltepe, Tuzla). In these districts, 405 participants were reached ($40 \times 10 = 400$), 38 incorrect codings were identified, and it was decided that the sample size of ($40 \times 5 = 200$) 367 people would be sufficient for the scale development study. 367 teachers responded to the form.

Data Collection Tools

Under this title, detailed information about the data collection tools and the data collection process were presented.

Occupational Health and Safety Practices Performance Scale in Schools

To determine the requirements of school OHS practices, laws, regulations, international reports, agreements and literature were reviewed and analyzed. Draft articles were determined after consulting experts. The number of experts (between 5-40) and expert quality are also of great importance for content validity (Ayre & Scally, 2014; Lawshe, 1975; Wilson, Pan & Schumsky, 2012, cited in Olgun & Alatlı 2021: 574). Experts in the field; It was shared with four professors, two doctoral faculty members, two doctoral students, five OHS experts, and two Turkish experts. Through the form sent to the experts, they were asked to mark one of the options "appropriate", "must be corrected" or "not suitable" for each of the

items. After receiving expert opinions, necessary corrections were made, and the number of items in the draft measurement tool was decreased to 49.

For the scale development study, eight expert opinions were received for the subject area and measurement and evaluation, five for the subject area and two for the language suitability. A preliminary trial was conducted with 15 people representing the target group to ensure that the scale items were understandable and readable by the responders, to detect spelling errors, and to determine the average time of scale application. For content validity, an item pool was created by taking care to include all aspects of the OHS practices carried out in schools. Then, opinions were taken from experts in the field in terms of the clarity of the items, scope, and suitability for the target group (Avcı, 2017: 618). The lower limit value of the content validity index (CGI) for 15 experts at the $\alpha=.05$ significance level was expressed as 0.49 by Lawshe (1975: 569). Each item was examined one by one, and 11 items with a CGI value below 0.49 were removed from the scale. According to the suggestions of "fifteen experts" who evaluated the development of the measurement tool, three items were removed from the measurement tool and two items were added. As a result, it was decided that the draft scale would consist of 49 items.

Compliance with Ethical Standards

The Ethics Committee of Kırşehir Ahi Evran University was applied for a document showing the ethical suitability of the study. The document showing that the study was ethically appropriate (decision dated 21.04.2022 and numbered 2022/03/45) was received.

Findings

Before exploratory factor analysis (EFA), the Kaiser-Meyer-Olkin (KMO) coefficient and Bartlett's test of sphericity significance level were examined to determine the suitability of the dataset for factor analysis. Statistics package program was used for EFA.

It is recommended that the data should be normally distributed, the Kolmogorov-Smirnov value is greater than 0.05 ($\text{sig}>0.05$), or the kurtosis and skewness values are between -1 and +1 (Çokluk, Şekercioğlu & Büyüköztürk, 2012: 123). For the analysis of scale data, scores must be summable and normally distributed (Büyüköztürk, 2012: 124-125). For this purpose, the descriptive statistics of the dataset used in the study are shown in Table 1.

Table 1

Descriptive Statistics

	Statistics
Mean	3,78
Median	3,90
Variance	0,63
Std. Deviation	0,79
Minimum	1,00
Maximum	5,00
Range	4,00
Interquartile Range	0,90
Skewness	-0,70
Kurtosis	0,74
Kolmogorov-Smirnov	0,12
p-value	0,00
Shapiro Wilks	0,95
Sig.	0,00

In Table 1, Kolmogorov-Smirnov (0.12 and $p > 0.05$) and Shapiro-Wilk (.95 and $\text{sig} > .05$) values are significant. In addition, because the kurtosis (0.74) and skewness (-.70) values are within the limits of +1 and -1, the scores show a normal distribution (Büyüköztürk, 2012: 124-125).

EFA and CFA were performed to determine the factor structure validity of the scale. In order to test the suitability of the sample size to the data structure for factor analysis, it was decided to compare the size of the partial correlation coefficients with the size of the observed correlation coefficients. The KMO test for this purpose and Bartlett's test (Bartlett test of Sphericity) were conducted to determine whether the measurement tool could be divided into factor structures (Pallant, 2005: 178). The KMO and Bartlett's Test results are given in Table 2.

Table 2

Kaiser-Meyer-Olkin and Bartlett's Test

KMO		0,987
	Chi-squared	58356,869
Bartlett Sphericity Test	df	1176
	Sig.	0,000

Since the KMO value is 0.987, the Bartlett's Test value and the obtained chi-square (χ^2) value are significant at the 0.01 level, and the data structure is perfectly adequate for factor analysis.

Because of the KMO test, if the value is lower than 0.50, The factor analysis cannot be continued (Pallant, 2005: 178). According to Çokluk et al. (2012), if the sample size value is 0.90 or above, it can be interpreted as "excellent". Bartlett's test provides information about whether the data are suitable for normal distribution and whether they are multivariate. On the other hand, a prerequisite for continuing factor analysis is that this test should be statistically significant (Büyüköztürk, 2012: 124-125; Çeçen, 2006: 105). The data set was suitable for factor analysis because the KMO coefficient stated in Table 2 was close to 1, with a value of 0.987, and the Bartlett Sphericity test significance level was less than 0.05. EFA evaluations continued as KMO and Bartlett's test's results met the condition. According to the research objective, orthogonal rotation was used because the main goal was to create a model and obtain the most appropriate number of "independent" factors and the generalizability of the results. Factor extraction with varimax rotation, which is an orthogonal method, is the generally accepted method (Keiffer, 1998; cited in Yaşlıoğlu, 2017: 78). Afterwards, the eigenvalues of the factors and the amount of variance they explained were determined using the Varimax rotation method.

Eigenvalues are generally obtained from the sum of the squares of the factor loadings of the items related to the factors. Here factors, with eigenvalues of 1 or greater than 1 can be considered important factors (Büyüköztürk, 2012: 124-125; Çeçen, 2006: 105). However, the threshold value of 1, determined according to the analysis results may vary.

Afterwards, the suitability for factor analysis was checked by performing the Bartlett Sphericity Test with the KMO value again. Here, the second step KMO value was found to be 0.985, which was close to 1. According to the Bartlett Sphericity test results, it was observed that the test statistic value was less than 0.05. Therefore, the factor analysis continued.

In the second step, the eigenvalues and explained variance amounts are stated in table 3. Since the number of factors with eigenvalues greater than 1 was two at this stage, it was observed that the remaining 40 items were weighted under two factors. The first factor alone explains 65.16% of the total variance, the second factor alone explains 7.92% of the total variance, and the two factors together explain 73.08% of the total variance.

Tablo 3

Rotated Component Matrix

	Total	Variance %	Cumulative %
1	26,07	65,16	65,16
2	3,17	7,92	73,08
	Total	Variance %	Cumulative %

The weights of the remaining 40 items under the relevant factor are given in table 3. At this stage, 25 items are under the first component and 15 are under the second component.

Table 4

Second Rotated Component Matrix

	Component	
	1	2
s46	0,84	
s32	0,81	
s47	0,81	
s45	0,81	
s44	0,8	
s35	0,8	
s40	0,8	
s39	0,79	
s36	0,79	
s29	0,78	
s28	0,78	
s49	0,77	
s27	0,77	
s38	0,76	
s26	0,75	
s34	0,74	
s33	0,74	
s30	0,74	
s24	0,73	
s25	0,72	
s43	0,72	
s31	0,72	
s42	0,72	
s41	0,71	
s37	0,6	
s8		0,83
s6		0,82
s9		0,82
s5		0,81
s12		0,8

s11	0,8
s14	0,78
s7	0,77
s13	0,77
s10	0,76
s15	0,76
s3	0,75
s4	0,75
s1	0,74
s2	0,69

CFA was applied to determine the suitability of the two-factor structure of the scale. Because of CFA, the sig. value and then the Chi-square (χ^2/df) fit indices were examined, and it was determined that the model showed an acceptable fit with the real data ($\chi^2/df=2.90$). In addition, the RMSEA fit value (.072) was found to be perfectly compatible in determining model adequacy. Because of CFA, in addition to the RMSEA value,

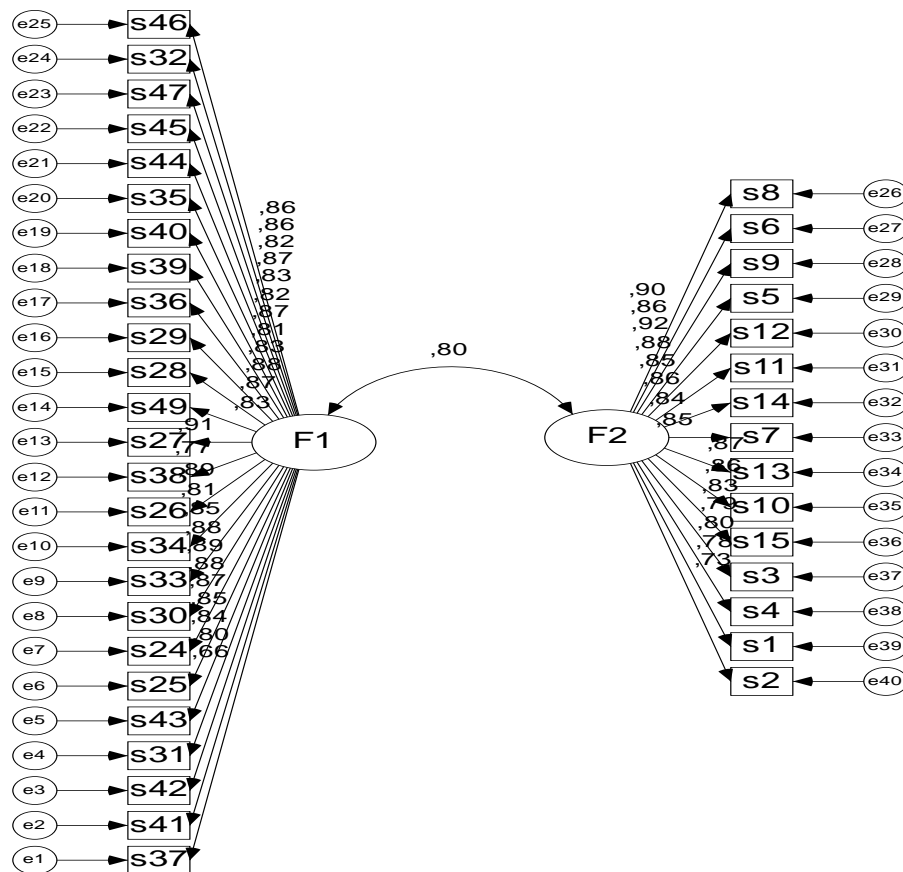


Figure 1. *Confirmatory Factor Analysis*

AGFI, GFI, NFI, NNFI, IFI, RFI and RMR fit index values were used to determine whether the model was sufficient. These values confirm that the model formed in the EFA of the scale is valid and that the factor structure determined in the scale is valid. When the

findings obtained because of these analyzes are evaluated, the "School Occupational Health and Safety Practices Performance Scale", consisting of 40 items and a two-factor structure, is a valid model to be implemented in schools.

Table 5

Fit Indices Values

Acceptable fit indices values	Analysis fit indices values
$\chi^2/sd <5$	2,90
GFI >0,90	0,91
AGFI >0,90	0,92
CFI >0,90	0,91
TLI >0,90	0,91
RMSEA <0,08	0,072
RMR <0,08	0,07

The regression coefficients for each item are given in Table 6

Table 6

Standardized Regression Coefficients

		Estimation
s24	F2	0,89
s25	F2	0,89
s26	F2	0,88
s27	F2	0,9
s28	F2	0,87
s29	F2	0,88
s30	F2	0,89
s31	F2	0,84
s32	F2	0,86
s33	F2	0,85
s34	F2	0,86
s35	F2	0,66
s36	F2	0,67
s37	F2	0,79
s38	F2	0,87
s39	F2	0,88
s40	F2	0,88

s41	F2	0,88
s42	F2	0,84
s43	F2	0,85
s44	F2	0,85
s45	F2	0,84
s46	F2	0,84
s47	F2	0,85
s49	F2	0,85
s1	F1	0,8
s2	F1	0,73
s3	F1	0,81
s4	F1	0,81
s5	F1	0,9
s6	F1	0,88
s7	F1	0,86
s8	F1	0,92
s9	F1	0,93
s10	F1	0,88
s11	F1	0,84
s12	F1	0,86
s13	F1	0,88
s14	F1	0,85
s15	F1	0,84

The Cronbach Alpha (α) coefficient is one of the reliability criteria used to determine internal consistency in scale adaptation and development studies (Seçer, 2013:176). This coefficient gives an average correlation value between the items on the scale. The reliability of the scale increases as these values approach from 0 to 1 (Akaydın & Kurnaz, 2015: 256, Pallant, 2005).

