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International Journal of Curriculum and Instruction 13(2) (2021) 1355–1373

IJCI
International Journal of Curriculum and Instruction

A leisure time educational tool: mind and intelligence games

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Abstract

The purpose of this study is to determine the opinions of the participants regarding the use of mind and intelligence games as a leisure time educational tool. The study population consists of a total of 97 mind and intelligence games trainers and referees as 58 women and 37 men with an average age of 38.103 who voluntarily participated in the study. In the study, the phenomenological design was preferred in order to have an in-depth understanding, and a semi-structured interview form, one of the qualitative data collection tools, was used. Content and descriptive analysis methods were used for the analysis of qualitative data. As a result of the analysis of the data obtained, the participants stated that they described mind and intelligence games as a leisure time educational tool. Another remarkable finding of the study is that the opinions of the participants regarding the acquisitions of mind and intelligence games consist of seven different themes: socialization, problem solving, self-consciousness, self-awareness, self-confidence, skill acquisition and awareness of using leisure time. As a result of the study, according to the opinions of the participants, mind and intelligence games are beneficial for individuals in the learning environment, offer the opportunity to learn by living and contribute to the development of social and cognitive skills. Accordingly, it was suggested to add the course of mind and intelligence games in the curricula of the institutions providing sports education.

Keywords: Leisure time, Education, Mind and intelligence games

1. Introduction

Today, when it comes to students, in addition to being individuals learning information throughout their lives, we think of individuals who question, think creatively, use their skills such as critical thinking and problem solving in all areas of life and are expected to produce solutions. Individuals discover and learn many things by playing games from their childhood. While games are accepted as a learning tool in which students

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participate actively during learning in educational institutions (Chen et al., 2012); game is expressed as a learning environment that is natural and provides development for individuals of all ages. In this context, it can be said that game and education are a whole. While game is an effective guide within the framework of education programs, it is also thought to be one of the most contributing factors to the learning process of students by living and doing also in their leisure time. Huizinga (1995) describes game as "activities performed voluntarily and in accordance with the rules within a certain time and environment". Games are not only effective in learning, but also contribute to the recognition of environment, increasing the self-awareness of the person and directing their lives (Çamlıyer & Çamlıyer, 1997). Koçyiğit et al. (2007) evaluated game as both a learning and resting tool and they expressed the opinion that the activities in game contributed positively to individuals and it would be more effective to prefer and use it in educational institutions within planned curricula.

When these relations between learning and learning environments are examined, game-based learning is a multi-way target-specific bridge in creating a connection between theory and practice by attracting more students' interest (Mann, et al., 2002; Ebner & Holzinger, 2007; Akın & Atıcı, 2015). Reviewing the literature, it is seen that there are studies in which positive outcomes such as cognitive skills, concentration, self-awareness and socialization are observed in individuals through game-based learning (Chiappe, Conger, Liao, Caldwell & Vu, 2013; Tsai, Huang, Hou, Hsu &Chiou, 2016; Yağmur, 2020).

Thanks to the different lessons and tools to be used in education, students are thought to be able to learn knowledge effectively and efficiently. Games in general and intelligence games in particular are tools that serve this purpose (Dempsey, Hasey, Lucassen, Casey, 2002). Mind and intelligence games are used as an educational tool in the development of students' cognitive status and skills, thinking skills, logical reasoning skills and strategic thinking skills through various games and activities (Bottino & Ott, 2006) (Davoodi, 2013). Intelligence games have been added to the curriculum as an elective course for 5th, 6th, 7th and 8th grades in educational institutions in Turkey (Ministry of National Education, 2020). While mind and intelligence games are a tool used in education of children, it is thought that they might have an important role also for university students. In addition to the theoretical courses, while these educational games, which include applications, can provide students to use their leisure time well, these games are thought to encourage students to prefer a process based on learning by doing and living, which is among the acquisitions of mind and intelligence games. When the literature is examined, the current studies show that these games contribute to the development of children's social skills in addition to gains such as quick decision making, problem solving, critical thinking and teamwork (Adalar & Yüksek, 2017; Kurbal, 2015; Ulusoy, Saygı & Umay, 2017).

The purpose of this study is to determine the opinions of the participants regarding the use of mind and intelligence games as a leisure time educational tool. For this purpose, the following questions were asked to the participants:

1. What would you associate with metaphorically the concept of "mind and intelligence games as a leisure time educational tool" if you want to compare it to a living or inanimate being, an object or anything? The metaphors they developed by completing the sentence of "Mind and intelligence games as a leisure time educational tool are like ……... because.....…" were investigated.

2. Do you describe mind and intelligence games as a leisure time educational tool? Could you explain why?

3. What do you think the acquisitions of mind and intelligence games as a leisure time educational tool are, could you explain these acquisitions comprehensively?

