

# Effectiveness of Puppet Ice Stack Puzzle on Ability to Calculate in Habibi Kindergarten Pariaman

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**Abstract**—This study originated from the fact in Habibi Pariaman Kindergarten, that learning activities used to develop children's numeracy skills are still not varied. This can be seen in counting activities, teachers only use magazines as media. So that it has an impact on the numeracy ability of children who still cannot show the symbol of numbers, say or list the numbers, and say or recognize the concept of numbers with objects. The ice stalk puzzle puppet game is thought to be effective against the development of children's numeracy skills. The research aims to find out how effective the ice stalk puzzle game is for the numeracy ability of children in Habibi Pariaman Kindergarten. This study uses a quantitative approach in the form of quasi experiments. The results showed that the children in the experimental class who used ice stalk puzzle puppet games had a higher average of 92 when compared to children in the control class who used styrofoam puzzles namely 78. Based on the calculation of the t-test obtained  $T_{count}$  is 8.957 greater from  $T_{table}$  which is 2.048, this shows that there are significant differences between the two classes. Thus it can be concluded that the game of ice stalk puzzle puppets is very effective against numeracy skills at Habibi Pariaman Nursery School 2018/2019.

**Keywords**—*Random Game; Geometry; Mathematics*

## I. INTRODUCTION

Early childhood education is an effort to optimally develop basic behaviors and abilities in children. According to (Trianto, 2011) early childhood is a different individual, unique, and has its own characteristics according to the stages of age. According to (Soefandi, 2009) Early Childhood Education or abbreviated as PAUD is a coaching effort aimed at children from birth to age 6 years, which is carried out through the provision of educational stimuli to help growth and physical and spiritual development so that children have readiness in entering education. Furthermore.

Kindergarten Education (TK) is one form of Early Childhood Education (PAUD). Kindergarten Education plays an important role in developing all the potential abilities of children. Kindergarten age children are individuals who have a 4-6 year age range. At this age it is a good time to lay the first foundation in developing psychological, cognitive, language, social emotional abilities, self-concept, discipline, independence, art, morality, and religious values.

Teachers are the most important thing in education in kindergarten, because teachers are the determinant of success in learning. The teacher must prepare extensive knowledge in developing learning materials that will be given to students.

The teacher is tasked with developing all the potential that exists in children, especially attitudes, behaviors, and basic abilities, such as cognitive, language, physical and motoric abilities.

Cognitive is one of the abilities that must be developed. cognitive is the process of thinking, analyzing, understanding, evaluating, and considering a situation to solve a problem that includes the development of the ability of general knowledge, scientific knowledge, the development of concepts of shapes, color sizes and patterns and concepts of the development of numbers. (Susanto, 2011) (Suryana, 2018)

For children's cognitive abilities to develop properly, teachers are expected to be able to determine the right methods and media. One of the cognitive abilities is numeracy.

Ability to count is the ability to use reasoning, logic and numbers that each child has to develop his abilities, the characteristics of his development starting from the environment closest to him, in line with the development of the child's ability can increase the level of understanding of the number, which is related to the number and reduction. (Susanto, 2011)

Counting is very necessary for children in everyday life. Providing numeracy skills taught to early childhood, the child will be able to think logically and systematically. Teachers should be able to design methods and media that are varied, interesting, according to the needs and stages of child development, so that children can enjoy learning to count.

Based on observations at Habibi Kindergarten researchers found a problem with numeracy. Ability to count children who still cannot show the symbol of numbers, say or mention the sequence of numbers, and say or recognize the concept of numbers with objects. Besides learning looks boring for children, children's concentration on learning given by the teacher is very short, so that makes the child divert his attention by playing.

Based on the description above, the researcher was interested in conducting a study on the Effectiveness of Ice Puzzle Puppets on Counting Ability in Habibi Pariaman Kindergarten.

**II. METHOD**

The type of study is classroom action research (PTK), namely research conducted in the classroom carried out by the teacher to solve learning problems faced by teachers, improve the quality of learning and try new things in the field of learning. Broadly speaking there are four stages that are passed in the research, namely: 1) Planning, 2) Implementation, 3) Observation and 4) Reflection.