Reliability analysis was performed to determine the reliability level of the scale used in the study and Chronbach alpha coefficient was obtained. The evaluation criteria used in the evaluation of Cronbach's Alpha Coefficient are; If $0.80 \leq \alpha < 1.00$, the scale can be stated as highly reliable. While reliability levels vary depending on the purpose and nature of the scale, the lowest level should be 0.70 (Pallant, 2005, cited in Akaydın & Kurnaz, 2015: 256). The Cronbach alpha coefficients obtained are given in Table 8. Accordingly, the scales are highly reliable with Cronbach's alpha values of 0.90 for the 1st factor and 0.91 for the 2nd factor.

Table 7

Reliability Analysis

	Chronbach Alfa
F1	0,90
F2	0,91

To measure internal consistency in reliability and to determine the relationship between the items and the total of the scale, correlation analysis was performed and the Spearman correlation coefficient was obtained. When the obtained correlation coefficients are examined; item-total score correlation coefficients range between $r = .878$ and $r = .650$, and there is a significant relationship at the $\text{sig} < .01$ level. Therefore, there is a positive relationship between the items and the total of the scale.

Table 8*Item and Scale Correlation*

item	r	sig.	item	r	sig
s1	0,756**	0,000	s29	0,820**	0,000
s2	0,721**	0,000	s30	0,849**	0,000
s3	0,765**	0,000	s31	0,830**	0,000
s4	0,782**	0,000	s32	0,782**	0,000
s5	0,845**	0,000	s33	0,819**	0,000
s6	0,806**	0,000	s34	0,768**	0,000
s7	0,822**	0,000	s35	0,752**	0,000
s8	0,846**	0,000	s36	0,768**	0,000
s9	0,878**	0,000	s37	0,650**	0,000
s10	0,842**	0,000	s38	0,709**	0,000
s11	0,819**	0,000	s39	0,742**	0,000
s12	0,816**	0,000	s40	0,809**	0,000
s13	0,848**	0,000	s41	0,766**	0,000
s14	0,809**	0,000	s42	0,815**	0,000
s15	0,813**	0,000	s43	0,852**	0,000
s24	0,870**	0,000	s44	0,755**	0,000
s25	0,849**	0,000	s45	0,815**	0,000
s26	0,852**	0,000	s46	0,776**	0,000
s27	0,858**	0,000	s47	0,745**	0,000
s28	0,815**	0,000	s49	0,768**	0,000

According to the scale's total score, whether the difference between the item averages of the 27% group with the highest score and the 27% group with the lowest score was significant or not was examined with the t-test in unrelated groups, and the results are shown in table 10.

Tablo 9

Results of Unrelated Groups t-Test Between the 27% Lower and Upper Groups

i		n	Mean	std	t	sig.	i		n	Mean	std	t	sig
s1	Lower	248	2,33	0,88	-28,8	0	s29	Lower	248	2,94	0,95	-28,5	0
	Upper	248	4,42	0,73				Upper	248	4,81	0,4		
s2	Lower	248	3,04	1,16	-21,8	0	s30	Lower	248	2,8	0,88	-31,3	0
	Upper	248	4,77	0,45				Upper	248	4,76	0,44		
s3	Lower	248	2,88	1,09	-24,7	0	s31	Lower	248	2,67	0,9	-30,6	0
	Upper	248	4,75	0,5				Upper	248	4,71	0,54		
s4	Lower	248	2,33	0,9	-26,7	0	s32	Lower	248	3,04	1,01	-26,4	0
	Upper	248	4,41	0,83				Upper	248	4,85	0,39		
s5	Lower	248	2,7	0,93	-29,1	0	s33	Lower	248	2,93	0,95	-27,4	0
	Upper	248	4,69	0,53				Upper	248	4,79	0,48		
s6	Lower	248	2,47	0,93	-28,2	0	s34	Lower	248	3,16	1,01	-24,3	0
	Upper	248	4,52	0,67				Upper	248	4,83	0,4		
s7	Lower	248	2,4	0,85	-29,4	0	s35	Lower	248	3,27	0,95	-24,1	0
	Upper	248	4,5	0,74				Upper	248	4,84	0,38		
s8	Lower	248	2,53	0,91	-30,6	0	s36	Lower	248	3,07	0,95	-26,9	0
	Upper	248	4,61	0,57				Upper	248	4,83	0,41		
s9	Lower	248	2,46	0,85	-35,1	0	s37	Lower	248	2,92	1,1	-21	0
	Upper	248	4,66	0,51				Upper	248	4,67	0,71		
s10	Lower	248	2,46	0,83	-31,5	0	s38	Lower	248	3,31	0,95	-22,1	0
	Upper	248	4,55	0,63				Upper	248	4,79	0,45		
s11	Lower	248	2,73	0,97	-28,2	0	s39	Lower	248	3,38	0,92	-23	0
	Upper	248	4,7	0,52				Upper	248	4,84	0,39		
s12	Lower	248	2,69	0,94	-29,1	0	s40	Lower	248	3,11	0,86	-28,5	0
	Upper	248	4,67	0,51				Upper	248	4,82	0,4		
s13	Lower	248	2,4	0,85	-32,6	0	s41	Lower	248	2,83	0,94	-26,7	0
	Upper	248	4,56	0,59				Upper	248	4,7	0,58		
s14	Lower	248	2,2	0,83	-31,7	0	s42	Lower	248	2,69	0,9	-29,4	0
	Upper	248	4,46	0,75				Upper	248	4,69	0,57		
s15	Lower	248	2,35	0,86	-31,7	0	s43	Lower	248	2,77	0,88	-31,5	0
	Upper	248	4,57	0,69				Upper	248	4,77	0,47		
s24	Lower	248	2,77	0,85	-32,9	0	s44	Lower	248	3,12	0,92	-24,8	0
	Upper	248	4,77	0,45				Upper	248	4,76	0,49		
s25	Lower	248	2,89	0,86	-30,6	0	s45	Lower	248	2,99	0,9	-27,5	0
	Upper	248	4,77	0,45				Upper	248	4,76	0,47		
s26	Lower	248	2,83	0,85	-31,5	0	s46	Lower	248	3,02	0,95	-25,2	0
	Upper	248	4,75	0,45				Upper	248	4,75	0,51		
s27	Lower	248	2,83	0,84	-32,1	0	s47	Lower	248	3,2	0,99	-23,5	0
	Upper	248	4,77	0,44				Upper	248	4,81	0,43		
s28	Lower	248	2,97	0,89	-29	0	s49	Lower	248	3,04	0,99	-24,5	0
	Upper	248	4,79	0,42				Upper	248	4,77	0,5		

According to the scale's total score, whether the difference between the item averages of the 27% group with the highest score and the 27% group with the lowest score was

significant or not was examined with the t-test in unrelated groups, and the results are shown in table 10.

In Table 9, there is a significant ($\text{sig} < 0.05$) difference between the items and the total score between the 27% lower and 27% upper groups. It was determined that this difference was in favor of the upper 27% group. The reliability of the items in the scale is high and that those who rate the scale are distinguished in terms of the characteristics they want to measure. Accordingly, the averages obtained for all scale items differ significantly between the lower and upper groups, and the upper group average is significantly larger than the lower group average. As a result, the reliability of the items in the scale is high.

The research was conducted on public and private primary, secondary, high school, and vocational high school teachers who were randomly selected by lottery, one of the simple random sampling methods, in the districts of Istanbul. First, validity and reliability tests of the scale data were conducted. The scale reliability coefficient (Cronbach's Alpha) is highly reliable, with Cronbach's Alpha values of 0.90 for the 1st factor and 0.91 for the 2nd factor.

Because of EFA performed to determine the construct validity of the scale, two sub-dimensions were obtained. These dimensions are named as "Occupational Health and Safety Training Practices Applied in Schools" and "Occupational Health and Safety Practices Applied in Schools, Managerial Precautions and Precautions". The first factor alone explains 65.16% of the total variance, the second factor alone explains 7.9% of the total variance, and the two factors together explain 73.08% of the total variance.

Results and Discussion

Making systematic and accurate OHS performance measurements will ensure that most of the deficiencies that may occur in the OHS management of the organization are eliminated. Therefore, performance measurements will make a significant contribution to protecting organizational employees from accidents and ensuring their health. It is necessary to provide the necessary management system conditions to control an organization's OHS risks and improve its OHS performance. OHSAS 18001 serves as a guide that determines the conditions related to OHSMS in order to control OHS risks that may occur in organizations and to improve OHS performance. According to OHSAS 18001, to improve OHS performance, it is necessary to continuously improve the working environment and ensure that all employees of the organization participate in the process (Serin and Çuhadar, 2015:

56). In accordance with Article 4 of OSH Law No. 6331, the employer must monitor whether the necessary sensitivity is shown to OHS measures, inspect and ensure that potential deficiencies are eliminated. In addition, because the same law accepts school administrators as representatives of employers, this situation places the greatest responsibility on school administrators in OHS management in the implementation of Article 4 of the law (Occupational Health and Safety Law, 2012). In this regard, it is thought that the OHS performance scale developed in the study can be a useful measurement and control tool that school administrators can use while conducting OHS practices, determining the problems experienced in OHS practices, and taking the necessary precautions.

Recommendations

Measurability of school OHS performance reveals the level at which OHS is implemented in schools and provides the opportunity to examine in detail which practices experience problems. In this context, it is thought that the school OHS practices performance scale developed in the study can be a useful measurement and control tool that can be used in monitoring the OHS practices of school administrators, identifying the problems experienced and taking the necessary precautions. Also leadership, management, school success, etc. Research can be done on the relationship between issues such as school OHS performance.

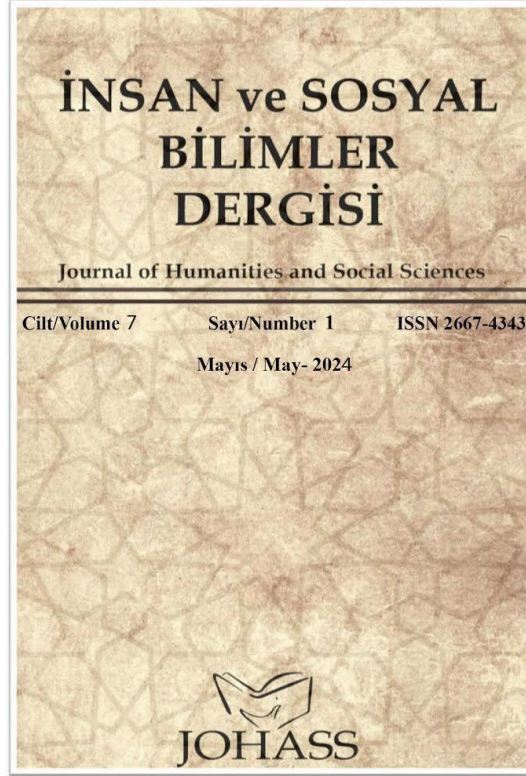
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JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)



<https://dergipark.org.tr/tr/pub/johass>

An Analysis of Postgraduate Studies on Reading Culture*

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Article Type: Research Article

Received: 27.04.2024

Accepted: 28.05.2024

Published online: 29.05.2024

Citation: Değirmenci Gündoğmuş, H. (2024). An analysis of postgraduate studies on reading culture. *Journal of Human and Social Sciences*, 7(1), 124-138.

An Analysis of Postgraduate Studies on Reading Culture

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Abstract

Reading culture is the love of reading, the ability to read continuously, and the ability to read effectively and critically. The reading culture of the individuals who make up a society is a strong foundation for the future. The objective of this study was to examine postgraduate theses on reading culture according to a range of variables. A total of 23 approved postgraduate theses, 10 doctoral theses and 13 master's theses on reading culture between 2014 and 2024 registered at the YÖK National Thesis Centre were identified. The data analysis of the theses under examination was conducted using the content analysis method, which is a qualitative research method. The research revealed that the inaugural study on reading culture at the graduate level was conducted in 2014. The majority of studies were conducted in 2023, with the highest number of studies conducted at Ankara University. Of the studies, 13 were at the master's level and 10 were at the doctoral level. The majority of studies were conducted by supervisors holding the title of professor. All studies were conducted in Turkish, and the qualitative research model was employed. The population and sample of the studies were predominantly teachers. Upon examination of the studies, it becomes evident that the significance of the concept of reading culture has been elucidated through the examination of reading culture in Turkey from various vantages. In accordance with the findings of the study, a series of recommendations were put forth.

Keywords: Reading, reading culture, postgraduate studies, education, society

Research Article

*Received: 27.04.2024
Accepted: 28.05.2024
Published online:
29.05.2024*

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Introduction

Reading is one of the most basic skills a person can use throughout life. Reading is a meaning-making process that goes beyond simply combining letters into words and words into sentences. It enables us to understand the age and environment in which we live, to interact with people and nature, and to express our feelings and thoughts accurately and effectively.

