Analyzing of the opinion of teachers conducting mind game courses for the applicability of mind games

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ABSTRACT

The primary purpose of this research is to ascertain the opinions of the teachers who attended the in-service training of mind games arranged by the Ministry of National Education and conducted the mind games course. To achieve this goal, the answer to the question, "What are the reasons why teachers do or do not prefer mind games?" was sought. The research was designed with a survey model, which is one of the descriptive research designs. The data of the research was obtained with the help of the survey form titled "Teacher Opinion Survey for Mind Games Course" practiced to the teachers conducting the mind games course in Kayseri in the 2016-2017 academic year. Some of the results gained from the research show that the most popular reason for teachers to prefer mind games is to develop students' abilities. Also, one of the results of the research obtained from the research is the scarcity of mind games materials used in schools. In this sense, certain studies can be conducted to reduce the scarcity of this material in schools.

Keywords: Mind, game, mind game, teacher, mind game courses.

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INTRODUCTION

When the literature is reviewed, it is observed that it is probable to encounter various definitions related to the game. Still, it is not very easy to find a precise definition. Thus, according to Uğurel (2008), the game differs from person to person due to its diversity, forms, and explanations. As the game provides benefits for the individual from pleasure to socialization, it is not very easy to make a complete description of the game, and various definitions exist because of its social, psychological, and moral aspects (Gedik, 2012). According to the contemporary dictionary of the Turkish Language Association, the game is defined as "entertainment that enhances talent and mind, has specific rules, and is useful for having a good time" (Turkish Dictionary, 2011: 1830). According to Ministry of Education (2013a), play is defined as a cheerful activity that children express their sentiments and thoughts, make research and observations, and socialize with their environment. In another definition, the game is described as the action of one or more

people to realize a particular goal by sticking to specific rules (Demirel, 2001). According to Saban (2000), games are essential activities where children's curiosity appears clearly.that has been discussed for many years and are associated with virtually most of the issues in the literature. The concept of personality, as in many different fields of science, draws attention as an important research topic in the field of sports sciences, which can mobilize the masses. The main factor causing this consideration is the desire to establish a link between personality and performance.

Game is an activity improving individuals' physical and cognitive abilities and various skills (Güneş, 2015). Hence, the game has been applied in diverse periods, primarily in the developmental periods of the individual. The game can be evaluated as an essential activity practiced for the development of individuals at various times and fields from infancy to preschool, and from primary school period to university. According to Çakırer-Özservet (2015), besides all developmental areas, the

game has particular significance in motor and physical development. The game, assisting the maturation of children's thin and thick muscles, influences the individual physically, mentally, and socially in a positive way (Aral et al., 2000; Kuru and Köksalan, 2012).

Individuals structure the knowledge within the game by playing the game by themselves. Hence, the individual who is enthusiastic and actively engages in the game process will accomplish learning by doing and experiencing (Babayiğit, 2016). In the active learning approach, whose importance has been increasing today and is frequently mentioned in the literature, the games are assessed technically (Açıkgöz, 2008). Supposing that the child has to play (Kaya et al., 2017), the result suggesting that it is essential to link this process with education emerges. Imam al-Ghazali's words stating "*urging the child to stop playing and pushing him to study continuously destroys his heart, blinds his mind, and brings the happiness of his life away; eventually, the child thinks of a trick to escape from the lesson*" exhibits how significant is the game for the child. Hence, it should be thought to be handled games and education as a whole in our schools.

According to And (1974), games are classified as games for children, games of chance, games of skill and strength, games of mind and participation; for Hazar (2000) as physical skill games, strategy games, physical skill and strategy games and physical skill games involving strategy and chance (Qtd by Gedik, 2012). According to Akandere (2003), games are divided into two groups as the games for children and educational games. The problems solved within the frame of specific logic with the aid of evidence, not adhering to any culture or race, are generally termed mind games. Mind games not only assist people to enjoy but also contribute to the improvement of various skills (Bayrak, 2008; Turkish Brain Team (TBT), 2014; Altun, 2017; Cengiz, 2017). Mind games are also described as activities for individuals to notice their abilities, perform correct and efficient decisions, create unique solutions for problems, and refresh themselves (Aytaş and Uysal, 2017; Şeb and Bulut Serin, 2017). The meeting of children with mind games is crucial in their improvement. Particularly in the elementary school period, students must get familiarized with mind games for their cognitive development. Since mind games also involve real problems, it enhances children's skills of thinking. It is also an indispensable tool for the development of cognitive skills such as problem-solving, analyzing, critical thinking, and the establishment of connections (Marangoz and Demirtaş, 2017). Besides, mind games represent an essential role in elaborating problem-solving skills encountered in daily life and being an essential skill that should be infiltrated in our education system (Adalar and Yüksel, 2017).