4. Would you suggest that mind and intelligence games should be given as compulsory or elective courses within the Faculty of Sports Sciences and / or Physical Education Sports Schools of universities? If you suggest, could you please explain your opinions about the addition of this course to the curriculum?

2. Method

2.1. Research Model

This research is a phenomenological study designed to determine the participants' opinions about the use of mind and intelligence games as a leisure time educational tool. Phenomenology is to focus on analyzing individuals' experiences (Miller, 2003). Phenomenology is to center upon the facts, in which we are aware of the experiences, perspectives and situations of a few people, in order to have an in-depth understanding (Yıldırım & Şimşek, 2016).

2.2. Study Group

The study population was determined through criterion sampling from purposeful sampling methods. Criterion sampling is the study of the situation that meets some predetermined criteria (Yıldırım & Şimşek, 2016). This method allows for in-depth research by selecting information-rich situations depending on the purpose of study (Büyüköztürk et al., 2011). The study group consists of a total of 97 mind and intelligence trainers and referees as 58 women and 37 men with an average age of 38.103 and with an average experience of 4.216 years in mind and intelligence games.

2.3. Data Collection Tools

The method of interview can be defined as an investigation in which a qualitative process is followed in order to reveal perceptions and events in a natural environment and in a realistic and integrated manner (Sönmez & Alacapınar, 2011). Interview method was preferred as a data collection tool. In line with this method, a semi-structured

interview form developed by the researcher was used. The relevant literature was examined and the interview form was created. After determining whether the questions were understandable by sending it to two different people as an expert in qualitative research field and a trainer of mind and intelligence games, the interview form was finalized in terms of scope and content. The first part of the data collection tool includes information about personal characteristics of the participants and the second part is an open-ended semi-structured interview form. The data of the research were collected by reaching the participants online. A program providing online data was used as a data collection method by reaching the participants over the web (Reips, 2002).

2.4. Data Analysis

Qualitative data analysis requires preparation, organization and coding of the data, the reduction of the coded data into categorical themes and finally the presentation of the data in a discussion form in figures and tables (Creswell, 2013). The responses of the participants to the interview form were analyzed using descriptive and content analysis techniques. First of all, the raw data obtained according to the descriptive analysis technique were converted into findings. In the subsequent content analysis, the purpose is to identify and theme the common features of the text contents (Gökçe, 2006). The data obtained from the interviews by three experts in the field were categorized at the first stage and then a framework was created in line with the conceptual literature in accordance with the definitions that emerged. As a result of the analysis, the themes explaining the data in the best way were determined and models were created through the Nvivo 10 qualitative research analysis program. Codes in the form of P1, P2 (Participant 1, Participant 2) etc. were added to the ends of direct quotations in order to determine that the opinions and statements belonged to which participant and to protect the privacy of the participants. Cohen's kappa statistics were preferred to determine consistency and agreement among coders (Cohen, 1960). If kappa coefficient is less than 0, it states poor agreement, slight agreement between 0.00-0.20, fair agreement between 0.21 -0.40, moderate agreement between 0.41-0.60, substantial agreement between 0.61-0.80 and almost perfect agreement between 0.81-1.00 (Landis & Koch, 1977; Viera & Garret, 2005). In this study, Cohen Kappa coefficient ($\kappa = 0.92$) points out perfect agreement.

2.5. Role of the Researcher

The researcher has an important role in qualitative researches (Yıldırım & Şimşek, 2011). In this regard, the researcher has 11 years of experience as a master trainer in the Turkish Federation of Mind and Intelligence Games, championship in Turkish Traditional Intelligence and Strategy Game: Mangala in the province of Manisa, Mangala instructor and referee in various organizations, chief referee in İzmir province and the First Tournament of Mind and Intelligence Games of Turkey and instructor

training formatter in Manisa province. In order to understand and analyze the subject and the participants better, the researcher is the person who personally participates in the study and interviews one to one with the participants; namely, he is a part of the process.

3. Results

Analysis results of the quantitative and qualitative data obtained are included in this part of the study.

3.1. Findings Related to Quantitative Data

Information about the socio-demographic characteristics of the participants of the research is given in Table 1Recruitment

Table 1: Socio-demographic characteristics of the participants

Variables				Total	X̄	Least	Most
Gender	Female	58	59,8	97			
	Male	39	40,2				
Education	Short cycle	6	6,3	97			
	Bachelor	79	81,4				
	Master/PHD	12	12,3				
Your job	Teacher	85	87,7	97			
	Private sector employee	12	12.3				
Duties taken in organizations related to mind and intelligence game	Instructor	34	35,1	97			
	Referee	24	24,7				
	Both the instructor both the referee	39	40,2				
Age				97	38,103	21	55
Experience				97	4,216	1	25

As seen in Table 1, 59.8% of the participants are female and 40.2% are male. Considering the educational status of the participants, it is seen that 6.3% have associate degree, 81.4% have bachelor's degree and 12.3% have master's degree. According to the variable of profession of the participants, 7.7% of them are teachers and 12% of them are private sector employees. When the tasks they assume in organizations related to mind and intelligence games are examined, 40.2% of the participants stated that they took charge as both trainers and referees, 35.1% as trainers and 24.7% as referees. When we

look at the age ranges of the participants, they are between 21-55 years old and their experience varies from 1 year to 25 years.