Reading is about assimilating the meaning of written texts by pronouncing written letters, words and texts at a certain speed and applying what has been assimilated to everyday life (Trudell, 2019). People use reading skills as a means of communication to adapt to rapid changes, express themselves comfortably, gain knowledge and increase their cultural level.

In order to facilitate the development of reading skills, which are an essential component of individual, social, cultural and economic growth and change, it is imperative that individuals are provided with an appropriate early childhood education. Moreover, it is of great importance to foster a reading culture at all ages, including early childhood.

According to Yılmaz (2009), the term 'reading culture' refers to both the level and quality of an individual's, social group's or society's relationship with the activity of reading and the individual and social way of life related to the reading process. The concept of 'reading culture' can be described as the level of reading achieved through the transformation of reading into a habit and the development of critical reading skills. Furthermore, it encompasses the capacity to perceive all aspects of one's life, including those that are known and those that are unknown, from the perspective of a proficient reader, as well as the concept of universal literacy.

The fact that reading is a skill depends on the individual making it a part of his/her life by incorporating it into the life process. For the individual who integrates reading into his/her life, reading will be an action that adds meaning to his/her life rather than a necessity or a need, and will also ensure the acquisition of reading culture (Yalçıntaş, Kartal & Turhan, 2023).

The future of a society depends on its individuals. The development of societies is directly proportional to the number of individuals who have acquired a reading culture. The formation of reading culture in society is of great importance in the development and development of that society. For this reason, it is important to raise individuals who have acquired a reading culture. According to Magara and Batambuze (2005), reading culture is not only an element developed to achieve school goals, but also a reading that takes place in all

areas of life and is respected and highly valued in society. A person who has acquired a reading culture is a person who activates thinking and critical processes.

The process of developing reading habits can be defined as the individual's early exposure to visual and written cultural products, the development of basic reading skills, and the behaviours that lead to the formation of a critical reading lifestyle. The term "reading culture" can be defined as an individual's capacity to perceive and process information in a manner consistent with that of a proficient reader, their efforts to become universally literate, and the reading level achieved through the integration of reading as a habit and the development of critical reading skills (Reading Culture Dissemination Platform [OKUYAY], 2020).

Examining the studies on reading culture, the factors that influence the process of acquiring reading culture are family, socio-economic level, environment, school, teacher, friend, text, library, library, skilled work, book selection, mass media and media (Bağcı Ayrancı, 2021; Baki & Gökçe, 2020; Bulut, 2018; Çıldır & Ergün, 2021; Karaosmanoğlu, 2019; Kasımoğlu, 2014; Özkan, 2021; Sever, Karagül & Doğan Güldenoğlu, 2017; Ülper, 2011). Raising individuals who can think, feel, question and produce in society is only possible if individuals have a reading culture. Raising individuals who can transform reading skills into a culture and increasing the number of these individuals will also bring about the internalisation of a reading culture in the social context (Öztürk, 2020).

The aim of this study is to examine postgraduate studies on reading culture with the intention of helping researchers to determine the topics and orientations of their studies in order to improve reading culture in society. The study examines postgraduate studies on reading culture according to a number of variables, including years, universities, types, supervisors' titles, languages, research models, populations and samples. The study is intended to serve as a guide for researchers.

Method

Research Design

This study used document analysis, a qualitative research method, to examine postgraduate dissertations on reading culture in Turkey. Qualitative research provides a deep understanding of events by looking at them in a realistic way (Yıldırım & Şimşek, 2008). Document analysis is a research method that involves collecting, reviewing, questioning and analysing documents for research data. It is a crucial aspect of research reliability, enabling

researchers to exert greater control over the source materials. The stages of document analysis are as follows: firstly, identifying the appropriate documents; secondly, verifying the authenticity of the documents; thirdly, establishing a system for coding and cataloguing; and finally, analysing the data (Merriam, 2009).

Population and Sample

The study population comprised postgraduate research on reading culture, encompassing approved master's and doctoral theses from the relevant institutes and departments of universities in the database of the National Thesis Centre of the Council for Higher Education (<https://tez.yok.gov.tr/>). These theses were written between 2014 and 2024. As all theses are accessible, no sample was selected.

Data Collection and Analysis

A search of the National Dissertation Centre of the Council for Higher Education database search engine (<https://tez.yok.gov.tr/>) for the term "reading culture" on 10 April 2024 yielded 23 approved dissertations. These were subjected to examination. The dissertations that were subjected to analysis in this study are presented in Table 1.

Table 1

Information on the Postgraduate Programmes Studied

Author Name Surname	Year	Name of Thesis	Type of Thesis
Özge Aksoy Serdaroğlu	2024	Reading culture in the 19th century Turkish novel	PhD
Arzu Tören Gül	2023	Examination of primary-secondary school textbooks and workbooks in the context of reading cultures	PhD
Berna Kaya	2023	Examination of reading activities in secondary school Turkish textbooks in the context of reading culture	Master's degree
Esra Yalçıntaş	2023	Determining the effect of the 'Reading culture-digital reading awareness program' on the reading culture and digital reading awareness levels of special education and primary teacher trainees	PhD
Fatma Düzenli Gür	2023	The relationship between students' reading culture levels and their reading comprehension and written expression skills	PhD
Hamza Can Kılıç	2023	Using novella in developing reading culture	Master's degree
Nur Sofuoğlu	2023	Self competency perceptions of Turkish teachers towards cultivating a reading culture	Master's degree
Büşra Aksoy	2022	Determining the reading culture levels of secondary school students	Master's degree

Gülcan Uyar	2022	Investigation of the relationship between family reading culture competence and cognitive emotion regulation skills in terms of different variables	Master's degree
Hande Nur Yaşar	2022	Reading culture perspectives of pre-service Turkish language teachers	Master's degree
Merve Ercan	2022	Views of reading culture in the digital age: A review on Youtube book channels	Master's degree
Özcan Öksüz	2022	Visualization of book reading culture in the digital age and the effect of book cover design on book purchase behavior	Master's degree
Ayşe Telli	2021	A research on the relationship between secondary school students' reading motivation and their parents' educational level and reading profile	Master's degree
Emine Akyüz	2021	Examination children's and youth literature centers structured at universities in terms of acquisition of reading culture (An international comparison)	PhD
İbrahim Şamil Koroğlu	2021	The transformation of reading culture in the new media age: Contemporary approaches and new trends of book publishing professionals in Turkey	PhD
Mehmet Soyuçok	2021	The role of the school in acquiring reading culture	PhD
Ahmet Polat	2019	Determination of in-service training needs of Turkish teachers on reading culture (Recommendation of in-service training program)	Master's degree
Saadet Ünlü	2019	The effect of Turkish teachers on the process of inculcating 'Reading culture' (The case of Muğla city)	Master's degree
Duygu Ak Başoğlu	2018	Understanding of reading culture in the context of the discourses of the Turkish teachers and the books they recommend: A case study	PhD
Sevilay Bulut	2018	Analyzing practices with children's books in preschool settings within the context of creating a reading culture	PhD
Tülay Erduran	2016	Reading culture in Bartın city in the scope of life-long learning: A case study	Master's degree
Ayşe Özgül İnce Samur	2014	The schedule of acquiring reading culture to individuals	PhD
Serhat Adem Körkuyu	2014	Investigation of the fundamental variables of the process of reading culture	Master's degree

A content analysis was used to analyse the data from the postgraduate studies listed in Table 1. In the content analysis technique, data are coded and categorised and data are defined and interpreted by finding themes (Yıldırım & Şimşek, 2018). In qualitative research methods, content analysis is a technique that presents certain features of a text, book, or document through digitisation (Karasar, 2011).

The research data were sorted according to the years of publication using Microsoft Excel program and coded as T1, T2, T3, ...T23 according to this order. In order to conduct data analysis and prevent data loss, the postgraduate theses on reading culture were carefully read and a "Thesis Review Form" was prepared in the Excel program showing the findings related to years, universities, types, supervisor titles, languages, research models, population

and samples. In order to prevent data loss, the information in the form and the information in the tables and diagrams were checked. Each coded thesis was analyzed according to the form.

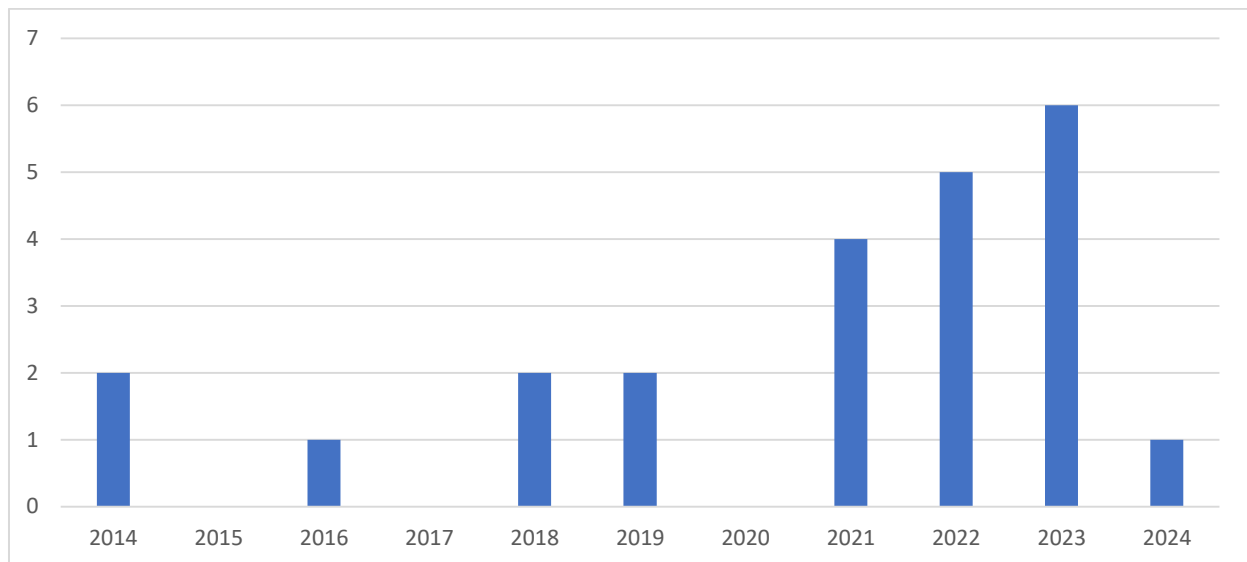
Findings

In the findings section, the data obtained from the analysis of graduate theses on reading culture were interpreted in the hope that they might be transformed into tables and supported by figures.

Figure 1 shows the distribution of the dissertations analysed in the study by year.

Figure 1

Number of Dissertations by Year

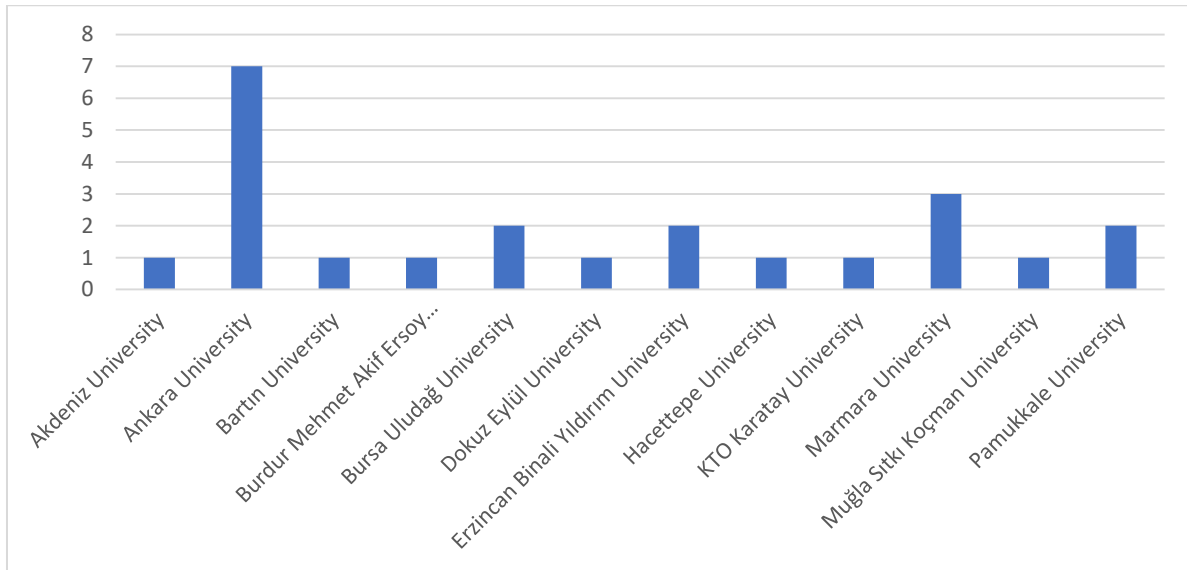


Looking at Figure 1, the first postgraduate study on reading culture was conducted in 2014; two studies were conducted in 2014, 2018 and 2023; one study was conducted in 2016, four in 2021, five in 2022, six in 2023 and one in 2024. There were no studies on reading culture in 2015, 2017 and 2020. Looking at the distribution of theses according to years, it was determined that the studies on reading culture were concentrated between 2021-2023.