Mind games are also assessed as educational games. Besides training the brain, mind games encourage the individual to improve cognitive functions by exercising him (Ott and Pozzi, 2012). Also, by performing mind games, students can better comprehend problems, obtain different views, make fast and precise decisions, and apply reasoning and logic efficiently (Ministry of Education, 2013b). The value of mind games has raised so much in recent years that the Ministry of National Education began to run on elective mind games in 2012. This course, formed for secondary schools, was opened in 2013. In this sense, it is not very easy to say that there is an adequate study on mind games, which is a new area.

The definite effects of game on all developmental areas of the child, primarily physical, emotional and social fields, have been the topic of various studies (Engin et al., 2004; Ministry of Education, 2013a; Gören, 2014; Kurbal, 2015; Babayiğit, 2016; Arslan, 2017; Arslan and Dilci, 2018). Playing games is an action that children are especially enthusiastic about performing, and feel excited, add to children's physical, affective, social, cognitive, and linguistic development (Özdemir, 2006). Playing games encourages different fields of development of children (Marangoz and Demirtas, 2017), besides their personality and character development are affirmatively influenced (Gander and Gandiner, 1998).

When the studies in the literature on mind games are analyzed, it is observed that there are studies mostly focusing on the effect of mind games on skills. Experimental research analyzing some of the mind games also exist. There are also studies in which teachers' opinions on elective mind games curriculum are studied. Still, it is seen that there is no research in which the opinions of the teachers conducting elective mind games is asked for this process, and about the reasons why teachers do or do not prefer mind games. In this regard, it is considered that this research will fill an essential gap in the literature.

The primary purpose of this study is to ascertain the opinions of the teachers who attended the in-service training of mind games arranged by the Ministry of National Education and conducted the mind games course. The answers to the following sub-problems were searched to fulfill this aim:

1. What are the reasons why teachers, conducting the mind game course, do or do not prefer mind games?

METHODOLOGY

Research model

The research, carried out to analyze the applicability of mind games by teachers conducting the mind game course, was designed with the survey model, which is one of the descriptive survey models. The survey model is a research model which proposes to define a present situation and in which participants' opinions are asked (Büyüköztürk et al., 2009; Karasar, 2010; Yıldırım and

Şimşek, 2008). With the research, it is intended to determine the applicability of the mind games by the teachers conducting the mind games course according to the teacher's opinions.

The demographic aspects of the teachers taking part in the research are presented in Table 1.

Data collection tools

The data of the research was obtained with the aid of the survey form titled "Teacher Opinion Survey for Mind Games Course" developed by the researcher. The relevant literature has been reviewed in detail to develop the survey. After reviewing the literature, mind games are classified under six headings. After asking the opinions of two experts in the related field, 37 mind games, and six headings related to them were arranged, as shown in Table 2.

Besides, 22 items in total were chosen from the literature for the reasons for preferring or not preferring mind games. Repeatedly, the reasons for preferring or not preferring mind games were decreased to 12 items in accord with the opinions of field experts. Teacher Opinion Survey for Mind Games Course has two parts. In the first part, there are questions related to the demographic aspects of the teachers. In the second part, there is a survey for preferring or not preferring mind games. The data of the research was obtained with the aid of the survey, "Teacher Opinion Survey for Mind Games Course," applied to the teachers conducting Mind Games course in Kayseri in the 2016-2017 academic year. Three hundred thirty survey data in total were the data source of the research. Percentage and frequency values were calculated according to the data collected from the survey titled "Teacher Opinion Survey for Mind Games Course" to analyze the data. SPSS 18 package program was applied to accomplish these analyzes.

Table 1. Frequency and percentage distributions related to demographic aspects of the teachers taking part in the research.

Variable		Frequency	Percentage
Gender	Female	141	42.73
	Male	189	57.27
Branch	Mathematics	65	19.70
	Science	24	7.27
	Turkish Language	32	9.70
	Social Sciences	41	12.42
	Technology and Design	53	16.06
	Information Technologies	47	14.24
	Class Teacher	49	14.85
	Other	19	5.76
Seniority	1-5 years	33	10.00
	6-10 years	58	17.58
	11-15 years	66	20.00
	16-20 years	102	30.91
	21 years or more	71	21.51
Duration of Playing Mind Games	1-5 years	24	7.27
	6-10 years	53	16.06
	11-15 years	111	33.64
	16-20 years	103	31.21
	21 years or more	39	11.82
Duration of Conducting Mind Games	1 year	90	27.27
	2 years	165	50.00
	3 years	75	22.73
Total		330	100.0

Table 2. Mind games used within in the scope of the research.

