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THE EFFECT OF THE INTELLIGENCE GAMES PRESCHOOL PROGRAM ON THE MATH SKILLS OF 60-72 MONTH-OLD CHILDREN

Yasemin Yüzbaşıoğlu

Preschool Teacher, Karahüyük Mah. Ahmet Haşhaş Primary School, Konya, TURKEY

yaseminyuzbasioglu@gmail.com

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ABSTRACT

This study was conducted to examine the effect of the Intelligence Games Preschool Program on the math skills of 60-72 month-old children. In the research, a model with pre-test post-test control group, which is one of the quasi-experimental models, was used. A total of 30 children, 15 of them from the experimental group and 15 of the control group, participated in the study. General Information Form and TEMA 3 Mathematics Ability Test were used as data collection tools in the study. In addition to the Preschool Education Program of the Ministry of National Education, the children constituting the experimental group in the study were included in the Intelligence Games Preschool Program prepared by the General Directorate of Lifelong Learning for 10 weeks, every day and 2 hours a week for a total of 100 hours. The control group was not included in this program and continued with the Ministry of National Education Preschool Education Program. Mann Whitney U test was used for comparison of independent measurements and Wilcoxon Signed Ranks test was used for comparison of related measurements in the analysis. Based on the research findings, it was concluded that intelligence games contribute to children's basic mathematical skills such as counting, comparison, addition and extraction process, matching, rhythmic counting, matching objects and numbers, visual perception and concept of part and whole.

Keywords: preschool, math skills, intelligence games

INTRODUCTION

The most distinctive feature of the period that human beings spend from birth to adulthood is the experience of continuous growth and development. (Aral& Baran, 2011). Undoubtedly, cognitive development constitutes a very important place within the development areas of the individual. Since cognition defines the inner mind process, many areas such as attention, perception, memory, problem solving, reasoning, creativity are included in the cognition term (Bayhan & Artan, 2009). In the early childhood period, as in all developmental areas, the most important tool in the field of cognitive development is "game". Preschool education focuses on the efforts to provide fun and meaningful learning opportunities to children aged four to six years old (Ali & Mukhtar, 2017). According to Dönmez (1999), game is the most effective learning process of the child. Game for a child is something that the child always wants to be involved in it willingly, whether it does have any rules or not, no matter if it has an aim or not, but it constitutes the basis of physical, cognitive, linguistic, emotional and social development. Piaget (1962) states that the concept of game stems from the mental structure of the child and can only be explained by this structure. In Piaget's Cognitive Development Theory, game is

seen as a tool that helps children to improve their skills through repetition and to pre-implement their further learning (Onur & Güney, 2004). According to this theory, the game the child plays is an indicator of his / her cognitive development (Piaget, 1962). The Pre-School Education Program (2013) that was published by the Ministry of Education of republic of Turkey, the importance of game in child's educational life has been stated as follows: "Game which is an indispensable occupation of childhood should be used as the most effective learning opportunity. Children develop and enrich their learning experiences through their games. It is especially recommended to use the game as a method and activity while addressing the achievements and indicators in the program. Learning through game is seen as an integral part of this program and pre-school education" (Turkish Ministry of National Education, 2013).

Since mathematics is everywhere in daily life and is an integral part of daily life, it is both enjoyable and instructive for children to interact with concepts related to mathematics and use mathematics in games they play with their peers. (Ginsburg et al, 2003; Jackman, 2005). Since games are so effective in early childhood and are an important and integral part of children's lives, all concepts to be taught are an effective tool for educators for gains. By recognizing all kinds of concepts and objects in the game, the child learns the features and tasks of using them. This learning is seen as an accumulation of knowledge and improvement in terms of this program. During the game, the child is constantly in an activity in terms of mental aspects and abstract skills such as thinking, perceiving, matching, comprehending, sorting, classifying, symbolizing, analyzing, synthesizing, evaluating, reasoning, making choices, establishing cause-effect relationships, focusing on a goal, making a choice. These concepts mentioned also include mathematical skills. Therefore, children also improve their math skills through games. (Aral et al., 2000; Doğanay, 2002; Haktanır, 2021; Hazar, 2000; Kandır & Orçan, 2011; Kumaş & Ergül, 2021; TMNE, 2007; Özdoğan, 2000).