Figure 2 shows the number of dissertations analysed by university.

Figure 2

Number of Dissertations by University



Looking at Figure 2, we can see that postgraduate studies on reading culture were carried out in 12 different universities. The largest number of studies was carried out at Ankara University, with seven dissertations. Three theses were written at Marmara University, two at Pamukkale University, Erzincan Binali Yıldırım University and Bursa Uludağ University, and one at other universities.

Figure 3 shows the number of theses analysed by type.

Figure 3

The Number of Theses Analysed By Type is Presented in The Following Table

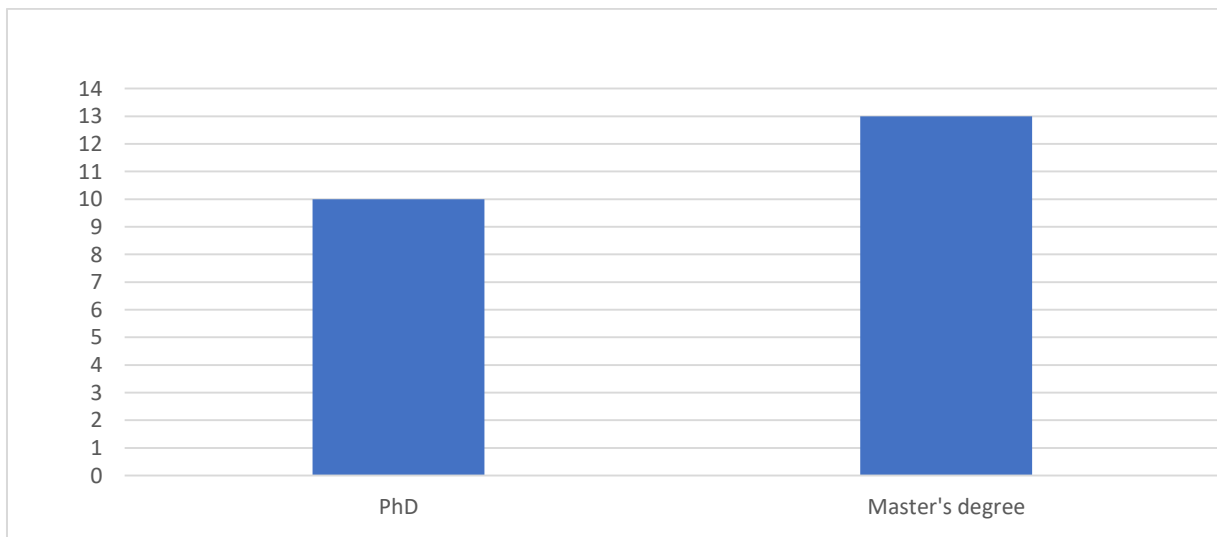


Figure 3 shows that 10 of the postgraduate studies on reading culture are at the doctoral level, while 13 are at the master's level. It is understood that master's theses on reading culture are concentrated.

Figure 4 shows the number of theses examined by thesis advisor.

Figure 4

The Number of Theses Examined According to The Titles of Thesis Advisors is As Follows

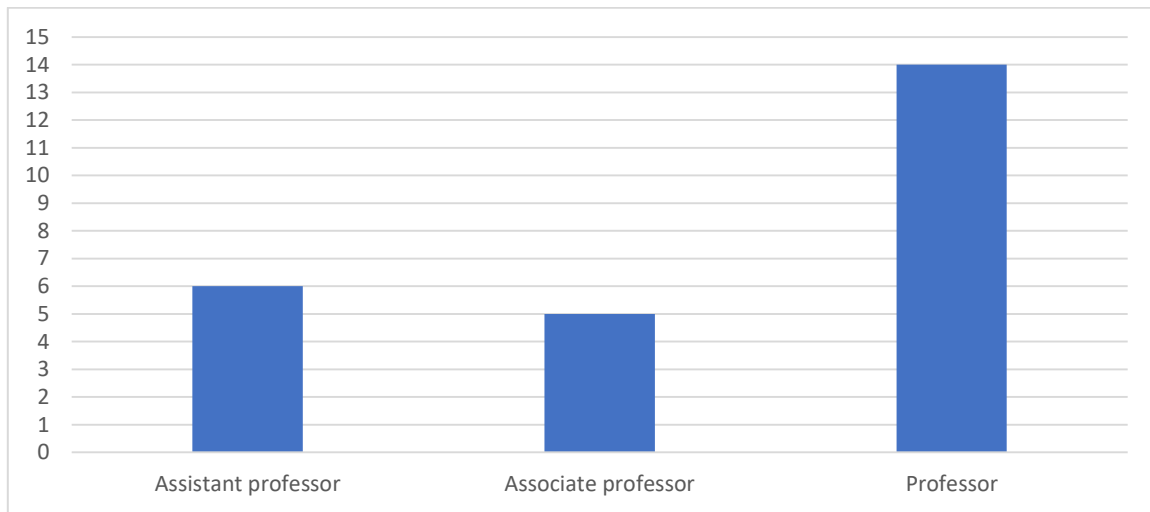
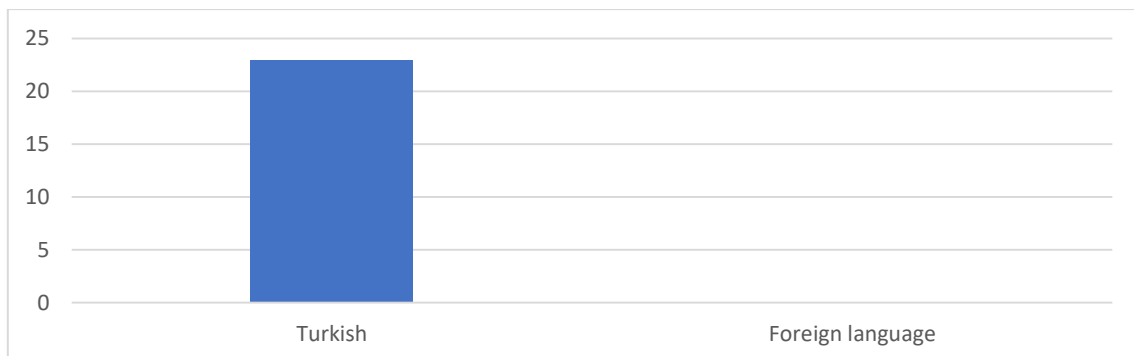


Figure 4 shows that 14 theses were advised by professors, five by associate professors, and six by assistant professors. One study was done with one professor and two associate professors. It is seen that the subject of reading culture is mostly studied by advisors with the title of professor.

Figure 5 shows the number of theses analysed in the study by language.

Figure 5

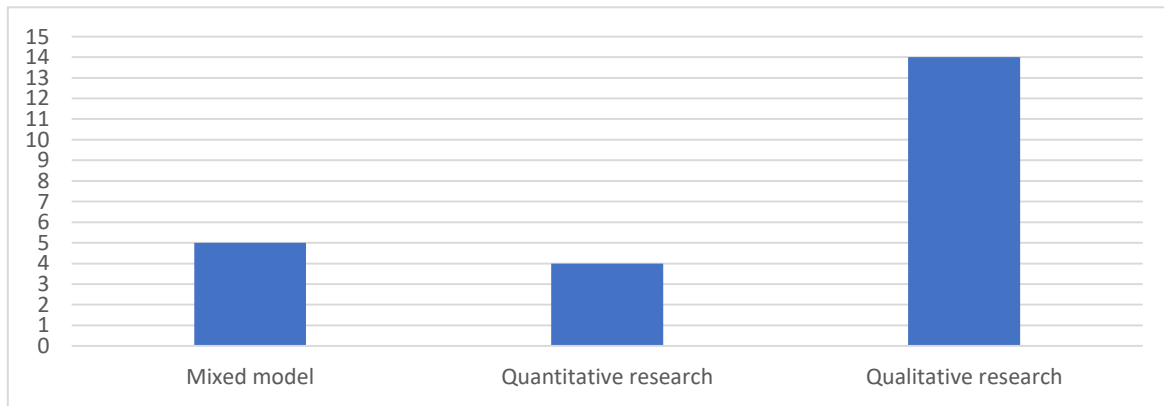
A Statistical Analysis of The Number of Theses Written in Different Languages



Upon examination of Figure 5, it becomes evident that all 23 postgraduate studies on reading culture were written in Turkish, with no studies conducted in a foreign language.

Figure 6

Presents The Number of Theses According to The Various Research Models



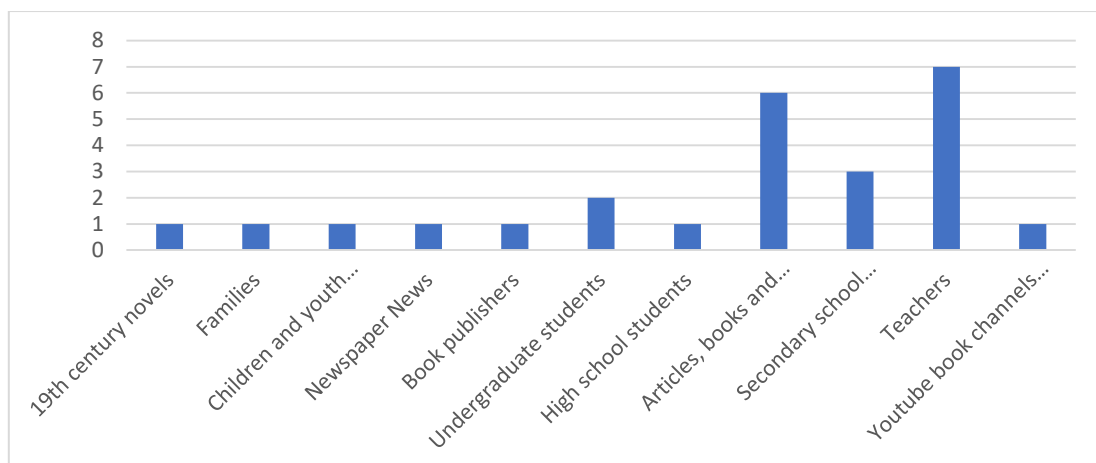
Upon examination of Figure 6, it becomes evident that a mixed model was employed in five of the 23 postgraduate studies on reading culture. Four studies used a quantitative method, while 14 used a qualitative method. It is understood that qualitative methods are preferred as the research method in the majority of theses.

Figure 7 shows how many theses were analysed in the study, by population and sample.

Figure 7

The Number of Theses Produced According to Population And Sample Size is Presented in

The Following Table



Upon examination of Figure 7, it becomes evident that in 23 postgraduate studies on reading culture, teachers were identified as the population and sample in 7 studies, articles, books and magazines in 6 studies, secondary school students in 3 studies, and undergraduate students in 2 studies. In each of the other studies, it is evident that different populations and samples were employed. These included 19th-century novels, families, children and youth literature centres, newspaper news, book publishers, high school students, YouTube book channels and children who own channels. It was determined that most of the theses on reading culture were conducted with teachers.

Results and Discussion

In the study examining the postgraduate theses on reading culture, 7 main findings were reached and the situation related to the findings was presented in tables and figures. A total of 23 authorised postgraduate theses, 10 doctoral and 13 master's theses, on the subject of "reading culture" between 2014 and 2024, were examined in the YÖK database at <https://tez.yok.gov.tr/>. The results of the theses examined according to the years, universities, types, supervisor titles, languages, research models, population and samples of the postgraduate theses on reading culture are presented below.

A review of the number of theses conducted according to the years of postgraduate studies on reading culture reveals that the first such study was conducted in 2014, with the highest number of studies conducted in 2023. One study was conducted in 2024. In 2015, 2017 and 2020, no postgraduate studies on reading culture were conducted. As a result of the research, when the distribution of theses according to years is examined, it was determined that the theses written on reading culture between 2021-2023 were concentrated. The fact that there are theses written on reading culture at both doctoral and master's level in these years shows that the importance of the subject has been recognized.

If we look at the number of dissertations according to the universities where they were carried out, we can see that postgraduate studies on reading culture were carried out in 12 different universities. The largest number of studies was carried out at Ankara University, with seven dissertations. Upon examination of the number of theses according to their respective levels of study, it becomes evident that 10 of the postgraduate theses on reading culture are at the doctoral level, while 13 are at the master's level. It was determined that the majority of graduate theses on reading culture were at the master's level. The reason for the high number of master's theses may be that the number of students enrolled in doctoral

programs is lower than the number of students enrolled in master's programs and the number of universities with doctoral programs is lower.