Reasoning and mathematical operation games	Verbal games	Geometric-mechanical games	Memory games	Strategy games	Mind questions
Sudoku	Anagrams	Tangram	Matching Games	Chess	Three light bulbs
Slitherlink	Decoding Games	Polyomino	Recalling the Pictures	Go	Liar and truth-teller
Square Logic	Scrabble	Nodes	Direction Finding	Reversi	12 balls
Nonogram	Word Grouping	Rubik's Cube	Object Identification	Mangala	Measuring caps
Kakuro	Word Hunting	Soma Cubes	-	Checker	Matchstick problems
Division	Word Placement	Jenga	-	Guessing the number	Finding the following terms
-	-	Puzzles		Battleships	-
-	-	Mechanical division puzzles	-	-	-

FINDINGS

In this part, teachers' opinions about the reasons for preferring or not preferring mind games are presented. The items in the survey from which the data were collected but teachers did not identify as the reason were excluded from the tables.

The opinions of the teachers about the reasons for preferring or not preferring the games requiring reasoning and mathematical operation are shown in Table 3.

When Table 3 is examined, it is seen that 46.06% of the teachers participating in the research preferred game of sudoku because it improves students' skills, 27.28% of them preferred it because it is proper to students' interests and skills, 6.67% of them preferred it because it boosts the course success, but 20.00% of them did not prefer it because of students' unwillingness.

It is observed that 32.42% of the teachers preferred game of slitherlink because it improves students' skills, 13.33% of them preferred it because students because it is proper to students' interests and skills, 14.24% preferred it because of its simplicity, 6.67% preferred because it contributed to students' success in other courses, but 25.76% of them did not prefer it because of students' unwillingness and 7.58% of them did not prefer it because of lack of written sources or materials to be utilized.

It is understood that 33.33% of the teachers preferred game of square logic because it improves students' skills, 6.67% of them preferred it because it is proper to students' interests and skills, 8.19% of them preferred it because of its simplicity, 11.81% preferred it because it contributed to students' success in other courses, but 27.88% of them did not prefer it because of students' unwillingness and 12.12% of them did not prefer it because of lack of written sources or materials to be utilized.

It is seen that 30.60% of the teachers preferred game of nonogram because it improves students' skills,13.33%

of them preferred it because of its simplicity, 9.40% of them preferred it because it is proper to students' interests and skills, 6.67% preferred it because it boosts the success in courses and grade point average, but 26.67% of them did not prefer it because of students' unwillingness and 13.33 % of them did not prefer it because of lack of written sources or materials to be utilized.

It is observed that 40.00% of the teachers preferred game of kakuro because it boosts the success in courses and grade point average, 26.67% of them preferred it because it improves students' skills, 5.76% of them preferred it because it is proper to students' interests and skills, but 20.90% of them did not prefer it because of students' unwillingness and 6.67 % of them did not prefer it because of its high cost.

It is noticed that 29.70% of the teachers preferred game of kakuro because it is proper to students' interests and skills, 23.63% of them preferred it because of its simplicity, 13.33% of them preferred it because it boosts the success in courses and grade point average, 6.67% of them preferred it because it is proper to students' interests and skills, but 21.21% of them did not prefer it because of students' unwillingness and 5.46% of them did not prefer because of its high cost.

Teachers' opinion for the reasons for preferring or not preferring verbal games is presented in Table 4.

When Table 4 is examined, it is seen that 33.33% of the teachers participating in the research preferred game of anagrams because it boosts the success in courses and grade point average, 20.00% of them preferred it because it improves students' skills, 21.21% of them preferred them because it is proper to students' interests and skills, 12.12% of them preferred it because the teachers like the game so much, but 10.61% of them did not prefer it because of students' unwillingness and 2.73% of them did not prefer it because of the difficulty in providing the equipment.

It is observed that 33.33% of the teachers preferred

Table 3. Percentage distribution of teachers' reasons for preferring or not preferring the games requiring reasoning and mathematical operation

	Reasoning and mathematical operation games	Sudoku	Slitherlink	Square logic	Nonogram	Kakuro	Division
	I think that this game is proper to students' interests and skills.	27.28	13.33	6.67	9.40	5.76	6.67
	I think that this game can improve students' skills.	46.06	32.42	33.33	30.60	26.67	29.70
Reasons for preferring	I think that this game is easy to play.	-	14.24	8.19	13.33	-	23.63
	I think that this game can boost the success in courses and grade point average.	6.67	6.67	11.81	6.67	40.00	13.33
	There is not efficient written source or material that I can benefit.	-	7.58	12.12	13.33	-	-
Reasons for not preferring	The students are not enthusiactic.	20.00	25.76	27.88	26.67	20.90	21.21
	Its cost is very high.	-	-	-	-	6.67	5.46
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 4. Percentage distribution of teachers' reasons for preferring or not preferring the verbal games.

