

**IMPROVING UNDERSTANDING OF GEOMETRY
CONCEPTS THROUGH COOPERATIVE LEARNING
WITH ORIGAMI PAPER MEDIA IN GROUP A
CHILDREN IN RA MIFTAHUL ULUM CURAH KERIS
KALIPANG PASURUAN**

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ABSTRACT :Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills needed by themselves, society, nation and country. Lestari K.W. explained that “Introducing geometric shapes in early childhood is the ability of children to recognize, point, name and collect objects around them based on geometric shapes”. Based on the phenomena found in RA Miftahul Ulum Bulk Keris Kalipang, it is known that children’s understanding of geometric shapes is still not optimal. The first indication is that in introducing geometric shapes, the teacher prefers the example on the blackboard without ever using origami paper. Second, the average child is still confused when mentioning various geometric shapes, namely the shape of a rectangle, triangle, circle, and other shapes. Third, the average child is still not able to make a geometric shape precisely because the shape made is not fully in accordance with the shape it should be 2. The results showed that the continuous improvement of children’s abilities from every meeting in cycle I and cycle II which was attended by 15 child (100%). In the first cycle of 15 students who showed very good development (BSB) at the 1st meeting was 14%, and at the 2nd meeting was 20%, Developing according to expectations (BSH) at the 1st meeting was 6% and at the 2nd meeting, 14% Beginning to Develop (MB) at the 1st meeting by 20%, and at the 2nd meeting

by 26%, and Undeveloped (BB) at the 1st meeting by 60%, and at the second meeting by 40%.

In the second cycle, there was a very good increase, from 15 students who showed very good development (BSB) at the 1st meeting by 26%, and at the 2nd meeting 34%, Developing according to expectations (BSH) at the second meeting. 1 was 20% and at the 2nd meeting was 26% , Started Developing (MB) at the 1st meeting was 34%, and at the 2nd meeting was 34%, and Not Developed (BB) at the 1st meeting was 20 % , and at the second meeting it was 6%.

Keywords: geometric shape concept, origami paper media

PRELIMINARY

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills needed by themselves, society, nation and state.

The development and growth of children must be properly stimulated, so that their developmental tasks can develop optimally. Christine Sujana stated that “a groundbreaking study in 1954 proved that intelligence can be cultivated”. One of the developmental tasks that must be fostered or stimulated is cognitive development by introducing objects around the child. Mukhtar Latif, et al explained that “in their growth, children cannot be separated from the objects around them”. Since childhood, they are familiar with nearby objects whose shapes are the same as geometric shapes, such as coins, cupboards, tables, books, balls, or other objects that are used to fulfill needs in daily life and play purposes.

Lestari K.W. explained that “Introducing geometric shapes in early childhood is the ability of children to recognize, point, name and collect objects around them based on geometric shapes”. Introducing geometric shapes to early childhood begins with building geometric concepts, namely by identifying the characteristics of geometric

shapes. Before identifying geometric shapes, in the cognitive development of children according to Bloom's theory, there are six levels of thinking processes, including knowing, understanding, applying, analyzing, evaluating, and being creative. Furthermore, according to Agung "Children's cognitive abilities have stages that must be considered, in accordance with the child's development, and not all levels of cognitive thinking ability processes can be measured".

According to Agung Triharso, (2013: 46). States that "the ability to recognize geometric shapes in children is always related to learning mathematics". Mathematics in PAUD is an activity of learning about mathematical concepts through play activities in everyday life and is scientific in nature. Playing while learning and learning while playing have similarities and differences. They both do play and learn activities, only the emphasis is different. If learning while playing puts more emphasis on the lesson, then playing while learning places more emphasis on playing activities and the type of game.

At RA Miftahul Ulum Bulk Keris Kalipang, researchers found a problem regarding children's lack of understanding of various geometric shapes. Children are not yet able to distinguish and mention various geometries, there are even children who are just silent when asked about geometric shapes. It

is hoped that by using activities that are interesting and in accordance with the development of children, children can be interested and feel happy in participating in learning activities.

The learning model with a group approach, group-based learning with security activities, is a learning pattern in which children are divided into several groups, usually children are divided into three groups and each group carries out different activities. In one meeting, children must complete 2-3 activities in groups in turn completely.

According to Isjoni, 2007:10-12. Group learning approach is one of learning based on constructive understanding. Group learning is a learning strategy with a number of children as members of small groups with different ability levels. Furthermore, Anita, 2007:16. Mention group learning with the term mutual cooperation learning, which is a learning system that provides opportunities for students to cooperate with other children in structured tasks. Furthermore, group learning works only when a group or system has been formed in which children work in a directed manner to achieve predetermined goals with the number of group members.