Mind and intelligence games play an important role in the development of students in areas such as thinking skills, logical reasoning and strategic thinking. In the literature review regarding intelligence games, it is stated that intelligence games increase motivation, improve attention and concentration, and develop a positive attitude towards learning (Bottino & Ott, 2006; Garris et al., 2002; Kayılı & Zerdal, 2018; Lou et al., 2001; Rosas et al., 2003; Türkoğlu, 2016). At the same time, it has been explained in the literature that the acceptance and play of mind-intelligence games by people bring the pedagogical potential to the agenda, and the skills that such games develop and support have been emphasized by the researchers and have a positive effect on students' performance when these games are used under certain conditions. (Bottino & Ott, 2006). It has been demonstrated that mind and intelligence games primarily develop critical thinking, creativity, originality and creative problem solving skills in students (Dziedziewicz et al., 2014; Facione, 1990; Kula, 2021; Leikin, 2009;). When it comes to the concept of game, we come across many concepts that are expected to be interrelated with each other such as cooperation, obeying the rule, decision making and competition. Each of these concepts indicates aspects that students are expected to develop in educational environment. One of the most important points that comes to mind when it comes to games is of entertainment. In this context, considering the developmental characteristics of primary school children, it is recommended to design teaching processes that they can learn with fun, and to use games and intelligence games in lessons (TMNE, 2017).

It is known that intelligence games are recommended to teachers as a tool to improve students' mental skills, and in this direction, the Turkish Ministry of National Education, General Directorate of Lifelong Learning provides a training course on intelligence games. Intelligence games are divided into six types as "Reasoning and Operation Games, Verbal

Games, Geometric Mechanical Games, Memory Games, Strategy Games and Intelligence Questions" (TMNE, 2017). Intelligence games that enable learning with fun are games that open children's minds and enable them to learn new things. These games, which develop children's abilities and enable them to gain new abilities, are very useful games that develop fast decision making, next step thinking and probability logic. Intelligence games, which also contribute positively to character development, are entertainments that develop the planned action skills of children and prevent bad habits. With intelligence games, children who increase their knowledge and skills increase their self-confidence and recognize their own limits. Intelligence games that require concentration also provide positive contributions to children's lessons by providing the ability to concentrate their attention (TMNE, 2019). Although intelligence games are so important in teaching, there are limited studies in the literature for early childhood period (Kayılı & Erdal, 2018; Türkoğlu, 2016). In this context, considering the contribution of mind and intelligence games to cognitive development and mathematics skills in early childhood, it is seen that there is not enough place in education and detailed studies are not carried out on this subject. In this context, it was aimed to examine the effect of intelligence games, which can be used in preschool education, on math skills of 60-72 month-old children.

METHOD

Model of The Research

This study, which aims to examine the effect of the intelligence games preschool program on the mathematics skills of 60-72 month-old children, was designed according to the quasi-experimental model, which is one of the quantitative research methods. In the research, quasi-experimental design with pretest posttest control group was used. In the quasi-experimental model, while the experimental and control groups were formed, the groups were formed from subjects with similar characteristics, not randomly. This distinguishes this model from the real experimental model. (Fraenkel & Wallen, 2006; Büyüköztürk, 2012). The dependent variable in the pattern is the math skills of 60-72 months old children. The independent variable is intelligence games preschool program. In the study, in addition to the Ministry of National Education Preschool Education Program, the children in the experimental group attended the Intelligence Games preschool program prepared by the General Directorate of Lifelong Learning for 2 hours a day for a total of 10 weeks. Children in the control group continued their daily education programs using only the Ministry of National Education Preschool Education Program.

Participants

The children who are in the study group of this research and constitutes the experimental and control group were selected a primary school attached to the Ministry of Education Turkey. One of the two branches in the same school constituted the experimental group and the other the control group. A total of 30 children, 15 children in the experimental group and 15 children in the control group, were included in the study. The demographic information of 60-72 month-old children included in the experimental and control groups is presented in table 1;

Table 1
Frequency and percentage distribution of the demographic characteristics of the children in the study group.