The population in this study were TK Kartika Jaya Pariaman Tengah students in Group B1, with a total of 17 students. Number of boys 9 while girls 8 people. The research instruments used were observation, documentation and interviews

**III. RESEARCH RESULT**

*A. Deskripsi Kondisi Awal*

In the initial conditions before the study was conducted, namely on January 19, 2012, which was studied were children aged 5-6 years, the mathematical abilities of TK Kartika Jaya students were still low. It is seen that some students in the class have difficulty when developing mathematical activities (introduction to the concepts of numbers and logic). In general, students can only mention numbers even though they do not know the actual concept of numbers, for fields but they are still confused like triangles, rectangles, circles. We can see more clearly in the table below:

TABLE I. CHILDREN’S MATHEMATICAL ABILITY IN THE LEARNING PROCESS IN EARLY CONDITIONS (BEFORE ACTION)

No	Aspects	Score					
		ST		T		R	
		F	%	F	%	F	%
1	Classify objects according to forms	-	-	2	12	15	88
2	Make forms of objects that are around	-	-	1	6	16	94
3	Create a flat plane forms	1	6	2	12	14	82
4	Match symbols of numbers with number of cards	-	-	1	6	16	94
Average			1		9		90

Based on the table above, it can be seen that the child's mathematical development in the initial condition before the action on classify objects according to the forms, that is, no child gets a very high score, 2 children get a high score with a percentage of 12% and 15 children get a low score with a percentage of 88%. For activities to make forms of objects that are around, that is, no child gets a very high score, 1 child gets a high score with a percentage of 6% and 16 children get a low score with a percentage of 94%. In the activity of creating a flat plane forms, that is, 1 child obtained a very high score of 6%, 2 people obtained a high score with a percentage of 12%

and 14 children obtained a low score with a percentage of 82%. For the activity of match blocks randomly, there were no children who scored very high, 1 child got a high score with a percentage of 6% and 16 children got a low score with a percentage of 94%.

*B. Description of Cycle I*

The first cycle was held in 3 meetings. Description of the implementation of learning in meetings I to III as follows.

TABLE II. RESULTS OF CHILDREN’S MATHEMATICAL ABILITIES IN LEARNING PROCESS ON CYCLE I AT I MEETING (AFTER ACTION)

No	Aspects	Score					
		ST		T		R	
		F	%	F	%	F	%
1	Classify the forms of Geometry	1	6	2	12	14	82
2	Make geometry forms	1	6	1	6	15	88
3	Creates forms from geometry pieces	2	12	2	12	13	76
4	Arrange geometry randomly	1	6	1	6	15	88
Average			8		9		83

Based on the table above, it can be seen that children's mathematical development in the Cycle I learning process after actions in classify geometry forms, namely, 1 child obtains a very high score of 6%, 2 children get high scores with a percentage of 12% and 14 children get a low score of 82%. For activities to make geometric forms, that is, 1 child gets a very high score of 6%, 1 child gets a high score with a percentage of 6% and 15 children get a low score with a percentage of 88%. In the activity of creating form of geometry pieces, namely, 2 children obtained very high scores with a percentage of 12%, 2 children obtained high scores with a percentage of 12% and 13 children obtained low scores with a percentage of 76%. For random geometry activities, 1 child gets a very high score of 6%, 1 child gets a high score with a percentage of 6% and 15 children get a low score with a percentage of 88%.

**TABLE III. RESULTS OF CHILDREN'S MATHEMATICAL ABILITIES IN LEARNING PROCESS ON CYCLE I MEETING II (AFTER ACTION)**

No	Aspects	Score					
		ST		T		R	
		F	%	F	%	F	%
1	Clasify the forms of Geometry	2	12	4	24	11	64
2	Make geometry forms	2	12	2	12	13	76
3	Creates forms from geometry pieces	3	18	4	24	10	58
4	Arrange geometry randomly	2	12	3	18	12	70
Average			13		20		67

Based on the table above, it can be seen that children's mathematical development in the Cycle I learning process after actions in classify geometric forms, namely, 2 children get very high scores with a percentage of 12%, 4 children get high scores with a percentage of 24% and 11 children get a low score of 64%. For activities to make geometric forms, namely, 2 children get very high scores with a percentage of 12%, 2 children get high scores with a percentage of 12% and 13 children get low scores with a percentage of 76%. In the activity of creating shapes from geometric pieces, namely, 3 children obtained very high scores with a percentage of 18%, 4 children received high scores with a percentage of 24% and 10 children obtained low scores with a percentage of 58%. For random geometry activities, 2 children received very high scores with a percentage of 12%, 3 children received high scores with a percentage of 18% and 12 children received low scores with a percentage of 70%.