Early childhood is in the preoperational stage where at this

stage is the preparation stage towards organizing concrete work and being able to think intuitively. This is as stated by Mohammad

Asrori that: The preoperational stage takes place at the age of 2-7 years. This stage is also called the intuition stage because cognitive development shows a marked tendency to be intuitive; in the sense that all rational actions are not supported by thoughts but by elements of feelings, natural tendencies, attitudes obtained from meaningful people, and the surrounding environment.

At this stage the child is familiar with shapes, can consider large or

small, long or short sizes on objects based on the child's experience and perception. Therefore, when the teacher explains the material, it is hoped that the children will know concrete things based on their experience.

Learning media at the PAUD level is very necessary when teaching, because the world of children is a world of play, therefore learning in PAUD should be directed by playing while learning which is packaged in an interesting way. In developing the ability to introduce geometric shapes to children, it can be done in various ways, one of which is by using origami paper media with simple geometric shapes to introduce various kinds of geometric shapes.

Gardner in Agung Triharso, explains that "a good introduction to geometric shapes, besides being able to improve their cognitive abilities, children can understand their environment". In addition, children are able to think logically

mathematically and can understand simple concepts in everyday life, such as when a child sees a coin, the child will know that the shape is a circle(round), the book is shaped like a rectangle, the roof of the house is triangular and so on. With honed and directed logical mathematical thinking skills, children will be able to think logically and rationally. Playing while learning through the use of origami paper, children will indirectly recognize the shapes of rectangles, circles, and triangles. This can be said to be playing while learning because children can play classifying the same geometric shapes and can learn to count.

Based on the phenomena found in RA Miftahul Ulum Bulk Keris Kalipang, it is known that children's understanding of geometric shapes is still not optimal. The first indication is that in introducing geometric shapes, the teacher prefers the example on the blackboard without ever using origami paper. Second, the average child is still confused when mentioning various geometric shapes, namely the shape of a rectangle, triangle, circle, and other shapes.

Third, the average child is still not able to make a geometric shape precisely because the shape made is not fully in accordance with the shape it should be

Based on this phenomenon, efforts will be made to increase the understanding of geometric shapes in children considering the ability to understand geometric shapes in

children is still low. This was done in the form of a research entitled “Improving understanding of geometric concepts through cooperative learning with origami paper media for children in group A at RA Miftahul Ulum Keris Bulk Kalipang Pasuruan”

METHOD

This study uses a classroom action research (CAR) design. In short, CAR can be defined as a form of reflective study by action actors, which is carried out to increase the rational ability of their actions in carrying out their duties, deepen the actions taken, and improve the conditions in which these learning practices are carried out. 1999:6) PGSM Coaching Team. This classroom action research was conducted in two cycles. Between cycles I and II mutually support where phase two or cycle two is planned based on the results of research in cycle I. Each cycle has four stages that have been planned and determined.

The population is the entire research subject (Arikunto, 2010: 173). The total population in this study were students of RA Miftahul Ulum Bulk Keris Kalipang Pasuruan.

The sample is part or representative of the population under study (Arikunto, 2010: 173). The number of samples in this study were students aged 4-5 years as many as 15 people taken from group A. The sampling technique in this study is purposive sampling with the consideration that the

observations made in RA tend to use learning methods. Instruments are tools used in recording or obtaining data that will be needed. The instruments were prepared before the researchers went directly to the field. In this research, the instruments used are:

a. An observation sheet for improving communication skills which contains notes on the results of activities regarding children's communication practices in accordance with the indicators to be achieved. The procedures for compiling and filling out this observation sheet are as follows:

1. Determine the indicators that will be used to determine the improvement of children's communication skills.
2. Describe the indicators into points of observation that show the achievement of indicators that children can do when carrying out activities.

3. Make an observation sheet that is used to record the results of observations every time you take action
 - b. Observation sheet on the application of visual media, which contains notes on the implementation of the number card game in an effort to improve cognitive abilities. The components that are subject to assessment in this number card game include: introduction, implementation, core, use of number cards and cover which is

carried out during the learning process.

1. The components of the learning activities to be observed are determined in advance.
2. Each component is translated into aspects of activities carried out by the teacher when carrying out learning.
3. Record the results of observations by giving a checklist (V) in the "Y" column if the aspect was carried out by the teacher and in the "T" column if the aspect was not carried out by the teacher during learning.

RESULT AND DISCUSSION

Based on the results of initial observations and interviews conducted at RA Miftahul Ulum Curah Keris, it is known that children show delays in understanding geometric concepts, meaning that they are not in line with the expectations of an educator. That is, during the learning process regarding the concept of geometry, children are still confused to distinguish between one geometric shape and another. Of the 15 students, only 1 student was able to understand the concept of geometry correctly, this was marked by the child being able to name various kinds of geometric shapes designated by the teacher, 1 child developed very well, while those who began to develop were 3 students and those who had not yet developed. As many as 10 students. Based on the observations of the problems above, the researchers

collaborated with the teacher to take steps as an effort to improve the understanding of children's geometric concepts so that they increased. One of the efforts made by using the media as for the right media to improve understanding of geometric shapes is with origami paper media.