Examining the theses by the title of the supervisor, 14 theses were supervised by professors. Postgraduate academic studies are conducted under the guidance of faculty members who act as advisors. In Turkey, the titles of faculty members in universities are as follows: professor, associate professor, assistant professor and doctoral faculty member (Resmî Gazete, 2018).

Upon examination of the number of theses according to the languages in which they were written, it was determined that all 23 graduate studies on reading culture were written in Turkish. Given that the intended readership of the theses includes academics, teachers, students and families, it is encouraging that they are written in Turkish (Orhan, 2022). It was observed that the majority of the theses analyzed were written in Turkish and according to the status of the universities, all of them were written in state universities.

A review of the theses according to research models reveals that the qualitative research method is employed in the greatest number of graduate theses on reading culture. The reliability and validity of the research are contingent upon the models that are preferred (Karasar, 2011). It is thought that in-depth studies on reading culture, which is a social issue, are not very suitable for quantitative research, and qualitative methods and document analysis are preferred during the research of the subject. It is thought that the main reason for the diversity seen in the methods, data collection and data analysis techniques of the theses examined is the difference and diversity of the methodological knowledge required by the fields of study.

Upon analysis of the number of theses according to population and sample, it was found that the majority of studies were conducted with teachers. As proposed by Altunkaya and Doğar (2018), future teachers should be encouraged to adopt a reading culture, as they are role models for their students in terms of developing reading skills.

Recommendations

In order to promote a culture of reading in Turkey, it is essential to conduct studies on the development of reading skills in children growing up in digital environments, their love of reading and the role of the family as a model for the child. When the results of the research are evaluated, it is thought that it would be beneficial to write more theses on reading culture. It is thought that the study group should be diversified in theses on reading culture. It is

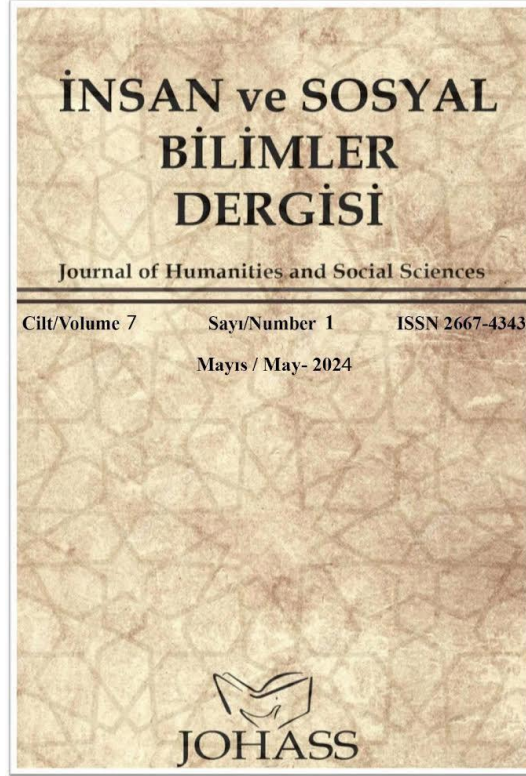
thought that addressing the theses written in terms of child, family, teacher, environment and age will reveal different aspects of the subject. It is thought that including mixed methods in the theses written on reading culture and sharing the results of the theses in academic and local environments will contribute to raising awareness on the subject. Furthermore, it is proposed that cross-sectional and longitudinal studies be conducted to support social development and transformations in the process of introducing reading culture to society. A critical examination of graduate theses on reading culture can be conducted according to their subjects and purposes. It would be beneficial to conduct studies with classroom teachers and preschool teachers who are effective in the process of gaining reading culture. It is possible to conduct studies on the acquisition of reading culture from early childhood. Longitudinal studies can be conducted in collaboration with other stakeholders to foster a reading culture within society.

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JOURNAL OF HUMAN AND SOCIAL SCIENCES (JOHASS)



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New Age Beliefs in Türkiye*

**Based on the doctoral dissertation "Search for Meaning, Alternative Sacraments, Beliefs Adapted to Needs: New Age Beliefs and Practices in Türkiye."*

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Orcid ID: 0009-0009-5349-3447

Article Type: Research Article

Received: 10.05.2024

Accepted: 28.05.2024

Published online: 29.05.2024

Citation: Doğan Koçak, B. (2024). New age beliefs in Türkiye. *Journal of Human and Social Sciences*, 7(1), 139-166.

New Age Beliefs in Türkiye*

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Abstract

This study aims to analyze institutions in Türkiye that offer training and practices based on New Age beliefs and understand the main reasons leading individuals to join these institutions. This research was conducted using qualitative methods, including in-depth interviews and participant observation techniques. The field research began in August 2022 and lasted over a year. During this time, more than 15 training sessions were attended, over 250 people were met, and in-depth interviews were conducted with 76 participants. In addition to studying institutions, this research also aims to comprehend the personal approaches and feedback from participants and trainers to shed light on the overall perspective of these institutions as a "community." The results indicated that most participants were between the ages of 35-45, had middle to upper-income levels, were well-educated, and women outnumbered men. Participants were seeking meaning in their lives, searching for answers to their questions, and looking for solutions to their problems to achieve spiritual and material benefits. On the other hand, group participation allowed individuals to socialize and be a part of a circle where they could express themselves open-heartedly. When considering institutions promoting New Age beliefs, many of them had commercial aspects, with a corporate identity and management approach like. With an increasing number of institutions and participants, New Age Beliefs seem to be a part of the contemporary world. Thus, resarches with the perspective of different disciplines should be conducted to understand all the aspects of the concept thoroughly.

Keywords: New Age Beliefs, healing, meaning, self, socialization

Research Article

Received: 10.05.2024
Accepted: 28.05.2024
Published online:
29.05.2024

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Introduction

The concept of “New Age Beliefs²” is a comprehensive definition that combines ancient and modern teachings, spiritual, mystical, esoteric, occult elements as well as scientific knowledge, traditions, and religious discourses without clear boundaries (Acar, 2019). Both social scientists and NAB practitioners find it challenging to define the term due to its easily changeable and adaptable structure. The literature on the field, indicates that various definitions such as: *alternative sacredness, the descent of the sacred to earth, secularization movements, personalized belief forms, patchwork beliefs, new wave spiritualities, new spiritualities, global spiritualism, spiritualism without religion, secular spirituality, neopaganism* have been used. In NAB it is emphasized that achieving spiritual and physical peace, finding answers to questions, having a “meaningful” life, reaching both material and spiritual abundance are possible with the correct teachings and practices (Özkan, 2014, p.32). New age is considered as a time of change, of awakening (Albasan, 2006), as well as a process of spiritual development (Sjoberg and Wahlberg, 2002). In NAB, psychological approaches that aim to help individuals reveal their potential, raise their awareness are frequently included (Hanegraff, 1996, p.522) by focusing on the individual, highlighting personal experience and well-being.

In NAB, a pluralistic approach has been adopted. It has been emphasized that diversity creates great richness, the lines between divine and profane have blurred, thus all kinds of different knowledge, beliefs, and approaches should be embraced and synthesized. The notion of "either this or that" has been replaced by "and" (Bauman, 2018, p.18) with a syncretic attitude. Instead of making choices, it has become preferable to unite several options.

In the 21st century, often referred to as the “Information Age”, a perspective has emerged that highlights the shared resources of humanity, emphasizing not only scientific but also intuitive knowledge. The postmodern approach, which promotes relativity and states that there is not a single truth and therefore not a single correct path to follow, has created an environment suitable for these movements generally referred to as “beliefs of the postmodern era”. Love, peace, tolerance, a holistic approach, anti-oppression, and the unity of people, beliefs, and religions have started to be emphasized frequently. Thus, this era, by encompassing scientific, sacred, spiritual, worldly, and many different elements, offers methods that appeal to both the mind and soul of modern individuals with beliefs, teachings,

² The abbreviation NAB will be used from now on

and practices that cater to all kinds of different needs and where everyone can find something suitable for themselves.

It is evident that the origins of the Information Age can be traced back to the views of the Enlightenment Era. During this era, there has been a shift in how life has been perceived, the idea of individuality emerged, and human reason was emphasized. Anything that could not be understood by human senses or filtered through reason was deemed superstition, leading to a rejection of traditional teachings and religious constraints. Science, knowledge, and research gained importance, leading to new discoveries and inventions. The emphasis on using one's own mind and having the courage to trust it became the motto of the era. While Weber (2012) believed that rationalization broke the enchantment of the world, Beck (1992) argued that beliefs and traditions lost their charm in the twentieth century as science and technology became revered. Adorno and Horkheimer (2014, p.48) asserted that reason and science replaced the blind faith once given to religion after the Enlightenment, turning it into a myth.

Humans who are captivated by their own reason, capacity, and the magic of the technology they are developing have started to perceive the world completely rationally; they have pursued rationality until it turns into "a complete irrationality" (Fromm, 2023). The Industrial Revolution, along with scientific and technological advancements, has brought unprecedented levels of prosperity, abundance, health, and longevity, but this process has also brought disappointments. With the rapid advancement of technology during World War II, the battlefields have become more destructive than ever (Adorno, 2009, p.4). This situation has paved the way for the emergence of deep existential voids³ in individuals' lives, the rise of ontological anxieties (Giddens, 2010), and the search for peace in the spiritual world that has been left idle⁴. The contemporary individual dealing with chronic problems brought about by the benefits of modern life (Aydin, 2005, p.15) seems to be a candidate for the "emergency solution" proposals of New Age Beliefs. New Age Beliefs, which attract intense interest in many parts of the world; are frequently featured in the media, films, television programs,

³ The concept was used by Victor E. Frankl in 1955. The main reason why people seek psychiatrists is the feeling of meaninglessness, emptiness, or the problems created by the feeling of "existential void". It is indicated that this feeling is increasing and becoming more widespread (Frankl, 1985).

⁴ In their 2018 study, Ritchie and Roser stated that individuals worldwide are experiencing a decline in their physical, mental, and social health, losing balance in their lives in the chaotic world order, turning towards excessive consumption, and engaging in stressful and meaningless communications. Similarly, the World Health Organization is also seeking solutions to this fundamental problem, drawing attention to the disconnection from the inner dimension inherent in individuals burdened with the anxiety of keeping up with the speed of modern life.

YouTube channels, social media, and in the extensive sections of bookstores⁵, with "the desire to do more" and the magic and power of the word "now" (Roubal, 2014), offering "guiding" discourse on how to live a better life.

The influence of these movements is also evident in Türkiye, as well as around the world. In our country, interest in metaphysical subjects began after the Republican Era, but gained momentum in the 1960s. The concept of NAB, which has become a prominent topic, started to impact society in various aspects of life after the 2000s. Recently, we have noticed that these discussions have become part of everyday language in Turkish society. Terms such as energy, frequency, living in the moment, power of thought, affirmation, and imagination have become common in our daily lives.

New Religious Movements (NRM) and New Age Beliefs (NAB)

In literature, all New Age beliefs are viewed as part of the New Religious Movements, predominantly as a sub-category. Thus firstly the emergence of NRM will be explained, followed by the development and spread of New Age beliefs. The term "new religious movements" is generally viewed as a subject for theological research. But it is affected by economic, technological, political, and cultural changes, and emerges as a force that influences some parts of the society. Despite often centering on spiritual matters, these movements see themselves as religious, philosophical, or scientific entities (Possamai, 2019). NRM emerged as a "global phenomenon" in industrialized societies in Europe after 1950 and began to spread worldwide after 1970. The purpose of NRM is to provide religious and philosophical views to its members, to find answers to significant questions like; the meaning of life, introduce a "new way of living", promise transcendental knowledge, peace, spiritual satisfaction, and discuss mystical experiences liken ever done before. This explains the terms "new" and "religious" (Kirman, 2010, p.64). On the other hand, it can also be considered "new" due to its coverage of a relatively new social layer when we consider the history of the middle class with better education and an open world view, to which it mostly appeals (Arweck, 2006, p.30-31). According to Bryan Wilson's work "*An Analysis of Sect Development*" (1979), movements can be examined in three categories: those that "reject the world", those that "approve the world", and those that "compromise with the world" (Wallis, 1984, p.48). Movements that reject the world are more religious than others; loyalty and

⁵ Today, there are sections in bookstores around the world related to New Age, and they cover the widest area (Davie, 2005, p.181). Similarly, in online book sales, Amazon.com has 4 out of the top 10 best-selling books in the categories of spiritual, spiritual, personal development, in short, topics related to New Age (Pınarbaşı, 2021, p.66).

obedience to charismatic personalities believed to be a leader, guru, or prophet are essential. They engage in missionary work to increase their number of members. It is believed that this world is temporary; preparation is made for the afterlife by staying away from material, worldly elements. Individuals are expected to become part of their new families by cutting off all connections with their current lives and social environments; they are expected to dedicate all their time, effort, and material resources to this new group (Köse, 2011, p.181). In the approach of approving the world, a theology or moral system developed is not prominent, the connection with worldly life continues, societal norms are accepted, and techniques aimed at revealing all kinds of potential in individuals are taught (Wallis, 1984, p.36-58). Here, individual beliefs are dominant. The basic approach of groups that compromise with the world is that there is a void in people's spiritual world.