Based on the table above, for the first meeting of Cycle II it was seen that the average number for the indicators grouped geometric forms, namely, 2 children obtained very high scores with a percentage of 12%, 4 children obtained high scores with a percentage of 24% and 11 children get a low score of 64%. For activities to make geometric forms, namely, 2 children get very high scores with a percentage of 12%, 2 children get high scores with a percentage of 12% and 13 children get low scores with a percentage of 76%. In the activity of creating forms from geometric pieces, namely, 3 children obtained very high scores with a percentage of 18%, 4 children received high scores with a percentage of 24% and 10 children obtained low scores with a percentage of 58%. For random geometry activities, 2 children received very high scores with a percentage of 12%, 3 children received high scores with a percentage of 18% and 12 children received low scores with a percentage of 70%.

**TABLE IV. RESULTS OF CHILDREN'S MATHEMATICAL ABILITIES IN LEARNING PROCESS ON CYCLE I MEETING III (AFTER ACTION)**

No	Aspects	Score					
		ST		T		R	
		F	%	F	%	F	%
1	Clasify the forms of Geometry	3	18	4	24	10	58
2	Make geometry Forms	4	24	4	24	9	52
3	Creates forms from geometry pieces	4	24	5	29	8	47
4	Arrange geometry randomly	3	18	4	24	10	58
Average			21		25		54

Based on the table above, it can be seen that the child's mathematical development in the learning process in Cycle I III Meeting after the action on the activities classifies geometric forms, namely, 3 children get very high scores with a percentage of 18%, 4 children get high scores with a percentage of 24% and 10 children received a low score of 58%. For activities to make geometric forms, that is, 4 children get very high scores with a percentage of 24%, 4 children get high scores with a percentage of 24% and 9 children get low scores with a percentage of 52%. In the activity of creating shapes from geometry pieces, 4 children obtained very high scores with a percentage of 24%, 5 children obtained high scores with a percentage of 29% and 8 children received low scores with a percentage of 47%. For random geometry activities, 3 children received very high scores with a percentage of 18%, 4 children received high scores with a percentage of 24% and 10 children received low scores with a percentage of 58%.

Based on the table above, for the I meeting of Cycle III it was seen that the average number for the indicators grouped geometric forms, namely, 3 children obtained very high scores with a percentage of 18%, 4 children received high scores with a percentage of 24% and 10 children get a low score of 58%. For activities to make geometric forms, that is, 4 children get very high scores with a percentage of 24%, 4 children get high scores with a percentage of 24% and 9 children get low scores with a percentage of 52%. In the activity of creating shapes from geometry pieces, 4 children obtained very high scores with a percentage of 24%, 5 children obtained high scores with a percentage of 29% and 8 children received low scores with a percentage of 47%. For random geometry activities, 3 children received very high scores with a percentage of 18%, 4 children received high scores with a percentage of 24% and 10 children received low scores with a percentage of 58%.

## Interview Result

TABLE V. RESULTS OF CHILDREN’S INTERVIEWS IN THE LEARNING PROCESS ON CYCLE I (AFTER ACTION)

No	Questions	Answers
1	Can the children classify the form of Geometry	16 children can (f) 94%
		1 child cannot (f) 6%
2	Can the children make geometry forms	15 children can (f) 88%
		2 children cannot (f) 18%
3	Can the children create forms from geometry pieces	15 children can (f) 88%
		2 children cannot (f) 18%
4	Do the children have difficulty in arrange geometry randomly	2 children answer yes (f) 12%
		15 children answer no (f) 88%

Based on the table above, it can be seen the development of children mathematics in the learning process Cycle II Meeting I after the action on the activity classifies geometric forms namely, 5 children get very high scores with a percentage of 29%, 7 children get high scores with a percentage of 41% and 5 children received a low score of 29%. For activities to make geometric forms, 7 children get very high scores with a percentage of 41%, 6 children get high scores with a percentage of 35% and 4 children get low scores with a percentage of 24%. In the activity of creating form of geometry pieces, 7 children obtained very high scores with a percentage of 41%, 6 children obtained high scores with a percentage of 35% and 4 children obtained low scores with a percentage of 24%. For random geometry activities 7 children obtained very high scores with a percentage of 41%, 6 children obtained high scores with a percentage of 35% and 4 children received low scores with a percentage of 24%.