Researchers try to find a way out of the problem by improving learning through Classroom Action Research (CAR). Classroom Action Research (CAR) was carried out on students aged 4-5 years or group A RA Miftahul Ulum Bulk Keris Kalipang. This research was conducted in 2 cycles. Cycles I and II were each carried out in 2 meetings. Siklus I will be held on January 10 and January 13, 2022. Meanwhile, Cycle II will be held on January 18 and 21, 2022.

Kindergarten is education to help the growth and development, both physically and spiritually of children outside the family environment before entering basic education, as an effort to make children aged 4-6 years more ready to take part in further education. Basically every child has creative potential, with creative potential children need creative

activities or activities in order to hone children's creativity. Some teachers argue that using media in learning helps children achieve the learning objectives to be achieved, but it requires more time and preparation of varied and interesting learning for children. From the research that has been

done that this does not solve the existing problems, often the goals to be achieved are less successful because the use of media is still too monotonous.

In learning media is a tool used to do good and effective teaching. In increasing children's creativity, it is necessary to use interesting and fun media so that they do not make children bored and bored. However, by using the right media, the activity and creativity of children will develop well.

Based on the results of the interview, it can be described that the children's daily activities show the impact of the learning provided at school, which can be developed in everyday life at home.

Furthermore, the results of interviews with children, who are directly involved in activities "make geometric shapes out of paper" can be summed up as follows: "Learning using paperfolding media is very fun, because it can create various shapes from funny origami paper."

Furthermore, on different occasions, information was obtained from other children, namely:

"Learning by using paper art, children can learn various aspects, for example, children can recognize colors, recognize geometric shapes and recognize new forms that have never been made before."

From the results of interviews with several children, it can be concluded that they feel happy, happy, and do not feel bored when participating in "paper art" activities.

In the implementation of the first cycle through two meetings with the implementation of cooperative learning in group A, several obstacles and weaknesses could be found, including the lack of interest of children in participating in activities because according to children it made the form difficult because previously this activity was rarely applied.

Based on the test results of the students' paper folding skills in the first cycle, it can be seen that, at the first meeting of the 15 children in group A who gave very good development results (BSB), it can be seen that there were 2 children (14%), developing according to expectations (BSH). There is 1 child (6%) Starting to develop (MB) it is known that there are 3 children (20%), and Undeveloped (BB) it is known that there are 9 children (60%). At the second meeting of 15 children in group A

who gave very good development results (BSB) it can be seen that there are 3 children (20%), developing according to expectations (BSH) it is known that

2 children (14%,) Starting to

develop (MB) it is known that there are 4 children (26%), and Undeveloped (BB) it is known that there are 6 children (40%). Thus, in

the first cycle, it shows that the understanding of the concept of children's geometric shapes has not yet developed.

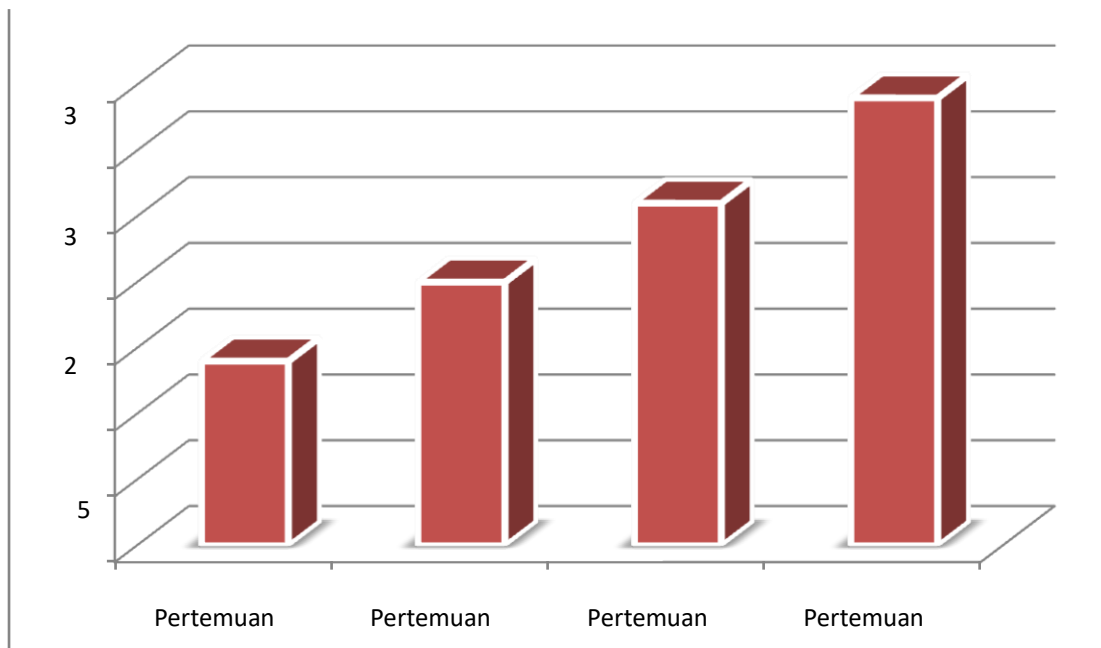
Armed with the weaknesses in the first cycle, it is used as capital for improvement in the implementation of the second cycle, both from planning, implementation and evaluation. This can be seen from the child skill test in child A which shows an increase which gives the results Very Good Development (BSB) it can be seen that there are 4 children (26%), Developing According to Expectations (BSH) 3 children (20%), Starting to Develop (MB) can be seen there are 5 children (34%), and Undeveloped (BB) can be known 3 children (20%). And at the fourth meeting of the 15 children in group B who gave very good development results (BSB) it can be seen that there are 5 children (34%), developing according to expectations (BSH) it is known that 4 children (26%) starting to develop (MB) it can be seen that there are 5 children (34%), and underdeveloped (BB) it can be seen that there is 1 child (6%). The response at the end of each cycle always increases.