	Verbal Games	Anagrams	Decoding games	Scrabble	Word grouping	Word hunting	Word placement
	I think that this game is proper to students' interests and skills.	21.21	33.33	29.70	24.24	22.73	24.24
	I think that this game can improve students' skills.	20.00	23.64	10.30	22.42	17.27	18.18
Reasons for Preferring	I think that this game is easy to play.	-	3.03	-	11.82	26.67	24.24
	I think that this game can boost the success in courses and grade point average.	33.33	26.67	20.00	26.67	11.82	12.12
	I like this game so much.	12.12	-	-	1.51	-	1.21
	Since the games apart from this game do not exist in our school, I compulsorily prefer it.	-	-	5.76	-	8.18	6.67
Reasons for not Preferring	Students are not enthusiastic.	10.61	13.33	20.91	13.33	10.30	11.52
	It is hard to provide the equipment.	2.73	-	13.33	-	3.03	1.82
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

game of decoding games because it is proper to students' interests, 26.67% of them preferred it because it boosts students' success and grade point average, 23.64% of them preferred it because it improves students' skills, 3.03% of them preferred it because of its simplicity, but 13.33% of them did not prefer it because of students' unwillingness.

It is noticed that 29.70% of the teachers preferred game of scrabble because it is proper to students' interests and skills, 20.00% of them preferred it because it boosts students' success and grade point average, 10.30% of them preferred it because it improves students' skills, 5.76% of them preferred them because any other game apart from this game does not exist in the school,

but 20.91% of them did not prefer it because of students' unwillingness and 13.33% of them did not prefer it because of the difficulty in providing the equipment.

26.67% of the teachers preferred game of word grouping because it boosts the success in courses and grade point average, 24.24% of the teachers preferred it because it is proper to

students' interests and skills, 22.42% of them preferred it because it improves students' skills, 11.82% of them preferred it because of its simplicity, 1.51% of them preferred it because the teachers like the game so much, but 13.33% of them did not prefer it because of students' unwillingness.

It is seen that 26.67 % of the teachers preferred game of word hunting because of its simplicity, 22.73 % of them preferred it because it is proper to students' interests and skills, 17.27 % of them preferred it because it improves students' skills, 11.82 % of them preferred it because it boosts students' success and grade point average, 8.18 % of them preferred them because any other game apart from this game does not exist in the school, but 10.30 % of them did not prefer them because of students' unwillingness and 3.03 % of them did not prefer because of the difficulty in providing the equipment.

It is observed that 24.24% of the teachers preferred game of word placement because of its simplicity, 24.24% of them preferred it because it is proper to students' interests and skills, 18.18% of them preferred it because it improves students' skills, 12.12% of them preferred it because it boosts students' success and grade point average, 6.67% of them preferred them because any other game apart from this game does not exist in the school, 1.21% of them preferred them because they like this game so much, but 11.52% of them did not prefer them because of students' unwillingness, and 1.82% of them did not prefer because of the difficulty in providing the equipment.

Teachers' opinions for the reasons for preferring or not preferring geometric-mechanical games are presented in Table 5.

When Table 5 is analyzed, it is seen that 52.73% of the teachers participating in the research preferred game of tangram because it is proper to students' interests and skills, 23.33% of them preferred it because it improves students' skills, 13.33% of them preferred it because it boosts students' success and grade point average, 3.94% of them preferred it because of its simplicity, but 4.55% of them did not prefer them because of students' unwillingness, and 2.12% of them did not prefer because of its high cost.

It is observed that 30.30% of the teachers preferred game of polyomino because it improves students' skills, 29.70% of them preferred it because it is proper to students' interests and skills, 6.67% of them preferred it because it boosts students' success and grade point average, 6.06% of them preferred it because they like this game, but 20.00% of them did not prefer it because of the difficulty in providing the equipment, and 7.27% of them did not prefer because of students' unwillingness.

It is noticed that 23.33% of the teachers preferred game of nodes because it improves students' skills, 23.33% of them preferred it because it is proper to students' interests and skills, 17.27% of them preferred it because it boosts students' success and grade point

average, 2.73% of them preferred it because they like this game, but 26.67 % of them did not prefer it because of students' unwillingness, and 6.67% of them did not prefer it because of its high cost.