As a result of these approaches, they suggest that individuals should live in a more religious environment and often offer new interpretations by critiquing existing institutional religions in Western countries (Köse, 2011, p.22). Additionally, two theoretical approaches that guide individuals towards NRM are discussed. The first one is "ideological deprivation," which is used to describe individuals who are dissatisfied with their lives, worldview, and belief system, and are seeking something new. The second is "social network theory," which refers to group members connecting with others to involve them in the community (Köse, 2011, p.19-20). According to the social network theory, relationships and friendships formed with others in the community make these environments appealing to individuals.

NAB, which is considered a continuation of NRM in the literature, is a concept that is very difficult to define. Especially since it started to come to the agenda in the 1960's, a definition that can be agreed upon has not been established (Aydın, 2008). NAB has been approached by various academics with different perspectives such as religion, philosophy, belief system, thought structure, worldview, teachings, spiritual beliefs, and spiritual way of life (Başkaya, 2006). It can be evaluated as a form of sacredness created by placing the individual at the center instead of a transcendent sacred place. It can be observed that various philosophies and beliefs such as Eastern mysticism, Western occultism, neopaganism, Hinduism, Buddhism, Shamanism, along with many teachings found in Christianity, Judaism, and Islam, are intertwined with each other. There are various features that distinguish NAB from NRM. In NAB a specific leader is not followed even if there is a founder most of the time, many different views and teachings can be easily applied together, individuals can combine pieces of beliefs, practices, and teachings according to themselves, there is no obligation, condition, or attachment, they can be followed and practiced individually as well

as with various groups, participants can specialize and make a profession after developing themselves in any field, their beliefs do not contradict with those who feel belonging to institutional religions, personal well-being is placed at the center, they exhibit an integrative approach rather than a divisive one, they do not consider any belief or teaching superior to another, and there is no sacred book or similar considered as holy. All of these differ from NRM.

NAB, based on scientific concepts to ensure its legitimacy, also incorporates ancient esoteric knowledge from the past. Therefore, it can be said that even though the concept is new, its foundations are ancient and deeply rooted (Hanegraaf, 2000, p.301). NAB, introduced to contemporary societies in a new form with the transformation of beliefs, rituals, ancient teachings, as well as spiritual and mystical phenomena (Paker, 2011, p.65), is the collective term for various movements inspired by classical spiritual beliefs that emerged towards the end of the 20th century. Encompassing diverse sub-teachings and groups, it explores topics related to science, ecology, psychology, and spirituality, providing individuals with the opportunity to select interpretations that suit their needs (Garnoussi, 2013, p.63). While in the West, New Age ideas are categorized as esoteric, new gnostic worldviews/religions, or psycho-organizations, in Türkiye they are generally referred to as movements, groups, schools, trends, sects, cults, and denominations (Kirman, 2010, p.49). Contrary to common belief, the NAB is not irrational or unscientific. Instead, it utilizes the advancements of modernity and science as a means to navigate the challenges of the modern world (Kozanoğlu, 1997, p.36).

During periods of significant changes in society, people typically seek ways to find comfort, security, and peace, as well as to help make sense of their experiences. This situation often leads to the rise of NAB, alternative spiritualities, and various mystical movements. Schüle (2008, p.57) echoed this sentiment by stating: "*At critical historical junctures where paradigms shift and individuals must reassess their values, mystical movements come to the forefront.*" The necessity for integrative mechanisms during times of crisis, coupled with individuals turning to alternative belief systems when traditional institutions fail to provide support, has fostered a fertile environment for the emergence of alternative spiritualities.

According to Berger (2002, p.23), the origins of all spiritual and religious practices should be sought in the concept of "search for meaning." NRM and NAB can be seen as a compensatory tool in overcoming the spiritual void problems through a search for meaning for contemporary individuals who are experiencing difficulties in experiencing spirituality, struggling with empty spaces in their spiritual world, suffering from "ontological constriction"

and "spiritual alienation depression" (Merter, 2012, p.282). In other words, it can be said that NRM and NAB appeal to those who want to escape from the social and economic problems of the modern world.

Literature on New Age Beliefs

In many studies related to New Religious Movements and New Age Beliefs, it is observed that foreign literature is translated into Turkish and transferred under the title of sociology of religion or within the structure of theology faculties. As mentioned above, new age practices, which can be evaluated from sociological, anthropological, psychological, political, religious, and economic perspectives and can be understood in a wider spectrum with the approach of different disciplines, are positioned according to the researcher's perspective. The studies aim to define various movements within a historical framework while providing descriptive information about the beliefs, approaches, views, and organizational forms of some movements seen in Türkiye at the local level.

Kirman's work "*Sociology of New Religious Movements*" (2010), Köse's "*Millennium Orders*" (2011) and "*Return of the Sacred*" (2014), Günay's "*New Age Beliefs in Türkiye*" (2011), Özkan's (2014) work titled "*Doomsday Orders*" provide enlightening information about the formation, development, spread, and characteristics of new religious movements worldwide. Kurt, in his work "*Sociology of Religion*" (2012), emphasizes that NRMs emerge not in the extremes of society but right in the center. Kurt explains the social factors in the formation of NRMs; individuals who are turned away from individualism and loneliness offer solutions to their search for "community and collectivism" by providing them with "alternative family units" and summarizes that the appeal of rational, eclectic, and syncretic formations in religious preferences becomes attractive (Kurt, 2012, pp.294-301). Several articles and theses have been written shedding light on the understanding of NRMs and New Age movements, revealing the demographic profile targeted, and explaining the reasons and motivations of people from which sectors direct themselves towards these areas. In several master's theses, the origins of New Age movements have been explored, focusing on their spread in Europe and the USA, as well as their reflections in Türkiye. Some theses introduce what New Age is, while others share the results derived from examples of teachings, practices, or applications within New Age. Researches made in Türkiye generally indicates that people having a tendency to practice NAB are non religious people with high education and income levels and women outnumber men. Examples for these theses include Uğurlu (2011), Uysal (2015), Develi (2019), Acar (2019), and Aydın (2008). Additionally, Başkaya

(2006) evaluates New Age movements as a practice in constructing a new sacredness; Mashael (2020) emphasizes that the interest in the New Age is higher among women, conducting interviews with 12 women aged between 30-52 and examining the healing aspects of the "feminine" qualities in a society still holding patriarchal characteristics. These theses generally aim to introduce New Age and provide information about the concepts, practices, teachings, and philosophies within the movement. There are various articles written with similar aims. Arslan (2006), Bodur (2000), and Soyubol (2021) discuss the formation and effects of spiritual movements in Türkiye.

Mirza's (2014) work, which was turned into a book titled *"New Trends in Religiosity and Spiritual Quests"* from her doctoral thesis, attempts to evaluate the reasons for individuals' spiritual quests and the position of religion and secularism in these quests. She stated that the data he obtained from the research is *"directly related to modernity and the living conditions brought about by modernity, rather than the concepts of religion and belief"* (Mirza, 2014, p.67). Utilizing data from the research conducted in various cities of Türkiye between 2018-2020 within the scope of the "Spiritual Quests in Türkiye" project supported by the TÜBİTAK 1001 program, Cengiz et al. prepared a work titled *"Spiritual Quests in Turkey: Deism, Yoga, Buddhism, Meditation, Reiki, etc."* (2021). The study examines Türkiye's economic and political dimensions from a macro perspective, concluding that the segment defining itself as secular is interested in this field and that 72% of the participants do not "like" institutional religions. It is emphasized that individuals interested in NAB have grown up in secular families distant from religious education and, therefore, have turned to alternative spiritual quests due to the lack of the spiritual feelings and collectivity provided by religion. It is expressed in their own words that a "headscarf-wearing" participant did not receive "very tolerant" treatment at a training they attended, and it is pointed out that the concept of tolerance emphasized in the trainings may not always be reciprocated. Various practices are not analyzed in the work, the researchers' experiences are shared. Evaluations are made based on the connections between gender and ecology. Although the majority of participants are women, it is mentioned that trainers are generally men, and somehow the patriarchal social order can be read in this hierarchical structure. As we will see in the following parts of this research, these findings do not correspond with what we have obtained.

In his 2015 doctoral dissertation titled *"The Relationship between Human Search for Meaning and New Age Beliefs"*, Aydın investigated the connection between these two concepts. In the study, a scale consisting of 20 questions called the "New Age Beliefs Scale" (Aydın, 2015) was used to understand individuals' religious beliefs in the form of NAB.

According to the results he obtained in his study, individuals between the ages of 31-45, married, with a high level of education, and males are more likely to find their lives meaningful. The obtained data shows a correlation between those who experience a lack of meaning in their lives and their orientation towards New Age beliefs.

Method

Model

The aim of the research is to comprehend the popularity of NAB in our country and determine which social segment it is more popular in, based on the social and demographic characteristics of the participants. The study also seeks to understand how participants define themselves in terms of religion, secularism, belief, etc., in their own words. As well as the reasons, motivations, areas of interest, and benefits that drive their involvement.

The research does not seek to understand society's general attitude towards NAB or include evaluations from individuals who are casually interested in them as a hobby. As the target audience consists of individuals who have been engaged in educational centers for at least one year, specific questions have been formulated to cater to the participants' interests in the field. Questions that are not relevant to this purpose have been deemed unnecessary.

The study was conducted using the qualitative method which is based on understanding and interpreting, rather than explaining. This method allows for detailed data collection on group dynamics, meanings created through interpersonal interactions, and more subjective aspects such as individuals' attitudes, behaviors, values, emotions, and experiences. The study employed "in-depth interviews" and "participant observation" as data collection techniques to gather detailed information with purposive sampling, which aimed to create a group that was fully representative, homogeneous, non-random, and relevant to the purpose (Kümbetoğlu, 2019, p.97). The population of the study includes individuals who are interested in NAB and are currently attending training centers either as trainers or participants, with the goal of becoming educators in the field of NAB in Istanbul.

Study Group

In this study, a group with the full representation capability, homogeneous, non-random, and purposeful sampling technique has been utilized (Kümbetoğlu, 2019, p.97). Initially, individuals who had a personal acquaintance with the researcher were contacted. Using criteria determined with the snowball technique, the group of participants for the study

was expanded until data saturation was reached. To maintain neutrality, data from individuals personally acquainted with the researcher were excluded from the study. The research universe consists of individuals interested in NAB, who attend training centers as trainers or participants and aim to become an NAB instructor. Individuals with less than one year of interest to a certain branch of NAB or follow the methods without attending a center are not included in the research scope.

Data Collecting Techniques and Analysis

In this research, in order to access detailed data related to the research topic, "in-depth interviews" and "participant observation" techniques were used. With these techniques, instead of defining the researched community from the outside, the opportunity to evaluate from an "inside" perspective is obtained. By asking open-ended questions, it is possible to understand the subject from all aspects. These techniques allow the researcher to notice meanings, intentions, and attitudes that may not be directly understood, and enable to understand how participants interpret situations, events, and phenomena both within themselves and in their surroundings (Kümbetoğlu, 2019, pp.71-72). With the in-depth interview technique, it is possible to cover all aspects of the researched topic, delve into the essence of a social phenomena, establish face-to-face and one-on-one relationships with participants to provide detailed data (Tekin, 2006, p.101). Another purpose for choosing this technique is to enable the researcher to be directly involved in the research process, guide the interviews in a purposeful manner, ask more detailed questions when necessary, provide explanations, and allow for a comprehensive understanding of participants' perceptions and understandings related to the research topic. Since a community can only be understood by being a part of their lives, by joining the same environment as participants and spending time with them, it was thought that the participant observation technique would be beneficial for making a multidimensional and detailed presentation of the research (Sönmez and Alacapınar, 2011, p.106). With a semi-structured question guide, open-ended questions were asked to understand participants' evaluations in depth. Throughout the study, more than 250 individuals were interviewed, and in-depth interviews were conducted with 76 of them, where data saturation has been reached.