Based on the results of the reflection of the two cycles, through 4 meetings of geometric shapes using origami paper in group A RA Miftahul Ulum Keris Kalipang Pasuruan, it was found that there was a significant increase in the percentage of development. This can be summarized in the following table:

Gambar

In the second cycle, there was a very good increase, from 15 students who showed very good development (BSB) at the 1st

**Grafik Perkembangan Pemahaman2 Konsep Geometri Siklus I
dan Siklus II Peserta Didik Yang Berkembang Sesuai
Harapan Kelompok A RA Miftahul Ulum Curah Keris
Kalipang
Grati Pasuruan**



From the table above, it can be seen that there is a continuous increase from each meeting in cycle I and cycle II. In the first cycle of 15 students who showed very good development (BSB) at the 1st meeting was 14%, and at the 2nd meeting was 20%, Developing according to expectations (BSH) at the 1st meeting was 6% and at the 2nd meeting, 14% Beginning to Develop (MB) at the 1st meeting by 20%, and at the 2nd meeting by 26%, and Undeveloped (BB) at the 1st meeting by 60%, and at the second meeting by 40%.

meeting by 26%, and at the 2nd meeting 34%, Developing according to expectations (BSH) at the second meeting. 1 by 20% and at the 2nd meeting by 26%, Starting to Develop (MB) at the 1st meeting by 34%, and at the 2nd meeting by 34%, and Not Developing (BB) at the 1st meeting by 20%, and at the 2nd meeting by 6%.

Based on the analysis in cycle I and cycle II, the author can conclude that making children's geometric shapes with origami paper media plays an important role in increasing understanding of the concept of geometric shapes for early childhood. By using origami paper media, children can increase their understanding optimally and from folding activities, children can learn several learning concepts.

CONCLUSION

Based on the description of the previous chapters, the authors can draw conclusions from the results of this study as follows:

1. Evidence of an increase in children's understanding through the media of origami paper at RA Miftahul Ulum Bulk Keris Kalipang Grati Pasuruan can be seen from the evaluation results at the end of each meeting and the implementation of RPPH 1 to 4 which is strung together in the actions of cycle I and cycle II.
2. The results showed that there was a continuous improvement in the ability of children from every meeting in cycle I and cycle II which was attended by 15 children (100%). In the first cycle of 15 students who showed very good development (BSB) at the 1st meeting was 14%, and at the 2nd meeting was 20%, Developing according to expectations (BSH) at the 1st meeting was 6% and at the 2nd meeting, 14% Beginning to Develop (MB) at the 1st meeting by 20%, and at the 2nd meeting by 26%, and Undeveloped (BB) at the 1st meeting by 60%, and at the second meeting by 40%.
3. In the second cycle, there was a very good increase, from 15 students who showed very good

development (BSB) at the 1st meeting by 26%, and at the 2nd meeting 34%,

Developing according to expectations (BSH) at the second meeting. 1 was 20% and at the 2nd meeting was 26% , Started Developing (MB) at the 1st meeting was 34%, and at the 2nd meeting was 34%, and Not Developed (BB) at the 1st meeting was 20 %, and at the second meeting it was 6%.

Thus the hypothesis of the action that the author proposes is answered in the process of implementing the classroom action research that the author has done, namely that with origami paper media can improve understanding of the concept of geometric shapes through cooperative learning at RA Miftahul Ulum Curah Keris Kalipang Grati Pasuruan.

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