It is perceived that 26.67% of the teachers preferred game of rubik's cube because it boosts students' success and grade point average, 21.21 of them preferred it because it is proper to students' interests and skills, 10.91% of them preferred it because it improves students' skills, 7.88% of them preferred it because of its simplicity, but 12.42% of them did not prefer it because of students' unwillingness, and 7.58% of them did not prefer it because of its high cost.

It is observed that 27.88% of the teachers preferred game of soma cubes because it is proper to students' interests and skills, 21.21% of them preferred it because it improves students' skills, 10.91% of them preferred it because of its simplicity, 6.67% of them preferred it because it boosts students' success and grade point average, but 15.15% of them did not prefer it because of students' unwillingness.

It is seen that 35.45% of the teachers preferred Jenga because it is proper to students' interests and skills, 28.79% of them preferred it because it improves students' skills, 9.09% of them preferred it because of its simplicity, 7.27% of them preferred it because they like this game, 6.06% of them preferred it because it boosts students' success and grade point average, but 6.67% of them did not prefer it because of students' unwillingness, and 6.67% of them did not prefer it because of the difficulty in providing the equipment.

It is seen that 42.12% of the teachers preferred game of puzzles because it is proper to students' interests and skills, 17.88% of them preferred it because it improves students' skills, 10.30% of them preferred it because they like this game, 9.70% of them preferred it because of its simplicity, but 8.48 % of them did not prefer it because of the difficulty in providing the equipment, 8.18% of them did not prefer it because students' unwillingness and 3.33% of them did not prefer it because of its high cost.

It is observed that 36.67% of the teachers preferred mechanical division game because it improves students' skills, 23.33% of them preferred it because they are proper to students' interests and skills, 10.91% of them preferred it because it boosts students' success and grade point average, 9.09 % of them preferred them because of its simplicity, but 17.88% of them did not prefer them because students' unwillingness and 2.12% of them did not prefer them because of its high cost.

Teachers' opinions for the reasons for preferring or not preferring memory games are shown in Table 6.

When Table 6 was analyzed, it is seen that 47.58% of the teachers participating in the research preferred game of matching because it improves students' skills, 16.98% of them preferred it because of its simplicity, 12.42% of them preferred it because they are proper to students' interests and skills, 9.70% of them preferred it because it

Table 5. Percentage distribution of teachers' reasons for preferring or not preferring the geometric-mechanical games.

	Geometric-Mechanical Games	Tangram	Polyomino	Nodes	Rubik's Cube	Soma Cubes	Jenga	Puzzles	Mechanical Division Bilmeceleri
Reasons for Preferring	I think that this game is proper to students' interests and skills.	52.73	29.70	23.33	21.21	27.88	35.45	42.12	23.33
	I think that this game can improve students' skills.	23.33	30.30	23.33	10.91	21.21	28.79	17.88	36.67
	I think that this game is easy to play.	3.94	-	-	7.88	10.91	9.09	9.70	9.09
	I think that this game can boost the success in courses and grade point average.	13.33	6.67	17.27	26.67	6.67	6.06	-	10.91
	I like this game so much.	-	6.06	2.73	-	-	7.27	10.30	-
Reasons for not Preferring	Students are not enthusiastic.	4.55	7.27	26.67	12.42	15.15	6.67	8.18	17.88
	Its cost is very high.	2.12	-	6.67	7.58	-	-	3.33	2.12
	It is hard to provide the equipment.	-	20.00	-	13.33	18.18	6.67	8.48	-
	Total	100%	100%	100%	100%	100%	100%	100%	%100

Table 6. Percentage distribution of teachers' reasons for preferring or not preferring the memory games.

	Memory games	Matching	Recalling pictures	Direction finding	Object identification
Reasons for preferring	I think that this game is proper to students' interests and skills.	12.42	24.24	34.24	26.67
	I think that this game can improve students' skills.	47.58	42.42	25.76	46.67
	I think that this game is easy to play.	16.98	13.03	11.51	6.67
	I think that this game can boost the success in courses and grade point average.	9.70	13.64	15.15	13.33
Reasons for not preferring	It is inefficient for students to show their skills.	-	-	7.27	1.21
	There is not efficient written source or material that I can benefit.	8.48	-	-	-
	Students are not enthusiastic.	-	6.67	6.06	5.45
	It is hard to provide the equipment.	4.85	-	-	-
	Total	100%	100%	100%	100%

boosts students' success and grade point average, but 8.48% of them did not prefer it because of lack of written sources or materials to be utilized and 4.85% of them did not prefer it because of the difficulty in providing the equipment.