3.2. Findings Related to Qualitative Data

The findings regarding the metaphor sentence of "mind and intelligence games as a leisure time educational tool are like ....., because....." to be completed by the participants are given below (Figure 1).

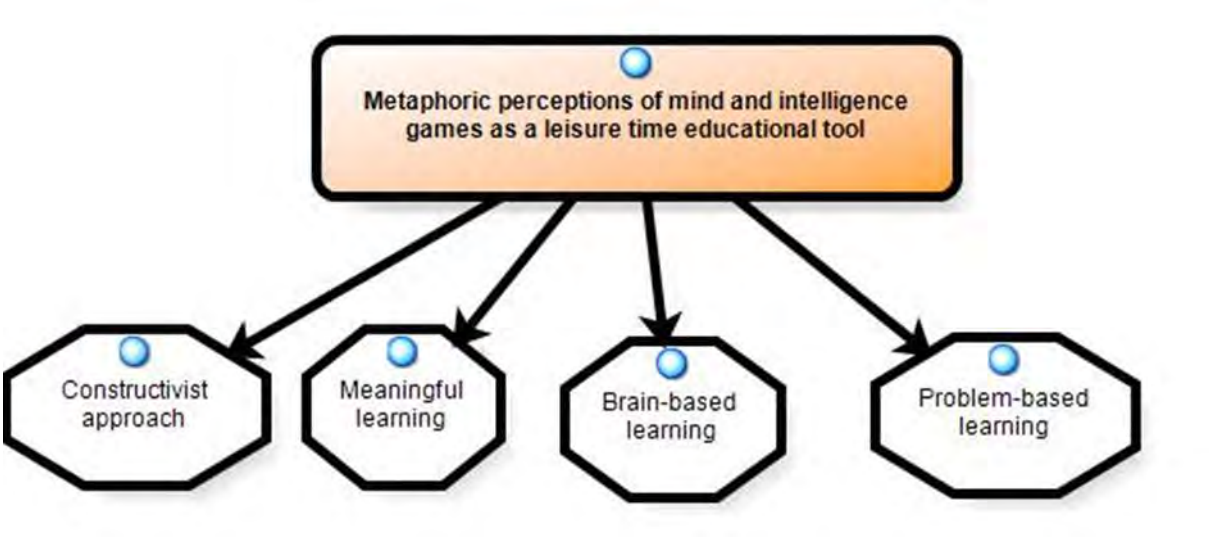


Figure 1: Participants' metaphoric perceptions of mind and intelligence games

Examining Figure 1, the metaphors related to mind and intelligence games as a leisure time educational tool are seen to gather under four themes as constructivist approach, meaningful learning, brain-based learning and problem-based learning. The metaphors produced for the leisure time educational tool are presented in Table 2.

Table 2: Frequency and percentage distributions according to the metaphors related to mind and intelligence games as a leisure time educational tool

	Metaphors	**Theme**	**f**	**%**
"mind and intelligence games as a leisure time educational tool are like ....., because....."	robot (1), a water in the desert (1), puzzle (1), rabbit (1), recess (1), book (5), opportunity (1), candy (1), compass (1) sweet (1) , circus (2), peacock (2), life (1), football (1), seed (2), a large skyscraper (1), tactical skill (1), life (2), gate (1), spring (1), holiday (1), predictive power (1), chameleon (1), entertainment machine (1), newspaper (1), martial art (1), teacher (2), salt (1), clover (1)), chocolate (1), raising the child (1), serious job (1) extra strength (3)	Constructivist Approach	44	%45,4

	mathematics (1), orange (1), key (1), paddle (1), lock (1), vitamin (1), cheetah (1), fight (1), path (1), fox (3), sea (1), labyrinth (2), horse (1)	Problem-Based Learning	16	%16,5
	plant (1), green pine films (2), flower (4), sports equipment (1), can (1), shadow (1), clause (1), childhood (1)	Meaningful Learning	12	%12,3
	chick's effort to hatch (1), brain (1), light (1), game (1), ball (1), imagination (2), sports (2), game (2), control (1), water (3), vitamin (1), dead-end (1), omega 3 (1), friend (2), sun (3), gymnastics (1), pen (1),	Brain-Based Learning	25	%25,8

As seen in Table 2, the most metaphors were produced in the theme of "constructivist approach" for the concept of mind and intelligence games. This is followed metaphorical views of the participants on the themes of "brain-based learning", "problem-based learning" and "meaningful learning", respectively. Some of the participants' views on the relevant themes are given below with direct quotations for each theme.