Demographic features		Experimental Group		Control Group		Total	
		n	*%*	*n*	*%*	*n*	*%*
Gender	Girl	7	46.7	8	53.3	15	50.0
	Boy	8	53.3	7	46.7	15	50.0
Mother's Education Status	Primary School	6	40.0	4	26.7	10	33.3
	Secondary School	6	40.0	8	53.3	14	46.7
	University	3	20.0	3	20.0	6	20.0
Father's Education Status	Primary School	5	33.3	2	13.3	7	23.3
	Secondary School	5	33.3	9	60.0	14	46.7
	University	5	33.3	4	26.7	9	30.0
Number of Siblings	One Child	3	20.0	2	13.3	5	16.7
	One Sibling	5	33.3	9	60.0	14	46.7
	Two Siblings	7	46.7	4	26.7	11	36.7
Monthly Income	Minimum wage and below	7	46.7	7	46.7	14	46.7
	Minimum Wage and Above	8	53.3	8	53.3	16	53.3

The ages of the children in the study group ranged from 60 months to 70 months; the average age of the children in the experimental group was 64.53 months, and the average age of the children in the control group was 65.33 months. In the experimental and control groups, there are 15 girls (50%) and 15 boys (50%) children. 40% of the mothers of the children in the experimental group participating in the study graduated from primary education, 40% from secondary education, 20% from higher education; 26.7% of the mothers of the children in the control group graduated from primary education, 53.3% from secondary education, and 20% from higher education. 33.3% of the fathers of the children in the experimental group graduated from primary education, 33.3% from secondary education, 33.3% from higher education; 13.3% of the fathers of the children in the control group graduated from primary education, 60% from secondary education, 26.7% from higher education. When the number of siblings of the children included in the study was examined, 16.7% had an only child, 46.7% had a brother and 36.7% had two siblings. In addition, when the monthly income levels of the families of the children in the study group were examined, it was found that 46.7% of them had the minimum wage and below, and 53.3% had an income level above the minimum wage.

Data Collection Tools

In this study, Early Mathematics Ability Test-TEMA-3 and General Information Form were used as quantitative data collection tools.

General Information Form

The General Information Form included the child's birth date, gender, number of siblings, education status of the parents, and income level. This form was filled in by the parents of the children and delivered to the researcher.

Test of Early Mathematics Ability, TEMA-3

Test of Early Mathematics Ability, TEMA-3 was developed by Ginsburgand Baroody in 1983 to evaluate the mathematical abilities of children between the ages of three and eight years and eleven months. It was revised in 1990 and published under the name TEMA-2. TEMA-2 test, which was revised later, was developed as TEMA-3 in 1993. Pictures, mathematical symbols, countable small objects are used as materials in A and B forms of TEMA-3. The test is administered to children individually. The application starts with the question corresponding to that age by calculating the chronological age. The test is terminated when there are five questions that the child cannot do in a row, each item is marked as true and false and the number of correct answers gives raw scores. (Ginsburg & Baroody 2003). TEMA-3 standardization in Turkey and adaptation studies in Turkish language were carried out by Erdogan (2006). As a result of the analysis made by Erdoğan, the test-retest Pearson Correlation Coefficient was found to be 90 for Form A and 86 for Form B. In the study, the internal consistency coefficient was also calculated regarding the reliability of the test, and the KR-20 value was found to be 92 for Form A and 93 for Form B.

Şeker and Alisinanoğlu (2017) applied the validity and reliability study of TEMA-3 test to children aged 48-60 months. As a result of the analysis of the study, it was found that there is a positive and high level of correlation between the scores of the TEMA-3 test forms A and B in 48-60 months old children (r: 0.985; $p < 0.01$). The high correlation calculated between the scores the children got from the two forms shows that the activities in the forms are parallel. In order to determine the reliability level of the test, the KR-20 coefficient was calculated. The reliability coefficient calculated for TEMA-3 is 703. Yüzbaşıoğlu (2019), in order to determine that the TEMA 3 scale is a valid and reliable test for 36-47 months old children, both the A form and the B form of the scale were administered to 100 children. The Kuder-Richardson (KR 20) method was used to determine the reliability of the internal consistency of the items in the A and B forms of the TEMA 3 scale. The KR 20 value regarding the internal consistency coefficient of TEMA 3 was found to be 73 for the A form and 71 for the B form. For the validity study of the TEMA 3 scale, Pearson Product Moments correlation coefficient was calculated between the scores that children both got from Form A and Form B. It is observed that there is a positive and high level of correlation between the scores of 36-47-month-old children on TEMA 3 test forms A and B ($r = .963$, $p < 0.01$). These values show that the activities in the A and B forms of the TEMA 3 test are parallel to each other. The results of validity and reliability studies show that the TEMA 3 scale is a valid and reliable scale in measuring the mathematics skills of Turkish children aged 36-47 months (Yüzbaşıoğlu, 2019). As a result of these studies, it was stated that the test has a high level of validity and reliability in measuring the mathematics ability of Turkish children between 36 and 72 months of age (Erdoğan, 2006; Şeker & Alisinanoğlu, 2017; Yüzbaşıoğlu, 2019).