Data Analysis

In this study, a descriptive method was used in data analysis. In-depth interviews conducted throughout the research were detailed through interviews and analyzed using the

content analysis method, one of the qualitative data analysis methods. With the content analysis method, the data were classified, summarized, and categorized under verbal data to be compiled into tables. These sections, which form a meaningful whole, were named and coded by the researcher (Neuman, 2012, p.668). After examining the concepts and revealing their relationships, codes were combined by finding common aspects and these relationships were explained with a more comprehensive overarching theme (Yıldırım and Şimşek, 2016, p.237). Themes, patterns, and relationships were identified by placing data with similar meanings under the same codes (Akarsu and Akarsu, 2019). Common themes and relationships were identified by comparing recurring words and phrases. In the final step, the results of data analysis were summarized by summarizing the codes and themes obtained. The findings were compared and interpreted with the findings obtained in similar literature reviews within the scope of the research.

Ethical Committee Approval

This research has been ethically approved by Beykent University Ethical committee at 02.08.2022 with the number 74966756- - 250 and code E-45778635-050.99-64524.

Findings

Throughout the research, it is possible to mention that there are common grounds that bring together all participants who are inclined towards NAB trainings for different reasons and with different purposes, and that trainers also possess similar characteristics within themselves. On the other hand, it can be observed that trainings organized on different topics repeat a common pattern within themselves. Goffman's (2009) analysis of self-presentation, group interaction and communication, likening them to a theater play through Dramaturgy theory, clearly reflects the concepts of performance, actor, stage, and showcase in all these training centers. The expectation of participation in NAB-related trainings for at least a year, which I had decided before the research process began, reveals that individuals, when they spend a certain time in a certain environment, start to speak with a certain "language" as emphasized by Bourdieu (1996), their word choices, body language, and ways of expressing themselves demonstrate their habitus. Participants, as Bourdieu expressed, enter into a game with various personal benefit expectations, knowing and accepting its rules, which corresponds to *illusio*. While the fact that many of the people I interviewed have taken various trainings together and have formed friendships can be interpreted as the formation of social

capital in the field, it can be stated that the certificates given at the end of the trainings provide symbolic capital. Based on the findings obtained through in-depth interviews and participatory observations during the research period, the most popular NAB topics in Türkiye are coaching, mindfulness, breath therapy, Theta Healing, Access Bars, EFT, Reiki, Bioenergy, NLP, family constellations, regression, and Sufi teachings.

According to the in-depth interviews conducted with 76 people, the majority of individuals interested in NAB (54 people) are women. While the age range varies according to the trainings, the 35-45 age group constitutes the largest segment. 52 participants described themselves as having a middle income level, while 24 participants described themselves as having an upper-middle income level. 69 participants have received university education or higher. In terms of marital status, married participants are the majority with 45 people, followed by single (17) and divorced (14) individuals. When the literature on NAB is reviewed, it is mentioned that the high proportion of female participants and the interest of individuals with a good education and middle/upper-middle income level align with our research, while the claim that young people and singles are more inclined towards the field is not supported by our research. Tucker (2002, p.50) expresses that individuals interested in NAB in Western societies are mostly women, while Yates and Chandler (2000, p.383) have shown that men are more hesitant towards NAB compared to women and there is a significant difference when compared to the number of female participants. According to the research conducted in the UK, 80% of those interested in NAB are women (Flanagan and Jupp 2007, p.115). Mashael's master's thesis conducted in our country highlighted that women are more involved in NAB practices as both participants and practitioners compared to men. In accordance with our research, Beatrice Hendrich emphasized in her study "*Beyond State Islam: Religiosity and Spirituality in Contemporary Turkey*" (2011) that middle-class women aged 30-50 in Turkey show more interest in spiritual quests compared to other groups.

The marital status obtained in this research contradicts Schnell's (2009) research, which found that most existential crises are experienced by individuals living with a partner without marriage (9%), divorced individuals (9%), and single individuals (11%); while among married couples, this rate is only 3%. Similarly, Aydın (2015) found in his doctoral thesis that singles have a higher interest in NAB than married individuals. Consistent with the results of our research, Arslan, in his work "*Turkish Popular Religiosity*" in 2004, found a higher participation rate in NAB among married individuals (Arslan, 2004, p.213-214). Throughout the interviews conducted during the research, it is noteworthy that the lowest education level is high school, with a considerable number of individuals who have completed their

postgraduate and doctoral degrees aside from university education, which confirms Aydın's statement (2015, p.139) that *"the belief levels in the New Age of individuals with high education levels are higher compared to those with low education levels."* Similarly, in the USA, Fuller (2001, p.103) defines the demographic profile of individuals interested in the New Age as *"relatively highly educated, with a high income level, aged between 25-49, non-black, generally university graduates, working in a white-collar job."* Roof's research in 2009 also indicates that a vast majority of those interested in the New Age movement are well-educated individuals who have achieved certain successes in their professional lives (Roof, 2009, p.58-59). According to Giddens (2010, p.227), dealing with these teachings and trainings obviously carries a class privilege as it requires money and time. Naisbitt and Abordene (1990) have defined individuals interested in NAB as those who have received university education and have financial means, stating that *"There are very few new age workers from the working class."* This approach is consistent with the discourse participants use to describe their economic situations. It is quite possible to say that it is unlikely for people who do not have financial means to suddenly quit their job and career like participant 7 who has quoted:

"I woke up one morning and quit my job, I thought that I needed a new path. I had enough with the constant pursuit of having more and more...I had a big house, a good car... and so what I wasn't happy."

This situation is in line with the statement that those interested in NAB, which is frequently encountered in the literature, have high education and financial resources.

In the literature, it has been stated that the majority of people interested in NAB (spiritual counseling and guidance) are individuals who do not have a connection to institutional religions, and even have a distant and critical approach to them. In our study, 40 participants⁶ identified themselves as religious/conservative, 22 individuals⁷ stated that they are believers and spiritual even though they do not always live according to the "rules and principles" of religion, and only 4 individuals mentioned that they do not feel connected to any institutional religion but believe in "an energy". There was no participant who defined themselves as completely faithless, without any belief, or not valuing spirituality. This situation suggests that spirituality is a need for every individual regardless of the era, culture, or geography they live in, and that spirituality can be evaluated and experienced independently of the teachings of institutional religions (Harris, 2014). The fact that veiled

⁶ Islam being mentioned

⁷ 20 of them have mentioned Islam the other two refers to Christianity

participants make up about one-fifth of the female participants supports these views. Unlike previous studies conducted in our country, neither veiled participants feel uncomfortable in these environments nor do "other" individuals approach veiled participants with any prejudice. While 72 participants believe that NAB is compatible with their own religion, the same individuals stated that they could practice practices belonging to other beliefs without any problem. None of the participants categorized NAB under the title of belief/religion, with the highest rate being in the form of "doctrine-practice" definitions. This was followed by those who defined it as "philosophy" and "a way of thinking". Based on these findings, it can be seen that NAB cannot be evaluated as a religion, a religion-like formation, or a pseudo-religion (Arslan, 2006, p.9), and that individuals do not have an attitude of distancing themselves from or critically approaching institutional religions. With the explanations of the participants, NAB can be translated as "movements without religious discourse", it seems more accurate to define NRM as "non-religious movements" (Enroth, 2005).

Participant 17's words form a good example about the approach to religious people who also benefit from NAB: *"I am a very religious person...Knowledge does not only come from religion or Islam, it comes from everywhere. What does the Quran say: Go seek knowledge even if it is in China? I pray five times a day as my religion tells me to do, I wish I had the opportunity to go to Tibet and receive education there from the monks. I think we are all made of energy, that's why I am in this bioenergy training know...last year I attended REIKI sessions which helped me a lot...Any place with a spiritual roof gives me happiness and I accept them all."*

It does not seem correct to attribute the increasing interest in NAB to the decreasing importance of religion in contemporary life, as often emphasized in the literature on the subject. In their study, Cengiz et al. (2021) found that 72% of participants did not "like" corporate religions. This result does not correspond to our research. Studies conducted in our country generally report that educated participants with middle to high income levels, who do not describe themselves as religious/conservative, are predominant. Examples of these studies include Uğurlu (2011), Uysal (2015), Develi (2019), Acar (2019), Aydın (2008).

Nowadays, it is possible to say that religion, beliefs, and faiths have not disappeared, but have only transformed in the way individuals need in their lives, offering new formations and support mechanisms that provide different ways to find the answers they seek, due to increasing knowledge and opportunities. Individuals interested in NAB generally show interest in teachings that are compatible with their own culture and geography, which are

more "familiar" to them, and tend to blend and harmonize these teachings with the institutional beliefs they feel they belong to.

All the educators I interviewed in depth are over 45 years old and at least university graduates, with 10 out of 12 educators stating that they served as senior executives in corporate companies before becoming educators. Currently, they all make a living by organizing training, courses, seminars, and sessions in the field of NAB after leaving their previous professions. The majority of educators, 8 out of 12, are women. All educators, as Goffman (2009, p.33) pointed out, demonstrate effective performances, paying attention to their tone of voice, facial expressions, and body language. Educators use a language and form their expressions that are suitable for the general profile of the participants. The details such as decoration and refreshments in the venues where the training and activities are organized create an atmosphere suitable for the field, forming appropriate showcases for the performance (Goffman, 2009, p.35).

It is possible to say that participants in all NAB trainings exhibit common characteristics in their ways of expressing themselves, the words they choose, their perspectives on life, and their clothing styles. Especially in Sufi education, the common language and behavior patterns created by individuals become very concrete. Here, Bourdieu's concept of habitus is very clearly reflected. The formation and continuity of fields are ensured as a result of the common experiences shared by individuals with the same habitus. People in the same field behave according to the rules of that field by accepting them. In order for a field to continue, there must be individuals with habitus who want to be in that field, who attribute importance and value to that field (Bourdieu, 2016), and it is possible to talk about the existence of this in these centers. Individuals participate in NAB trainings with the aim of benefiting themselves and fulfill the requirements of the trainings for this purpose. This situation can be explained with Bourdieu's analogy of the game. The concept of *illusio* also seems appropriate for individuals who want to become professionals in the NAB field, as well as those who want to develop themselves physically, mentally, and spiritually. It is possible to observe that applications in all trainings are interconnected, support and complement each other. For example, in bioenergy training, color therapy is also applied, a day of coaching training is dedicated to NLP, breathing techniques are used in mindfulness training, specific points in the body stand out in EFT and Access Bars, the power of thought, the importance of staying in the moment, the impact of spoken words in our lives, the subconscious, energy, divine source, and the unity of all living beings are frequently mentioned in all of them. In today's rapidly changing world where all kinds of changes are

happening quickly, especially with the uncertainty and lack of trust environment that emerged after the pandemic, it is expected that different types of knowledge will not separate with rigid lines but rather merge flexibly, complementing each other to meet the different needs of individuals. At this point, it becomes necessary to read NAB and the teachings it contains as "being good for the individual", along with the impossibility of evaluating it as right or wrong. Throughout the trainings, the ease and success of the methods are frequently emphasized by the trainers, as well as detailed descriptions of the "miraculous" changes and transformations in the lives of individuals who apply the method.

Scientific concepts are frequently included in the trainings, sharing data on energy, frequency, vibration, as well as the functioning of the human brain, the workings of internal organs, and psychology. Phrases like "according to research conducted, data obtained" are commonly used. Religious concepts and statements are also included, with trainers' speeches emphasizing either religious or scientific statements depending on the participant profile. Here, it should be noted that the education provided in the field does not contradict with religion, science, ancient teachings, but on the contrary, it complements each other in harmony, as an effort to eliminate any question marks in the participants' minds. When participants were asked about how they economically evaluate the areas related to NAB whether they see it as a market, most of them evaluated it as a sector, but they were not complaining about the expenses they made and considered the figures given to be reasonable. The trainers, on the other hand, were understood to see the fee they received as a compensation for their efforts and time, and evaluated it as a "balance of give and take". Therefore, it is revealed that neither the trainers nor the participants have any discomfort with the money paid. On the other hand, all education centers appear in a hierarchical structure like a corporate company, from their websites to their secretariats, administrative affairs, and trainers. Based on the participatory observations and in-depth interviews I conducted throughout all the trainings I attended, it is possible to say that almost all participants have a profession, so they do not attend these trainings with the aim of pursuing a hobby or "filling free time", but with specific goals and purposes in mind.

They all make a specific effort, especially allocating time and money, to adjust their schedules and daily tasks according to the dates and times of their education programs. Accordingly, participant profiles are as follows:

- i. Those who seek meaning by thinking that there is a lack of meaning in their lives. People who set out in search of meaning are generally those who live in material prosperity. Therefore, it is possible to say that none of them have any financial concerns, but they have

reactions to what life brings, people's constant rushing, the necessity to always move forward, and constant consumption. While some move towards a goal, it can be observed that some enjoy this process, the state of search; it can be said that they add a "meaning" to their lives while striving for this search, based on their own statements. The participants' statements highlight the feeling of "something missing despite having everything". The words of participant 7 are:

"I am very anxious, worried, always feeling tired, feeling like I can't keep up with anything, feeling like I am always running late, feeling like I am constantly rushing and not resting, feeling like I am unable to control my life, feeling like I am on autopilot, enjoying very few things or pretending to enjoy them. Sometimes I want to leave everything behind, but work, responsibilities, children - how will they be? I feel like I am living someone else's life. I wake up in the morning and start rushing. The constant need to consume more, buy the latest model car, have a bigger house, make sure the children attend all the courses, let's compete with each other for expensive brands, etc. It's always about more and more, a never-ending process that is never enough."