Mind and intelligence games as a leisure time educational tool are like:

- *"A big skyscraper because when you take your first step through the door, there are thousands of surprises waiting for you on each floor" (P15).*
- *"A holiday. It relaxes, entertains, ensures quality time, and besides, leaves a lot of positive impressions" (P46).*
- *"An extra power source; you can move a car with your existing potential, but if you want to have a place in the race, I think you need a supplement that will make all these features of yours meaningful and useful. In other words, there are things we can do with basic education and they are undeniable; but when we combine this education with an individual developed in many ways such as practicality, being solution-focused and farsightedness, we achieve quality work and efficiency" (P60).*
- *"Yeşilçam (a metonym for the Turkish film industry, similar to Hollywood in the United States) movies. Because they make you both have a good time and think"(P11)*
- *"A flower because you are happy when you look at flowers. You smell them, your soul is refreshed; you watch them and you are cheered up; but if you do not take care of them, they will fade, dry, rot and pollute the environment. Intelligence games are like flowers, you benefit as you play, you spend quality time, your brain develops and your thinking skills increase. If you do not play, you will not get anything and so that the skills that exist in the human cannot be revealed and developed; and you wane and become blunt" (P81).*

- *"A chick that hatches by struggling. Because the chick gets stronger and its chance of survival increases as it struggles. Mind and intelligence games keep intelligence active and strengthen it in all ages and groups" (P38).*
- *"Vitamins because they improve and change us, and nurture the talent and emotions of us. Either deficiency or excess of vitamins can cause problems. The dose is important" (P41).*
- *"You feel the pleasure felt when you solve a math problem every time you win a game" (P7).*
- *"A labyrinth. You need to use your intelligence to find the exit. If you are trained, you can always find the exit "(P25).*

The data obtained regarding the question of "Do you describe mind and intelligence games as educational tools? Could you explain why? " are observed to gather in 7 (seven) themes: problem solving skill, mental development, skill development, visual intelligence, thinking skill, critical thinking skill and learning with fun (Figure 2).