Operations and Processes

The researcher applied the TEMA 3 test as a pretest to the children in both the experiment and control groups. In order to attract attention and motivate children, it was carried out in a quiet environment separate from educational environments, sitting opposite to each other on tables and chairs suitable for children. TEMA 3 test was applied to each child individually by the researcher. The answers of the children were recorded on the scale form that was arranged separately. The pretest applications took an average of 20-25 minutes with each child.

After applying pre-tests, the program which was prepared by Turkey Ministry of Education Lifelong Learning Directorate General Intelligence Games Preschool was implemented on the experimental group. The Intelligence Games Preschool Program was applied by the researcher for a total of 10 weeks, 2 hours on five days a week. The materials to be used during the training were made available in the intelligence games workshop of the school in accordance with the number of groups.

During the period when the Intelligence Games Preschool Program was not applied to the children in the experimental group, the Ministry of National Education applied a daily education program for the preschool education program for 36-72 months old children. For children in the control group, the Ministry of National Education's pre-school education program for 36-72 months old children were continued.

Following the implementation of the Intelligence Games Preschool Program, TEMA 3 test was applied to both the experimental group and the control group as a post-test.

Intelligence Games Preschool Program

Intelligence Games Preschool Program; It is aimed for the individual to develop analytical and systematic thinking skills and to be able to do various game activities. The program includes a total of 100 hours of lessons. Region, environment, site, material, interest, needs and the state of the learning environment should be taken into account in the program. Intelligence games included in this research; Color Cups, Sudoku (Sudoku with shapes, numbers, colors and objects), Obitz, Detective, Look Look, Somo Cubes, Jenga, Equilibrio, Skippty, Tangram are used. Methods and techniques that support individual learning are mainly used in the implementation of the program. During the training process; Lecture method, problem solving method, demonstration and have it made method, individual study method, case study method, demonstration methods are applied. Educators who will implement the Intelligence Games Preschool Program must have completed the Intelligence Games Tutorial Course Program (TMNE, 2019).

Analysis of the Data

The statistical analysis of the data is handled in a design that will reveal the effects of the independent variable on the dependent variable. Since the number of children in the groups was 15, it was decided to analyze with nonparametric tests. In the analysis of the data obtained from the TEMA 3 test; Mann Whitney U test was used for comparison of independent measurements and Wilcoxon Signed Ranks test was used for comparison of related measurements. 0.05 level of significance was sought in the analyzes.

FINDINGS

The findings and tables related to the TEMA 3 test in the study conducted to reveal whether the Intelligence Games Preschool Program is effective in the development of mathematics skills of 60-72 month-old children attending preschool institutions are included in this section. TEMA 3 pretest scores were compared with the Mann Whitney U test in order to test whether the TEMA 3 test pre-test scores of the experimental and control groups constituting the research group differ or not. The values for comparison are given in Table 2.

Table 2
Information about the Mann Whitney U test regarding the pre-test mean scores of the Theme 3 Mathematics Ability Test of the children in the experimental-control group is in the table.

Pretest	n	Average Ranks	Sum of Ranks	U	z	p
Experiment	15	15.73	236.00	109.000	-.147	,883
Control	15	15.27	229.00			

p>.05

When the pre-test mean scores of the Theme 3 Mathematics Ability Test of the children participating in the study are examined, it is seen that there is no significant difference between the experimental and control groups (U = 109,000; p> .05). When the average ranks are examined, the average of the ranks of the children in the experimental group is 15.73; the average of the ranks of the children in the control group was found to be 15.27.

Table 3
Wilcoxon Signed-Ranks Test Results on the Theme 3 Mathematics Ability Test pre-test and post-test mean scores of the children in the experimental group.