It is seen that 42.42% of the teachers preferred game of recalling pictures because it improves students' skills, 24.24% of them preferred it because it is proper to students' interests and skills them, 13.64% of them preferred it because it boosts students' success and grade point average, 13.03% of them preferred it because of its simplicity, but 6.67% of them did not prefer it because of students' unwillingness.

It is noticed that 34.24% of the teachers preferred game of direction-finding because it is proper to students' interests and skills, 25.76% of them preferred it because it improves students' skills, 15.15% of them preferred it because it boosts students' success and grade point average, 11.51% of them preferred it because of its simplicity, but 7.27% of them did not prefer it because of its inefficiency for student to show their skills and 6.06% of them did not prefer it because of students' unwillingness.

It is observed that 46.67% of the teachers preferred game of object identification because it improves students' skills, 26.67% of them preferred it because it is proper to students' interests and skills, 13.33% of them preferred it because it boosts success and grade point average, 6.67% of them preferred it because of its simplicity, but 5.45% of them did not prefer it because of students' unwillingness and 1.21% of them did not prefer it because of its inefficiency for student to show their skills.

Teachers' opinions for the reasons for preferring or not preferring strategy games are presented in Table 7.

When Table 7 is analyzed, it is seen that 24.55% of the teachers participating in the research preferred chess because it improves students' skills, 23.33% of them preferred it because it is proper to students' interests and skills, 15.45% of them preferred it because it boosts success and grade point average, 10.00% of them preferred it because they like the game, 6.67% of them preferred it because of its simplicity, but 15.76% of them did not prefer it because of students' unwillingness and 4.24% of them did not prefer it because of the difficulty in providing the equipment.

It is observed that 20.00% of the teachers preferred game of go because it improves students' skills, 14.85% of them preferred it because it boosts success and grade point average, 11.82% of them preferred it because of its simplicity, 6.06% of them preferred it because it is proper to students' interests and skills, but 20.61% of them did not prefer it because of the difficulty in providing the equipment, 16.36% of them did not prefer it because of lack of written sources or materials to be utilized, 9.09% of them did not prefer them because of its high cost.

It is noticed that 18.18% of the teachers preferred

game of reversi because it improves students' skills, 15.15% of them preferred it because it is proper to students' interests and skills, 13.33% of them preferred it because it boosts success and grade point average, 9.09% of them preferred it because they like this game, 4.24% of them preferred it because of its simplicity, but 20.61% of them did not prefer them because of its high cost, 12.42% of them did not prefer it because of the difficulty in providing the equipment, 6.97% of them did not prefer it because of students' unwillingness.

It is seen that 48.18% of the teachers preferred game of Mangala because it is proper to students' interests and skills, 18.48% of them preferred it because it improves students' skills, 16.06% of them preferred it because they like this game, 3.94% of them preferred it because it boosts success and grade point average, but 7.58% of them did not prefer it because of students' unwillingness and 5.76% of them did not prefer them because of its high cost.

It is observed that 25.76% of the teachers preferred game of checker because of its simplicity, 24.24% of them preferred it because it is proper to students' interests and skills, 23.64% of them preferred it because it improves students' skills, 6.36% of them preferred it because they like this game, but 16.97% of them did not prefer it because of students' unwillingness and 5.76% of them did not prefer it because of its high cost.

It is noticed that 27.27% of the teachers preferred game of guessing the number because it improves students' skills, 21.21% of them preferred it because it is proper to students' interests and skills, 19.39% of them preferred it because of its simplicity, 12.12% of them preferred it because it boosts success and grade point average, but 15.15% of them did not prefer it because of students' unwillingness and 4.85% of them did not prefer it because of lack of written sources or materials to be utilized.

It is seen that 25.45% of the teachers preferred game of battleships because it is proper to students' interests and skills, 18.18% of them preferred it because it improves students' skills, 13.03% of them preferred it because it boosts success and grade point average, 10.00 % of them preferred it because they like this game, but 23.33% of them did not prefer it because of students' unwillingness and 10.00% of them did not prefer it because of lack of written sources or materials to be utilized.

Teachers' opinions for the reasons for preferring or not preferring mind question games are presented in Table 8.

When Table 8 was analyzed, it is seen that 26.67% of the teachers participating in the research preferred game of three light bulbs because it improves students' skills, 19.09% of them preferred it because it boosts success and grade point average, 14.24% of them preferred it because it is proper to students' interests and skills, 0.61% of them preferred it because they like this game, but 39.39% of them did not prefer it because of students'

Table 7. Percentage distribution of teachers' reasons for preferring or not preferring the strategy games.