Based on the table above, for the II Cycle I meeting, the average number for the indicators classifies geometric forms, namely, 5 children get very high scores with a percentage of 29%, 7 children get high scores with a percentage of 42% and 5 children get a low score of 29%. For activities to make geometric forms, 7 children received very high scores with a percentage of 41%, 6 children obtained high scores with a percentage of 35% and 4 children received low scores with a percentage of 25%. In the activity of creating shapes from geometry pieces, 7 children obtained very high scores with a percentage of 41%, 7 children obtained high scores with a percentage of 41% and 3 children obtained low scores with a percentage of 18%. For random geometry activities 7 children obtained very high scores with a percentage of 41%, 6

children obtained high scores with a percentage of 35% and 4 children received low scores with a percentage of 24%.

### C. Description of Cycle II

Cycle II was held in 3 meetings. Description of the implementation of learning in meetings I to III as follows:

TABLE VI. RESULTS OF CHILDREN’S MATHEMATICAL ABILITY IN LEARNING PROCESS ON CYCLE II MEETING I (AFTER ACTION)

No	Aspects	Score					
		ST		T		R	
		F	%	F	%	F	%
1	Classify the forms of Geometry	5	29	7	42	5	29
2	Make geometry Forms	7	41	6	35	4	24
3	Creates forms from geometry pieces	7	41	7	41	3	18
4	Arrange geometry randomly	7	41	6	35	4	24
Average			38		38		24

Based on the table above, it can be seen the development of children mathematics in the learning process Cycle II Meeting I after the action on the activity classifies geometric forms namely, 5 children get very high scores with a percentage of 29%, 7 children get high scores with a percentage of 41% and 5 children received a low score of 29%. For activities to make geometric forms, 7 children get very high scores with a percentage of 41%, 6 children get high scores with a percentage of 35% and 4 children get low scores with a percentage of 24%. In the activity of creating form of geometry pieces, 7 children obtained very high scores with a percentage of 41%, 6 children obtained high scores with a percentage of 35% and 4 children obtained low scores with a percentage of 24%. For random geometry activities 7 children obtained very high scores with a percentage of 41%, 6 children obtained high scores with a percentage of 35% and 4 children received low scores with a percentage of 24%.

Based on the table above, for the II Cycle I meeting, the average number for the indicators classifies geometric forms, namely, 5 children get very high scores with a percentage of 29%, 7 children get high scores with a percentage of 42% and 5 children get a low score of 29%. For activities to make geometric forms, 7 children received very high scores with a percentage of 41%, 6 children obtained high scores with a percentage of 35% and 4 children received low scores with a percentage of 25%. In the activity of creating shapes from geometry pieces, 7 children obtained very high scores with a percentage of 41%, 7 children obtained high scores with a percentage of 41% and 3 children obtained low scores with a percentage of 18%. For random geometry activities 7 children obtained very high scores with a percentage of 41%, 6

children obtained high scores with a percentage of 35% and 4 children received low scores with a percentage of 24%..

**TABLE VII. RESULTS OF CHILDREN’S MATHEMATICAL ABILITY IN LEARNING PROCESS ON CYCLE II MEETING II (AFTER ACTION)**

No	Aspects	Score					
		ST		T		R	
		F	%	F	%	F	%
1	Classify the forms of Geometry	7	41	7	41	3	18
2	Make geometry Forms	9	53	5	29	3	18
3	Creates forms from geometry pieces	9	52	4	24	4	24
4	Arrange geometry randomly	10	58	4	24	3	18
Average			51		29		20

Based on the table above, it can be seen the development of child mathematics in the learning process Cycle II Meeting II after the action on the activity classifies geometric forms, namely, 7 children get very high scores with a percentage of 41%, 7 children get high scores with a percentage of 41% and 3 children received a low score of 18%. For activities to make geometric forms, that is, 9 children get very high scores with a percentage of 53%, 5 children get high scores with a percentage of 29% and 3 children get low scores with a percentage of 18%. In the activity of creating form from geometry pieces, 9 children obtained very high scores with a percentage of 52%, 4 children obtained high scores with a percentage of 24% and 4 children obtained low scores with a percentage of 24%. For random geometry activities 10 children received very high scores with a percentage of 58%, 4 children received high scores with a percentage of 24% and 3 children received low scores with a percentage of 18%.