At this point, it can be mentioned that there is a search for adding more meaningful elements to their lives, as well as an effort to give meaning to what they experience, the negative situations and events they see around them, illnesses, disasters. According to Wilson and Dobbela, people who participate in these kinds of movements are individuals who, in our study, are attending educational centers and seeking vibrant, warm, cheerful, open, "welcoming" environments due to boredom or weariness of the daily monotony or dullness of life (2004, p.119).

ii. Those who want to make changes in their physical, mental, and spiritual characteristics that they do not like: Here, especially desired characteristics such as losing excess weight, getting rid of bad habits and stress, as well as being more positive, cheerful, relaxed, calm, and flexible stand out. In particular, techniques such as Theta Healing, Access Bars, Bioenergy, Reiki, NLP, and yoga not only contribute to individuals' physical, spiritual, and mental well-being, but also often emphasize vitality, youthfulness, and a healthy body. It is also possible to mention that there are many discourses and efforts aimed at reversing the graying of hair, stopping and even eliminating wrinkles on the face, having a slimmer body, and "getting rid of the traces created by years". In all of these discourses, the emphasis on a young and healthy body, especially in capitalist societies, and directing people towards consumption to achieve this, come to light. In addition to being happy and joyful in life and conforming to the established model of the spiritual world, the necessity for the body to

always be young and fit is emphasized, and the body is turning into a cult (Özbolet, 2017, p.269). As a result of considering aging as a flaw and a situation to be avoided, these discourses find a response and can be seen as a desire to challenge the realities of life and create their own realities with a "challenge" against the aging process. It is possible to see the emphasis on individuality, walking on the path chosen by oneself in the way chosen by oneself, resisting aging and illness, and being responsible for everything in one's life.

iii. A new search for identity/self: Some participants have repeated phrases such as "a new self" and have been observed to be aiming to create a new identity beyond the "person" they have been up to a certain age. The common motivation among most participants, "to change and transform themselves", can be evaluated as a reflection of seeing their identities as something that can be constructed and changed, rather than given. They aim to liberate themselves from any kind of imposition coming from the past, their childhood, or their families, and to create their own destinies, futures, and values. In this way, they aim to create a new identity, a new self; to constantly surpass themselves by revealing their potentials and reaching their best "versions", and to live their lives to the fullest. It can also be said that the history of modernity is in a way the history of a certain type of self (Bauman and Raud, 2018, 14). Being modern is perceived as living in a world not bound by traditions, customs, habits, rituals, expectations, and beliefs. In this process, which can also be considered as the effort of contemporary individuals to create a self, an identity for themselves, individuals intend to find themselves, develop themselves, recreate themselves, "reformat" their personalities, reach the qualities they idealize and leave behind what they do not like, and get rid of emotions, thoughts, memories, and traumas that do not serve them.

Just like a sculptor creating a work of art, it is possible to talk about a change, differentiation, inner structuring, an "inner aesthetic" process in the person's inner world, spiritual realm. Nowadays, people have become obsessed with "creating themselves" (Funk, 2013, 63). Participants thus embark on a path to adapt to what they consider to be "appropriate" ways of thinking and feeling, lifestyle, and characteristics befitting the people of this age. Today, no one is willing to accept what is given or imposed; everyone puts their own freedom, choices, and preferences to the forefront. Therefore, individuals aim to change even the characteristics they inherit from their family, environment, and even genes, and to recreate and organize them according to their own taste. A sense of "weariness" and a search for renewal can be observed in individuals in all these trainings and groups. What individuals want to achieve as a result of their search is not an investment in the afterlife; it is based on

living in a way that suits their preferences in this world, finding peace, and achieving abundance and prosperity. –

iv. Those who want to acquire a new profession: The vast majority of participants (59 out of 64) have expressed their desire to specialize in the fields they have received education in and turn these educations into a profession professionally, while 5 of them have expressed their warm feelings towards this situation by saying "maybe in the future", only 4 people have stated that they do not intend to turn the field they have received education in into a profession. Currently, some of them are already providing counseling/training services in a field within NAB outside the field they have received education in.

The expectation of the majority of participants to have a profession in this field also reveals their expectation of providing them with a financial benefit. At this point, the importance of the certificates and documents obtained after completing the trainings becomes apparent. Especially in coaching training, it is understood that participants research the educational institution and prefer it because it has an internationally recognized certificate. As we can see from the words of participant 9 who is a psychologist:

"Honestly, I want to make a lot of money from this job... Of course, it is very important to help people but I want to have many clients, make a name for myself, and have a nice office. Since I have a psychology education, coaching seems very close to me, and nowadays coaching seems warmer to people than being a psychologist...thus I value the certificate that I will obtain from here and plus it has an international accreditation."

The interest that arises in individuals in these approaches is considered appropriate for Bourdieu's concept of "illusio". This concept refers to things that lead individuals to the field, convincing them to participate in the "game" (Bourdieu, 1996).

v. Those seeking social environment and sense of belonging: Individuals carry a desire to be free and autonomous on one hand, while on the other hand, they want to belong to a community, to be understood, to share common values and views. Participants often mention how good the environment they received education in is for them, how they can express themselves comfortably there, and how they form "spiritual families". It is possible to say that in all educational centers, there is a warm, friendly atmosphere where individuals can express themselves comfortably and do not face any criticism. Phrases like *"we are in a safe and strong circle, we can open up"* are repeated frequently throughout the trainings, allowing everyone to express themselves freely. Thus, it can be said that participants take a break from the "outside world" and find the security, understanding, communication, interaction, and tolerance they cannot find there in the "suspension communities" (Bauman, 2016, p.22) where

they can suspend their fears and concerns, and in the "warm circles"⁸ (Rosenberg, 2000) created. When it is assumed that every human community is an "attempt to create a world" (Berger, 2011, p.51), these centers based on volunteerism seem to provide socialization and a sense of belonging by taking on the roles that were previously fulfilled by family, village, neighborhood, or community members (Hervieu-Leger, 2006, p.54) to their participants.

On the other hand, in contrast to the feelings of isolation and alienation experienced by contemporary individuals, formations that gain appeal with a sense of belonging strengthened by solidarity, common emotions, and thoughts also provide their members with "social capital" (Bourdieu and Wacquant, 2014) through personal relationships formed among individuals within the centers. In NAB trainings, individuals feel safe, accepted, and supported in these centers (Roof, 2009, p.57-58). It is observed that participants in these trainings carry both the desire for "self-discovery" and the desire for "belonging and being part of a team" (Funk, 2009, p.12). It can be said that it is quite attractive and appealing for individuals who cannot find what they are looking for in their social life, have a limited social circle, cannot socialize due to a busy work life, or differ from their existing social circle in terms of views and thoughts. As a result, individuals can experience a much more "accelerated" process of evolving from acquaintanceship to friendship after encounters in the outside world. After a short chat outside, when someone says "let's have a coffee", this offer, which may not be very appropriate, is generally perceived as natural and ordinary in these environments and is generally positively received. Behaviors that are seen as unusual in other situations begin to be accepted as ordinary behaviors in certain areas (Bourdieu, 2006, p. 341). Individuals can share any topic they want in these centers as they wish, and they believe that others listen to them "really" without criticizing and can express themselves very comfortably. They can openly express the situations, events, traumas, sorrows, and pains that affect their lives. They cry together, laugh together with other participants, and experience moments that they may not even share with their closest ones in their private lives. These sharing opportunities also allow the development of intense emotions between individuals, the formation of emotional bonds, and feeling safe. When the trainings end, it can be seen as natural for people with limited social circles and limited occupations to desire to continue

⁸ Göran Rosenberg used the concept of a "warm circle" in an article published in "La Nouvelle Lettre Internationale" in 2000 to describe the pure state of togetherness that people are in. While once common, it has become rare in today's modern society. The commitments offered and actually expected within the warm circle are not derived from external social logic or an economic cost-benefit analysis. This is exactly what makes the circle warm. There is no need for the conformity and cold calculations that the surrounding society presents as distant and unappealingly "reasonable". Those within the warm circle will not need to prove anything, and no matter what they do, they can expect understanding and help.

with different trainings, as they may fall into a void. These feelings can be seen in participant 11's words: *"Socialization is really happening in these trainings. The best part is that everyone is very open, no one pretends and expresses themselves as they truly are. In which other environment will you experience this? I feel like I really know these people and can really be myself and I know that I am accepted and loved..."*

Many participants attend various trainings without limiting themselves to a single subject or field. Throughout the trainings, it has been observed that many people who have become friends by meeting in previous trainings decide to take many trainings together and often come together in their social lives.

vi. Those who seek healing: Participants do not oppose conventional medicine, they all advocate consulting expert medical doctors as a priority when they have a physical, mental, or spiritual ailment. They see energy healing and other methods as complementary and supportive elements.

vi.i. Physical Healing: Those who aim to find healing for their own and their loved ones' physical ailments are included in this group. Migraines, stomach problems, heart conditions, tics, and cancer diseases have been mentioned by the participants. Additionally, those who want to have a healthier, fitter, younger body are also included under the physical healing category.

vi.ii. Mental-Spiritual Healing: The issues that participants particularly emphasized are anxiety, panic attacks, worry, depression, moodiness, and unhappiness.

vi.iii. Seeking Healing in Relationships: Transforming, repairing, and improving relationships with spouses/partners, parents, family members, children, and relationships in their work lives are highlighted.

vii. Those who want to bring abundance and prosperity into their lives: Those who especially desire more than what they currently have in terms of material matters can be included in this group.

viii. Those who come out of curiosity, influenced by their surroundings/media/popularity: In this category, it is possible to see the reflections of popular culture and the influence of social media posts.

According to the findings obtained in this research, NAB seems to have established itself in the Turkish society with its eclectic and syncretic structure, open nature to change, development, and different interpretation styles. It is possible to talk about a NAB field where people from different social and cultural backgrounds, various beliefs can turn to according to their own needs. Therefore, there is a NAB that can respond to all kinds of requests that can

be multiplied, such as searching for answers to big questions in their lives, adding meaning to their lives, trying to solve a physical, mental, or psychological problem, attracting abundance, correct relationships, acquiring a new profession, or supporting their current profession, and providing benefits in the desired direction to the individual. It seems possible to say that there is no such thing as "failure" in NAB. If desires do not come true, it may be due to reasons such as the individual not wanting enough, not applying the practices correctly, not being able to adjust their subconscious, frequency correctly, not being ready yet, as well as the existence of a divine and/or universal "better plan", which may result in wishes not coming true. Thus, individuals continue to try constantly, and they can easily switch to a different practice that they think will be more "suitable" for them.

Results and Discussion

It can be said that the interest in the field and the number of participants in the trainings will continue to increase, considering that all participants have stated that their processes related to NAB will continue in the future, 60 people have mentioned their intentions to attend different trainings, 76 people have recommended and directed 70 of their own circles to attend NAB trainings, and no participant has a skeptical, questioning, or critical attitude towards NAB and the trainings. In the increasing number of NAB centers, participants share topics and events that may be extremely personal and "secret" in their lives with people they have never met before. This situation shows on one hand how much individuals need to "really" trust someone, while on the other hand it may appear to be of a nature that could create a security issue. It seems necessary to monitor the reliability of educational institutions, trainers, the information provided, and the practices carried out. It should be considered that practices and information conveyed can be effective and beneficial, but also susceptible to abuse, leading to different problems.

The importance of the supervision of expert physicians, especially in some mental and physical illnesses, should not be overlooked. It would not be wrong to say that there is a significant oversight in this regard. Considering the wide range of fields, it is necessary to conduct comparative research from different disciplines. It is possible to develop different perspectives and approaches on the subject by examining many areas influenced by holistic and organic nutrition, homeopathy, Ayurveda, physical healing fields, medicine, various sub-branches of sociology (health sociology, religion sociology, etc.), psychology, theology, tourism, TV series and cinema, literature, social media, consumption, etc. In addition, it is

thought that conducting comparative studies between Turkiye and other countries can be enlightening in understanding how the field is perceived in different societies. Therefore, conducting detailed studies on the subject seems important in order to understand both individual and societal change and transformation processes.

Ethical Committee Approval

This research has been ethically approved by Beykent University Ethical committee at 02.08.2022 with the number 74966756- - 250 and code E-45778635-050.99-64524.

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