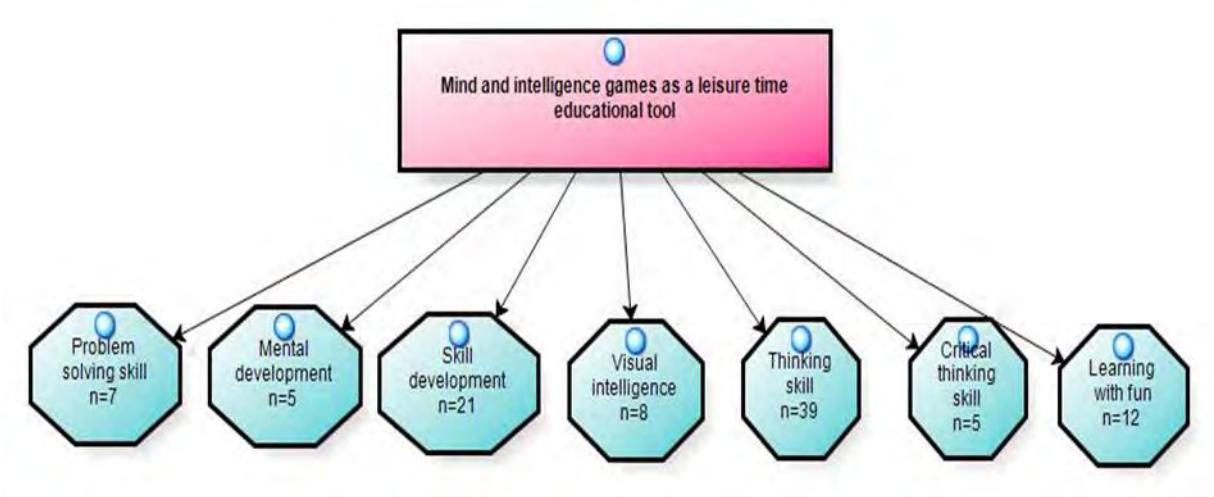


Figure 2: Mind and intelligence games as a leisure time educational tool

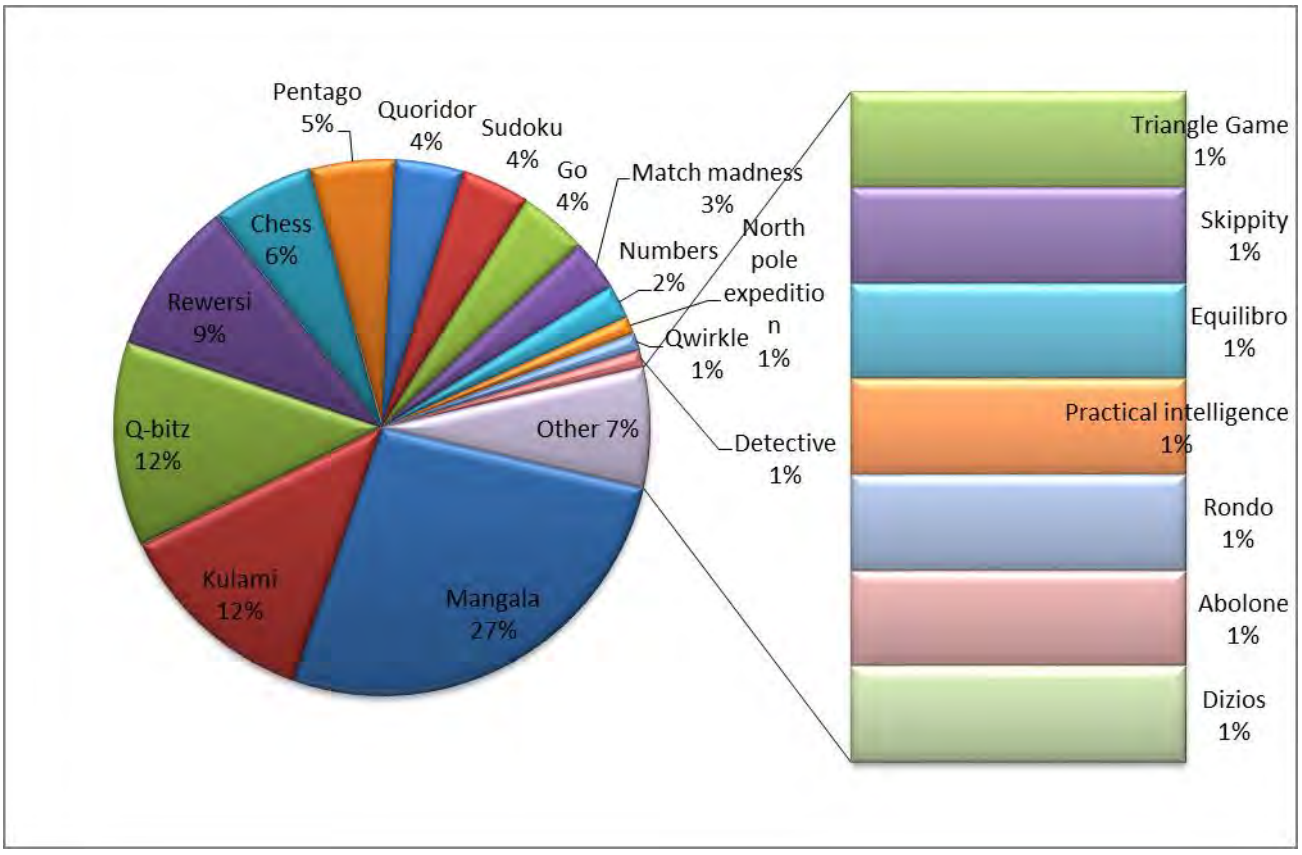
Some of the participants' opinions by making direct quotations for each theme related to the relevant themes are as follows:

- *"These games are definitely an educational tool. Learning with fun is the most appropriate explanation for mind and intelligence games. Following the game, deciding on the move, guessing the opponent's move, preventing the opponent's move, concentration ..." (P20).*

- *"Of course. Because education is about presenting information and target audience receiving it. Namely, it is communication. Game in all ages and at all levels is the most beautiful and effective argument. Learning through play is both fun, permanent and sustainable. In another aspect, it is the most effective method for defining, measuring and evaluating the target audience and making decisions accordingly" (P49).*
- *"Yes, they improve students' practical thinking, problem solving and strategy development behaviors" (P57).*
- *"I think it is absolutely necessary because I am of the opinion that the individuals who play develop in many ways; for example, they gain a practical answer, a multi-solution and a researcher identity. At the same time, I think using games increases the permanence and interestingness of the features we want to give with education" (P60).*
- *"Yes. I think it is useful for individuals with different types of audiovisual and spatial intelligence. It is also important in terms of developing thinking skills of individuals" (P82).*
- *"Absolutely yes, because I think that mind and intelligence games increase the success of students indirectly by improving their reasoning skills and making them gain the ability to see lessons from different dimensions, while also enabling them to attend the lessons at higher levels of readiness and to be able to pay attention to the lesson. You can also think of mind and intelligence games like that someone who does gymnastics and swimming sports can be more prepared, prone and competent in terms of physics and fitness than someone who has never done sports before " (P86).*
- *"Yes. Games improve attention, focus, reasoning, questioning, foresight and creative thinking and make learning fun" (P90).*

The data regarding the favorite mind and intelligence game the participants prefer and recommend as a leisure time educational tool are given below (Chart 1).