Posttest -Pretest	n	Average Ranks	Sum of Ranks	z	p
Negative Sequence	0	,00	,00	-3.336	,001*
Positive Sequence	14	7.50	105.00		
Equal	1				

a: based on negative ranks * p< .05

The results of the Wilcoxon signed ranks test regarding whether the mean scores of the Theme 3 Mathematics Ability Test show a significant difference before and after the Intelligence Games Preschool Program of children are presented in Table 3. Analysis results show that there is a significant difference between pre-program and post-program scores of children who participated in the Intelligence Games Preschool Program (z = -3,336, p <.05). Considering the mean rank and total of the difference scores, it is understood that this observed difference is in favor of the post test. In the light of the obtained results, it is seen that 14 children in the Theme 3 Mathematics Ability Test mean score increased after the Intelligence Games Preschool Program, and the mean scores of 1 child were equal in pretest and posttest.

Table 4
Wilcoxon Signed Ranks Test Results on the Theme 3 Mathematics Ability Test pre-test and post-test mean scores of children in the control group.

Posttest -Pretest	n	Average Ranks	Sum of Ranks	z	p
Negative Sequence	4	5.63	22.50	-.540	,589
Positive Sequence	6	5.42	32.50		
Equal	5				

a: based on negative ranks p> .05

The results of the Wilcoxon signed ranks test regarding whether the mean scores of the Theme 3 Mathematics Ability Test show a significant difference before and after the Intelligence Games Preschool Program of children are presented in Table 4. Analysis results show that there is no significant difference between the pre-test and post-test scores of the children in the control group (z = -540, p> .05). According to this, it is seen that the mean scores of Theme 3 Mathematics Ability Test of 4 children decreased, the mean scores of 6 children increased, and the mean scores of 5 children were equal in pretest and posttest.

Table 5
Mann Whitney U test for Theme 3 Mathematics Ability Test posttest mean scores of children in the experimental-control group.

Posttest	*n*	*Average Ranks*	*Sum of Ranks*	*U*	*z*	*p*
Experiment	*15*	*19.60*	*294.00*	*51.000*	*-2.582*	*,010**
Control	*15*	*11.40*	*171,00*			

*p<.05

When the Theme 3 Mathematics Ability Test posttest mean scores of the children participating in the study were examined, it was found that there was a significant difference between the mean scores of the children in the experimental and control groups (U = 51,000; p <.05). When the average ranks are examined, the average of the ranks of the children in the experimental group is 19.60; The mean ranks of the children in the control group were found to be 11.40. Accordingly, it was found that the significant difference was in favor of the children in the experimental group.

DISCUSSION AND CONCLUSIONS

According to the findings of this study, which aims to examine the effect of the intelligence games preschool program on the mathematics skills of 60-72 month-old children, the statistical analysis results to determine whether there is a significant difference between the pre-test scores of the experimental and control groups show that the groups are similar. This finding shows that the children included in the experimental and control groups are similar to each other in terms of mathematics skill level before the application of the education program. TEMA 3 posttest scores of the experimental and control group children differ statistically. TEMA 3 posttest scores of experimental group children were found to be higher than TEMA 3 posttest scores of control group children. According to these findings, it is seen that the

Intelligence Games Preschool Program supports the mathematics skill development of the children included in the study. When the skills measured by TEMA 3 are evaluated, it was concluded that intelligence games contribute to children's basic mathematical skills such as counting, comparison, addition and extraction process, matching, rhythmic counting, matching objects and numbers, visual perception and concept of part and whole. It is seen that this result is consistent with the results of studies evaluating the effectiveness of similar programs. The findings of the study conducted by Şirin (2011) to reveal whether the game method has an effect in giving the concepts of number and operation to the children of five years old who attend kindergarten are consistent with the research findings. Türkoğlu (2016), Intelligence games are included in the content of the "Game Based Cognitive Development Program". And in this study, the effect of this program on the cognitive development of 60-72 month-old children attending the kindergarten was examined. And as a result, it was seen that the cognitive development skills (language concept, discrimination speed, number concept and place concept) of the children participating in the program were significantly improved compared to those who did not. Tatlıpınar & Serçe (2019) examined the effect of chess training prepared for preschool children on attention skills in a study in which 72 children attending preschool education program participated. Considering the results of the study, it was observed that there was an increase in attention concentration and concentration skills of children who received chess training. This result also supports the results of this study.