Based on the table above, for the Cycle II meeting II, it was seen that the average number for indicators classify geometric forms, namely, 7 children obtained very high scores with a percentage of 41%, 7 children obtained high scores with a percentage of 41% and 3 children get a low score of 18%. For activities to make geometric forms, that is, 9 children get very high scores with a percentage of 53%, 5 children get high scores with a percentage of 29% and 3 children get low scores with a percentage of 18%. In the activity of creating shapes from geometry pieces, 9 children obtained very high scores with a percentage of 52%, 4 children obtained high scores with a percentage of 24% and 4 children obtained low scores with a percentage of 24%. For random geometry activities 10 children received very high scores with a percentage of 58%, 4 children received high scores with a percentage of 24% and 3 children received low scores with a percentage of 18%.

**TABLE VIII. RESULTS OF CHILDREN’S INTERVIEWS IN LEARNING PROCESS ON CYCLE II (AFTER ACTION)**

No	Questions	Answers
1	Can the children clasify the form of Geometry	16 children can (f) 94%
		1 child cannot (f) 6%
2	Can the children make geometry forms	15 children can (f) 88%
		2 children cannot (f) 18%
3	Can the children create forms from geometry pieces	15 children can (f) 88%
		2 children cannot (f) 18%
4	Do the children have difficulty in arrange geometry randomly	2 children answer yes (f) 12%
		15 children answer no (f) 88%

On the first question whether the child can classify geometric forms it is stated that 94% of children can, 6% of children do not. For the second question 88% of children can make geometric forms and 12% of children do not. For the third activity 88% of children can create geometric forms and 18% do not. While for the fourth question 12% of children have difficulty arranging geometry randomly and 88% of children who have no difficulty.

The results of the above interviews as reinforcement of the results of observations made in this study to determine the achievement of developments that arise from children's learning outcomes. It appears from the results of interviews that children's mathematical ability to increase and even exceed the minimum completeness criteria, which is above 75%..

*D. Data Analysis*

1. Analysis of Cycle I I

Based on the cycle I of children's mathematical abilities, it can be concluded that they have not yet achieved the Minimum Completeness Criteria (KKM). This can be seen from the average percentage of children from the predetermined indicators, namely, at the first meeting the value is 8%, the average value is 10% and the value is 82%. At the meeting II a high score of 12%, a moderate score of 18%, and a low score of 70%. While at meeting III high scores 18%, moderate values 24% and low scores 58%. In this case, it means that random geometry is not optimal in improving children's mathematical abilities. It is expected that in a random geometry game can improve the child's mathematical abilities at least 75%

2. Analysis of Cycle II

Based on the results of the research obtained in Cycle II the number of children who obtained a high average increased and reached the Minimum Completion Criteria (KKM) that had been set. This can be seen from the average percentage of

Cycle II meeting II. This means that a random geometry game can improve the mathematical abilities of children in TK Kartika Jaya Pariaman Tengah exceeding the 75% Minimum Completeness Criteria (KKM).

**3. Analysis of Observation Resulti**

Random geometry games to improve children's mathematical abilities the average value obtained from overall achievement has reached the Minimum Completion Criteria (KKM). Improving children's mathematical abilities through random geometry games at TK Kartika Jaya Pariaman Tengah has increased starting from the initial conditions, Cycle I and Cycle II. For more details, see the following tables and graphs:

**TABLE IX. PERCENTAGE OF DEVELOPMENT OF CHILDREN'S MATHEMATICAL ABILITY THROUGH RANDOM GEOMETRY GAMES IN LEARNING PROCESS (VERY HIGH CATEGORIES)**

No	Aspects	Before Action	Cycle I	Cycle II	Note
1	Clasify the forms of Geometry	-	18	82	Increase
2	Make geometry Forms	-	24	76	Increase
3	Creates forms from geometry pieces	6	24	88	Increase
4	Arrange geometry randomly	-	18	88	Increase
Average		1	21	82	Increase

Based on the table above, it can be seen that the average percentage of development of children's mathematical abilities in the learning process with very high values has increased where before the average action is 1%, in cycle I 21% and in cycle II 82%.

**TABLE X. PERCENTAGE OF DEVELOPMENT OF CHILDREN'S MATHEMATICAL ABILITY THROUGH RANDOM GEOMETRY GAMES IN LEARNING PROCESS (HIGH CATEGORIES)**

No	Aspects	Before Action	Cycle I	Cycle II	Note
1	Clasify the forms of Geometry	12	24	12	Decrease
2	Make geometry Forms	6	24	18	Decrease
3	Creates forms from geometry pieces	12	29	12	Decrease
4	Arrange geometry randomly	6	24	6	Decrease
Average		9	25	13	Decrease

Based on the table above, it can be seen that the average percentage of development of children's mathematical abilities in the learning process with high categories has decreased where before the average action is 9%, in Cycle I the average is 25% and in Cycle II the average is 13%.