Chart 1: Participants' favorite mind and intelligence games as a leisure time educational tool



When Chart 1 is examined; 27% of participants prefer and recommend Mangala as a leisure time educational tool, 12% Kulami, 12% Q-Bitz; 9% Rewers, 6% Chess; 5% Pentago, 4% Quoridor; 4% Sudoku, 4% Go; 3% Match madness, 2% Numbers; 1% North pole expedition, 1% Qwirkle; 1% Detective, 1% Triangle game; 1% Skipitty, 1% Equilibrio; 1% Practical intelligence, 1% Rondo vario;1% Abolone and 1% Dizios.

The data obtained related to the question of "What do you think about the acquisitions of mind and intelligence games as a leisure time educational appliance? Could you explain these acquisitions comprehensively?" are seen to gather in seven themes including awareness of using leisure time, socialization, self-esteem, self-consciousness, self-awareness, skill acquisition and problem solving skill (Figure 3).

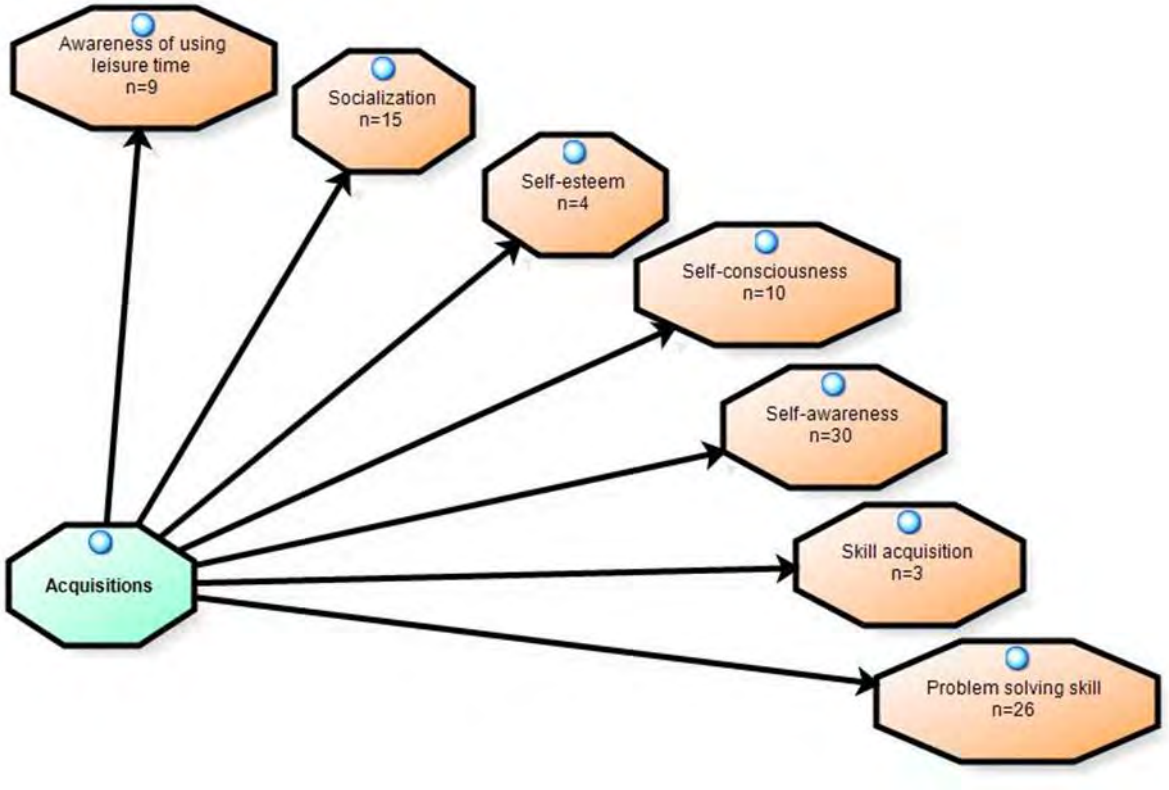


Figure 3: Acquisitions as a result of mind and intelligence games a leisure time educational tool according to the opinions of the participants

Some of the participants' opinions by making direct quotations for each theme related to the relevant themes are as follows;

- *"I believe that individuals who are trained in all areas of mind and intelligence games change their perspective on events, develop their problem solving skills, express themselves more accurately, transfer what they learn to different areas and provide easy learning, spend fun and quality time and achieve permanent learning" (P3) .*
- *"These games that provide socialization first of all include many gains such as creative thinking, problem solving and strategy making. It is very valuable for children to acquire these important gains in a mysterious way under the name of game during leisure time education" (P7).*
- *"Reasoning, three-dimensional thinking, strategy development and strengthening memory" (P35).*