	Strategy games	Chess	Go	Reversi	Mangala	Checker	Guessing number	Battleships
Reasons for preferring	I think that this game is proper to students' interests and skills.	23.33	6.06	15.15	48.18	24.24	21.21	25.45
	I think that this game can improve students' skills.	24.55	20.61	18.18	18.48	23.64	27.27	18.18
	I think that this game is easy to play.	6.67	11.82	4.24	-	25.76	19.39	-
	I think that this game can boost the success in courses and grade point average.	15.45	14.85	13.33	3.94	-	12.12	13.03
	I like this game so much.	10.00	-	9.09	16.06	6.36	-	10.00
Reasons for not preferring	There is not efficient written source or material that I can benefit.	-	16.36	-	-	-	4.85	-
	Students are not enthusiastic.	15.76	-	6.97	7.58	16.97	15.15	23.33
	Its cost is so high.	-	9.09	20.61	5.76	3.03	-	-
	It is hard to provide the equipment.	4.24	20.61	12.42	-	-	-	10.00
	Total	100%	100%	100%	100%	100%	100%	100%

Table 8. Provide legend.

	Mind question games	Three light bulbs	Liar and truth-teller	12 balls	Measuring cups	Matchstick problems	Finding the following term
Reasons for preferring	I think that this game is proper to students' interests and skills.	14.24	14.24	6.36	14.85	18.18	34.54
	I think that this game can improve students' skills.	26.67	29.70	36.67	30.30	27.58	34.24
	I think that this game is easy to play.	-	10.00	12.73	14.85	14.24	-
	I think that this game can boost the success in courses and grade point average.	19.09	15.15	6.06	7.58	9.39	10.00
	I like this game so much.	0.61	0.61	0.30	-	1.82	1.21
	Since the games apart from this game do not in our school, I compulsorily prefer them.	-	-	-	5.75	8.79	5.15
Not preferring	Students are not enthusiastic.	39.39	30.30	37.88	26.67	20.00	14.85
	Total	100%	100%	100%	100%	100%	100%

unwillingness.

It is observed that 29.70% of the teachers preferred game of liar and truth-teller because it improves students' skills, 15.15% of them preferred it because it boosts success and grade point average, 14.24% of them preferred it because it is proper to students' interests and skills, 10.00% of them preferred it because of its simplicity, 0.61% of them preferred it because they like this game, but 30.30% of them did not prefer it because of students' unwillingness.

It is perceived that 36.67% of the teachers

preferred game of 12 balls because it improves students' skills, 12.73% of them preferred it because of its simplicity, 6.36% of them preferred because it is proper to students' interests and skills, 6.06% of them preferred it because it boosts success and grade point average, 0.30% of them preferred it because they like this game, but 37.88% of them did not prefer it because of students' unwillingness.

It is noticed that 30.30% of the teachers preferred game of measuring cups because it improves students' skills, 14.85% of them preferred it because of its simplicity, 14.85% of them preferred because it is proper to students' interests and skills, 7.58% of them preferred it because it boosts success and grade point average, 5.75% of them preferred it because any other game apart from this game does not exist in the school, but 26.67% of them did not prefer it because of students' unwillingness.

It is seen that 27.58% of the teachers preferred game of matchstick because it improves students' skills, 14.24% of them preferred it because of its simplicity, 18.18% of them preferred because it is proper to students' interests and skills, 9.39% of them preferred it because it boosts success and grade point average, 8.79% of them preferred it because any other game apart from this game does not exist in the school, 1.82% of them preferred it because they like the game, but 20.00% of them did not prefer it because of students' unwillingness.

It is observed that 34.24% of the teachers preferred game of finding the following term because it improves students' skills, 34.54% of them preferred because it is proper to students' interests and skills, 10.00% of them preferred it because it boosts success and grade point average, 5.15% of them preferred it because any other game apart from this game does not exist in the school, 1.21% of them preferred it because they like the game, but 14.85 % of them did not prefer it because of students' unwillingness.

DISCUSSION

The most frequent reason for the teachers 'preference for mind games is that they enhance students' abilities. According to Arslan and Dilci (2018), mind game adds to ability development besides character development, physical skill development, social development, and cognitive development. Similar results have been found in the studies of Demirkaya and Masal (2017). Adalar and Yüksel (2017) reported that almost all of the teachers taking part in the research asserted that mind games promote their development of skill and intelligence. In the results of Alkan and Mertol's (2017) study, the point where mind games promote the development of skills such as problem-solving, reasoning, efficient communication, the establishment of the relationship,

analytical thinking, strategy development in terms of the contribution of mind games to education was highlighted.