**TABLE XI. PERCENTAGE OF DEVELOPMENT OF CHILDREN'S MATHEMATICAL ABILITY THROUGH RANDOM GEOMETRY GAMES IN LEARNING PROCESS (LOW CATEGORIES)**

No	Aspects	Before Action	Cycle I	Cycle II	Note
1	Clasify the forms of Geometry	88	58	6	Decrease
2	Make geometry Forms	94	52	6	Decrease
3	Creates forms from geometry pieces	82	47	-	Decrease
4	Arrange geometry randomly	94	58	6	Decrease
Average		88	54	4	Decrease

Based on the table above it can be seen that the average percentage of development of children's mathematical abilities in the learning process with a low value has decreased where before the average action was 88%, in Cycle I the average was 54% and in Cycle II the average was 4%.

**IV. DISCUSSION**

Mathematics is a thinking process where the ability of individuals to connect, assess and consider an event or event. Menuru. [7]) ) Mathematics is expressed by the growth of the ability to design, remember, and find solutions to problems faced. [8] Mathematical abilities are defined as extensive knowledge, reasoning power, creativity, language skills and memory.

Based on the results of research on improving children's mathematical abilities through random geometry games at TK Kartika Jaya Pariaman Tengah, a discussion is needed to explain and deepen the study in this study.

In the initial conditions obtained a picture of the geometry random game is still low where some children in class B4 TK Kartika Jaya Pariaman Tengah experience difficulties when randomly arranged geometry activities are held. After seeing the initial conditions the researchers took action to improve children's mathematics through random geometry games.

Based on the level of research in cycle I and cycle II can be described the average success of children as follows:

- a. The ability of children to take part in the activity has increased, from the initial condition of an average of 2%, at the third meeting the second cycle the average rose to 81%. while the low positive decreases from an average of 88% to 6%.
- b. Observe from the activities of the teacher, learning in the Cycle II has run well and successfully.

c. The ability of children through random geometry games increases can be seen in the following description:

1. *Children can classify geometric forms from the initial condition the ability value is very high from 0% at the meeting III of the cycle II to 82%.*
2. *Children can make geometric forms from the initial conditions very high values 0% at the meeting III of the cycle II increased to 76%.*
3. *Children can create forms from geometric pieces from the initial condition a very high ability value of 6% at the meeting III of the cycle II increases to 88%.*
4. *Children can arrange geometry randomly from the initial condition, the ability value is very high 0% at the meeting III of the cycle II increases to 88%.*

From the description above, it can be seen that the random geometry game to improve children's mathematical abilities, the average value obtained from overall achievement has reached the Minimum Completion Criteria (KKM). Improving children's mathematical abilities through random geometry games at TK Kartika Jaya Pariaman Tengah has increased starting from the initial conditions, Cycle I and Cycle II. It means that a random geometry game can improve the mathematical abilities of children at TK Kartika Jaya Pariaman Tengah exceeding the 75% Minimum Completeness Criteria (KKM).

#### V. CONCLUSION

Based on the results of the research that has been done, it can be concluded that the children's mathematical abilities in the learning process can be increased by using random geometry games in the children of the B1 TK Kartika Jaya Pariaman Tengah; in geometric random play the ability that is achieved is that the child can classify geometry, the child is able to make geometric forms, the child is able to create forms from geometric pieces and the child is able to arrange geometry randomly; Random geometry games can improve

children's mathematical abilities; Geometry random game tool suitable for kindergarten age, because it is in accordance with the principle of playing in kindergarten; Through geometry random games can provide a quite satisfying influence to improve children's learning outcomes, with an increase in each cycle; The need to stimulate children's mathematical abilities at an early age; and game tools are very important for children's development.

Based on the description of the conclusions above there are some suggestions that the researcher would like to describe as follows:

1. In order for learning to attract the attention and interest of children, teachers should be more creative in creating a fun learning environment for children.
2. For the implementation of kindergarten, it should be able to provide teaching aids capable of supporting children's development.
3. In learning process, the teacher must be able to create learning strategies so that children are not bored, so that learning objectives are achieved.
4. For other researchers it is expected to develop children's mathematical abilities through other methods and media.

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