- *"They provide gains such as spending quality time, preventing technological addiction, socializing and most importantly, gaining high level cognitive skills" (P73).*
- *"In addition to developing many skills such as visual perception, strategic thinking, problem solving, reasoning, etc., mind and intelligence games teach children about the sense of winning and losing, being patient and paying attention for a long time according to their types. They also contribute raising more confident individuals who can realize their own skills" (P86).*
- *"These games develop multi-faceted thinking skills, strategy development and the ability to achieve results by looking for alternatives in the face of situations encountered. They offer the opportunity to develop an individual with mental competence at every level by turning life into a game" (P97).*

The data belonging to the question of "Should mental and intelligence games be added to the curriculum as elective or compulsory courses? Could you explain why?" are tabulated as "Yes-elective course", "Yes-compulsory course" and "No".

Table 3: Mind and intelligence games in institutions providing sports education

Valiables	Participants	f	%
Yes-elective course	2,5, 7, 13, 16, 29, 32, 33, 34, 36, 42, 45, 47, 48, 54, 55	16	%16,4
Yes-compulsory course	1, 3, 4, 6, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 30, 31, 35, 37, 38, 39, 40, 41, 43, 44, 46, 49, 50, 51, 52, 53, 57, 59, 60, 61, 62, 63, 64, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97	75	%77,4
No	21, 56, 58, 65, 77, 78	6	%6,2
Total		97	%100

Considering the data related to the question addressed to the participants, 77.4% of the participants state that mind and intelligence games should be added to the curriculum of sports education institutions as compulsory courses, 16.4% as elective courses and % 6.2 express their opinions by replying no. Some participant opinions;

- *"Mind and intelligence games should be added to the curriculum as a compulsory course not only in the institutions that provide sport sciences education, but also in all educational institutions because this allows us to provide a willing education by entertaining students without boring them. Both the trainer and the educated are the winners of mind and intelligence games" (P11).*

- *"I think that these games might be objectionable to be compulsory because they can be perceived as imposition, so it would be better to present them as an alternative instead" (P33).*
- *"No, mind and intelligence games should be given from preschool to secondary education" (P77).*
- *"Yes, these games should be added to the curriculum as a compulsory course. I am a physical education teacher. In disadvantaged areas where there is no sports facility or gym, I give education to students in the winter when climate conditions are not suitable. Thus, mind and intelligence games offer the opportunity to explore every student with their different aspects" (P81).*

4. Discussion and Conclusions

The first finding obtained in this study, which was conducted to determine the opinions of the participants regarding the use of mind and intelligence games as a leisure time educational appliance, is that women are more interested in mind and intelligence games than men. Considering the profession variable, 87.7% of the participants are teachers in different branches. The participants stated that they obtained their certifications of training and refereeing from the trainings related to the mind and intelligence games given by the Federation of All Mental Intelligence Games and Mangala Game Association. Thanks to their certificates teachers can teach elective courses in their schools and can open courses within clubs and extracurricular activities. They also state that using mind and intelligence games as an educational tool in their own lessons contributes positively to their lessons. It is thought that the experience of teachers in interpreting and observing the details related to mind and intelligence games and which games will provide more development to their students is important.

As a result of the metaphors produced by the participants regarding mind and intelligence games as a leisure time educational tool, four themes were identified: "constructivist approach, problem-based learning, meaningful learning and brain-based learning." Matthews (2002) defines the constructivist approach as a learning theory in which mental and environmental factors are effective. Considering that the individual is a being capable of thinking according to traditional approach together with constructivist approach, it is stated that mental processes and mental skills are included in teaching process (Küçükavşar, 2010; Kutluca, 2013). Constructivist approach, which is adopted at the basis of mind and intelligence games, enables the individual to experience information by doing and living not only learning theoretically, since the student's thinking and strategy is more important. Thus, while learning is permanent, individuals are also provided to take pleasure. Constructivist approach is thought to play an

important role in ensuring meaningful learning (Çakıcı, Alver & Ada, 2006). That the individual questions objects in a natural environment through social interaction leads to emergence of meaningful learning (Özmen, 2004). Brain-based learning supports learning that exploeres ways to achieve maximum learning by synthesizing how the brain works best (Carolyn, 1997). Caine and Caine (2002) address the importance of achieving meaningful learning as one of the main objectives of brain-based learning. Learning through games is to develop skills during the game and for life by applying the instructions in the game and increasing the level of knowledge about the game (McFarlane, Sparrowhawk & Heald, 2002). Individuals, who experience and play mind and intelligence games, achieve meaningful learning by doing and living rather than rote learning. In addition to being a tool that students can be actively interested in and carry out their activities individually, games provide environments that allow students to learn by doing and living (Akın & Atıcı, 2015). In this context, the data of this study correspond to the literature.