Among the reasons why teachers prefer mind games, are the development of skills, influence the success of other courses, and obtain various skills. In the literature, there are similar results belonging to other researches. For example, as a result of the research on arranging tangram activities for teaching the concept of field protection and the issue of field measurement, Shofan (2014) deduced that tangram activities were beneficial in the teaching field protection and field measurement for primary school students. In other research, Ott, and Pozzi (2012), as a result of the research conducted to analyze the impacts of mind games on creative thinking skills and attitudes of primary school students, concluded that students continually playing mind games have high creative thinking skills and attitudes. Also, Siew and Abdullah (2012), as a result of the research carried out to identify the levels of geometric thinking and views of students at the time when they are playing tangram, reached the conclusion that the students dealing with tangram activities get high results and that there is an increase in their knowledge and interest for geometry.

Alkaş Ulusoy et al. (2017) have reported some negative aspects of the mind games course. These involve that the word 'mind' in the name of the course creates a problem for the student, that the presence of students from different grade levels in the course constitutes a problem, and that the lack of material and time is restricting. It can be stated that these negative aspects are similar to the results of this research. Principally, the lack of material influences the preference of mind games. Although it does not exist in the results of this research, it may be proposed that field experts should carry out research to ascertain whether there is a problem with the name of the course, including the word 'mind.'

Şeb and Bulut Serin (2017), as a result of the research for the game of chess, resolved that the problem-solving skills of the students playing chess were higher than the problem-solving skills of the students who did not receive chess education. In the research, it is determined that teachers prefer chess game because they enhance students' skills and serve their interests and needs. In this regard, it can be stated that there is a similarity between the results of the researches. Similar results can also be found in other research. Kurbal (2015) carried out thesis research to analyze the impact of mind games on the problem-solving and reasoning skills of secondary school students. As a result of the research, it was concluded that there was an improvement in the problem-solving and reasoning skills of the students who attended the mind games course and that students exhibited a positive attitude towards the mind games course and the games they performed in the course. Similar results can be obtained in other research. As a result of the research conducted by Reiter et al. (2014), it was deduced that the kendoku game adds to the problem-solving and

reasoning skills of students.

As a result of the research carried out by Orak et al. (2016), it was determined that mind games affirmatively influenced students' attitudes towards mathematics course and their academic accomplishment. In the research, it was determined that the improvement of the students' academic achievement and grades, and its contribution to their success in the courses are among the reasons why mind games are preferred. Hence, the results of the research can be maintained to comply with the literature. Similar results were also available in Demirel's (2015) research. The results found by Demirel (2015) in his research with secondary school students as follows: In the course taught with mind games, the students' success in Turkish and mathematics classes was higher, and the opinions of teachers and students concerning the practices of mind games were decisive.

Devecioğlu and Karadağ (2014), as a result of the research investigating the views of student, teacher, and directors for elective mind games, reached the following conclusions: the mind games course can improve different skills other than those defined in the curriculum, there will be a problem if a teacher from another field gives the lesson, and there is a lack of material. As stated above, a significant issue presented in the research is the lack of material. Accordingly, it is considered that this lack, which is repeatedly stated in the literature, should be resolved.

Yüksel et al. (2017) carried out research to exhibit the contribution of geometric-mechanical games in mind games course curriculum to cognitive, affective, and psychomotor development. As a result of the research, it was determined that teacher candidates in the field of science were more successful in the game of soma cubes, that there was no significant difference between the scores gained from the test by gender, and that teacher candidates in field of science were more successful in the game of rebus. In the research, the teachers' knowledge level of soma cubes, and the incidence of using the game was "Medium," and the significance level of the game was "High." Besides, according to the results of the research carried out by Adalar and Yüksel (2017), the types of games that teachers have decisive opinions among the types of mind games are verbal games, mind questions, and geometric-mechanical games.

RECOMMENDATIONS

The recommendations developed for the results of the research are listed below:

1. Different activities can be arranged in schools so that mind games can be introduced to students properly.
2. One of the results gained from the research is the lack of mind games materials in schools. In this regard, the required studies can be conducted to resolve the lack of this material in schools.
3. In-service training given by academicians who are experts in their fields for the academic problems encountered by teachers can be arranged in the course of mind games.
4. As often stated in the literature, mind games develop students' different skills. For this reason, teachers and parents can be advised about the preference of mind games courses.
5. Taking into consideration that we live in the age of technology, it can be provided that a web-page with informative and pleasant content concerning mind games can be opened in the EBA portal executed by the Ministry of National Education.
6. Projects such as mind games hall, mind games exhibition, promotion days that will improve the use of mind games in schools can be developed.

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