Kayılı and Erdal (2018) examined the effect of mind and intelligence games that can be used in preschool on children's cognitive skills in their study with 40 children attending preschool education. As a result of this study, it was determined that mind and intelligence games support cognitive problem solving, auditory reasoning and processing skills, attention and concentration skills of children. Bottino & Ort (2006), in their study examining the effects of some computer intelligence games on cognitive skills, thinking skills, logical reasoning and strategic skills, concluded that intelligence games are effective.

Intelligence games for the Intelligence Games Preschool Education Program of the Ministry of National Education Lifelong Learning General Directorate “Intelligence games that enable learning by having fun are games that open the minds of children and enable them to learn new things. These games, which develop children's abilities and enable them to gain new abilities, are very useful games that develop fast decision making, next step thinking and probability logic. Intelligence games, which also have positive contributions to character development, are entertainments that develop the planned action skills of children and prevent bad habits (TMNE, 2019). Considering all these results, it is thought that intelligence games support children's existing mathematical skills and are one of the effective methods to be used in increasing them to higher levels.

No education was given to the control group children in addition to the preschool education program. When the pretest and posttests of the control group are evaluated, it is seen that the average scores of the Theme 3 Mathematics Ability Test of 4 children decreased, the mean scores of 6 children increased and the mean scores of 5 children were equal in the pretest and posttest. Pretest and posttest scores in mathematics skills do not differ significantly. It can be said that the increase seen in the posttest scores of some children is related to the pre-school education they receive, the journals and books used in early childhood support cognitive development, and the children are very open to learning in this period when their cognitive development is the fastest.

When the TEMA 3 Mathematics Ability Test posttestmean scores of the children participating in the study were examined, it was found that there was a significant difference between the mean scores of the children in the experimental and control groups. It was determined that this difference was in favor of the experimental group participating in the Intelligence Games Preschool Program. There are studies supporting this result in the literature. Altun et al. (2016) examined the effect of intelligence games on children's attention levels on 213 pre-school children. Intelligence games were played to 113 children in the experimental group 3 days a week for 10 weeks. As a result of the research, it was determined that intelligence games have a positive effect on the attention levels of preschool children. In a study conducted by Marangoz & Demirtaş (2017), 24 primary school sophomore students were made to play 14 different Turkish Brain Team mechanical intelligence games for 14 weeks. In the study, it was concluded that there was a significant increase in the mental skill levels of the students (focusing attention, strategic thinking, analyzing, establishing piece-whole relationship, using visual perception and clues). Bulquues (2011), in her/his experimental study examining the effect of educational games on children's thinking skills performance, revealed that there are significant differences between the experimental group and the control group children's performance levels regarding thinking skills. According to the research results of Saltık Ayhanöz (2022), there is an important relationship between intelligence games and mathematics. Solving problems and reaching results in games are parallel to math skills. When the literature is examined, it is seen that intelligence games improve many development areas and many skills. These results are consistent with the results of the research and support this result. According to the results of the study, it was determined that the Intelligence Games Preschool Program support the mathematics skills of the children who were participating in. Based on the research findings, the following recommendations have been developed.

Ompok et al. (2021) evaluated the math skills of preschool children in the 2021 program using early math-based games. The results show that the use of games developed by authors are effective in improving preschoolers early Mathematics performance. This intervention is consistent with the outcome of this study and shows that mathematics can be taught from an early age in an interactive, fun-filled learning environment. Akkaya et al.(2022) examined the relationship between primary school math curriculum and intelegence games. As a result of the research, it was determined that the most outcomesand game matches were in the 1st grade; mind and intelegence games mostly matched with outcomes in learning areas of numbers and operations and geometry. It is seen that the outcomes under the sub-learning domains Spatial Relations, Geometric Objects and Shapes, Natural Numbers match more with the game contents. One of the aims of preschool is to prepare for primary school. In this respect, intelligence games can prepare children for the 1st grade curriculum and support their math skills. In this respect, the results of this study support this study.

It is recommended that intelligence games be included in the Preschool Education Program. In-service training can be given to preschool teachers about intelligence games that can be used in pre-school period. Teachers have responsibilities to deliver the needs of programme (Arumugam et al., 2020), so the approaches of teachers on teaching maths are key aspects thatenable children to learn more about the concepts (Kesicioğlu &Mart, 2022). In this study, the effect of intelligence games on math skills was examined. Studies that examine and evaluate its effect on different development areas and different skills should be conducted. Active participation of parents at home in the development of children should be ensured by giving seminars to families about the effect of intelligence games and how they are played.

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