All of the participants included in the study describe mind and intelligence games as an educational tool and state that this educational tool has positive contributions to thinking skills, learning with fun, skill development, critical thinking, visual intelligence, mental development and problem solving skills. Analyzing the literature, the data related to that mind and intelligence games affect thinking skills positively (Marlove and Page, 1998; Marangoz & Demirtaş, 2017), and contribute to the importance of learning with fun (Büyük, Uğur, Saykılı & Şahin, 2018), critical thinking (Murphy, 2014), visual intelligence (Garris, Ahlers & Driskell, 2002; Bulut & Sarıkaya, 2018), mental development (Marangoz & Demirtaş, 2017) and problem solving skills (Tetik & Açıkgöz, 2013; Devecioğlu & Karadağ, 2016) are in parallel with the results of this study. Games should not be considered just as an entertainment tool; it should be noted that they also include an education process that gives an opportunity for the individual to learn something on his own and discover the skills he has (Yavuzer, 2000). It should not be ignored that the individual learns by doing-living, participates actively in the solution of the problem, socializes and has the opportunity to learn with fun thanks to games. Game-based learning, which is an inevitable issue in order to accomplish skill learning, should not be overlooked (Quian & Clark, 2016).

Looking at the favorite games defined by the participants as leisure time educational tools; Equilibro, Sudoku, Numbers, North pole expedition and Practical intelligence can be played by one person; Mangala, Kulami, Reversi, Chess, Pentago, Quoridor, Go and Abolone are 2-player games; Rondo vario, Q-bitz and Match madness are for 1-4 players; and Qwirkle, Detective, Triangle game, Skippity and Dizios can be played by 2-4 players. It is important to plan these mind and intelligence games in line with the individual's interests and needs taking into account individual differences. Considering these mentioned games, we can state that they provide gains for more than one area of development.

Another remarkable finding in the study is the themes related to socialization, problem solving, self-consciousness, self-awareness, self-confidence, skill acquisition and awareness of using leisure time regarding the acquisitions of mind and intelligence games as a leisure time educational tool. There are different types of mind and intelligence games that can be preferred as a leisure time activity tool in the classroom and / or other open-closed areas. Games are played individually, mutually or by groups. Diverse mind and intelligence games can provide different gains for individuals due to personal differences. The individual needs to produce options and find different solutions against a problem he encounters during the game. While individuals socialize through games played with at least two people, they also have the opportunity to learn by discovering their own positive and negative aspects in the face of a different strategy. Mind and intelligence games can be said to contribute to self-acquaintance, confrontation with the sense of winning and losing, making new friends and self-confidence increasing as enjoyed; and in fact, to enable players to gain more than one value and internalize them with the learning process besides the acquisitions aforesaid. Moreover, these games are thought to help individuals stay away from internet and technological addiction in their leisure time, achieve efficient and meaningful learning and manage time well.

It is seen that being accepted by their peers during the game has a very important role in the child's getting used to the society and socializing (Alp, 2016). While the individual who starts playing has the opportunity to compare himself with his friends, he discovers his competencies and inadequacies (Aracı, 2001). Individuals develop their thinking skills through games and they have the opportunity to get into action in the learning environment (Vos, Van der Meijden & Denessen, 2011).

The literature defines self-consciousness as the individual's self-awareness (Lindwall, 2004; Bowker & Rubin, 2009), the tendency of awareness of personal aspects, self-thinking and inner self-awareness. Mind and intelligence games, which are determined by considering individual differences, provide the individual to increase his self-consciousness level and develop positive social relations. Therefore, they are thought to have important effects in terms of self-awareness besides their important impacts on emotions, thoughts, behaviors and self-consciousness. It is seen that the results of this study support these effects.

When the data on adding mind and intelligence games to the curriculum are examined, 93% of the participants are in the opinion of that they should be included in the curriculum in the institutions providing sports education. While expressing their opinions, the participants referred to the themes obtained through the acquisitions of mind and intelligence games. Games increase the interest and motivation of learners by applying the curriculum content in the problem-based learning environment and improve their academic performance (Yang, 2015). It is thought that adding mind and intelligence

games as a leisure time educational tool to the curricula of the institutions providing sports education will contribute positively to the active participation of students in different types of games in theoretical and practical lessons, learning with fun, and the transfer of values such as the sense of winning and losing through gamification.

Mind and intelligence games as a leisure time activity are thought to be a method within which individuals will learn and experience these games, obtain different gains, develop their strategies and perform these by enjoying and having fun. Adding mind and intelligence games to the curriculum of the institutions providing sports educations can help future physical education teachers, recreation leaders, sports managers and coaches use these games as an educational tool.

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