

Analysis Of Mathematics And Creative Science Learning In Early Childhood Al-Kausar Perjuangan Kindergarten

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Abstract. This research discusses the analysis of mathematics and science learning at Al-Kausar Perjuangan Kindergarten. Mathematics for early childhood focuses more on mastering counting skills, while science focuses on recognizing colors through indoor and outdoor experiments. The method used by researchers in this research is a qualitative method with data collection techniques through observation and interviews. The research location for the researcher was the Al-Kausar Perjuangan Kindergarten . Creative mathematics and science learning as an alternative for young children is packaged in fun and meaningful activities.

Keywords: *Mathematics, Creative Science, Early Childhood*

Abstrak. Penelitian ini membahas tentang analisis pembelajaran matematika dan sains di TK Al-Kausar Perjuangan. Ilmu matematika untuk anak usia dini lebih fokus pada penguasaan kemampuan hitungan sedangkan sains memfokuskan pada pengenalan warna dengan eksperimen di dalam ruangan maupun luar ruangan. Metode yang peneliti gunakan pada penelitian ini ialah metode kualitatif dengan teknik pengumpulan data melalui observasi dan wawancara. Lokasi penelitian peneliti mengambil TK Al-Kausar yang ada di Perjuangan. Pembelajaran matematika dan sains kreatif sebagai salah satu alternatif bagi anak usia dini yang dikemas dalam kegiatan yang menyenangkan dan bermakna.

Keywords: *Mathematics, Creative Science, Early Childhood*

Introduction

Science and mathematics education is an integrated approach that teaches science and mathematics-based technology and techniques in kindergarten. The definition of early childhood according to Law Number 20 of 2003 concerning the National Education System states that early childhood is a child aged 0-6 years. According to experts Marliah, (2019) Early childhood is children aged 0-8 years. Early age is a period often referred to as the golden age or *Golden Age* Because during this period children have a golden opportunity to learn and play

Every child has a great curiosity. This is closely related to children's cognitive development so that it encourages children to carry out exploration activities by exploring every corner, understanding pictures and objects around them, and enjoying experiments by fiddling with objects such as playing puzzles and playing with water by filling and pouring water into containers. From these activities, children often ask various questions that demand logical answers to satisfy their curiosity. In addition to exploration activities, at an early age children also tend to like classification and counting activities (Muqdamien, 2021).

In addition, early childhood learning is synonymous with fun activities by integrating the concept of knowledge to produce new acronyms). The art aspect in general leads to children's creativity in producing works. Art and science complement each other because science provides a grasp of methodology, art provides a creative model for the development of science (Fitria, 2015).

Mathematics and science learning can be introduced to early childhood through daily activities. The purpose of developing the concept of Mathematics and Science is so that children can build sensitivity to the surrounding environment and be able to solve problems that occur around them (Adnyan, 2021). Therefore, learning Mathematics and Science provides an opportunity for early childhood to develop the ability to think logically and creatively, in addition to learning mathematics and science should be done in a fun way and the media used is as creative as possible.

However, in reality, learning in developing mathematical and scientific logic skills still does not result in the achievement of the expected abilities. This can be seen from the results of observations in the Al-Kausar Perjuangan Kindergarten Play Group, which shows that most of them still need help and guidance in completing tasks given by teachers related to mathematical and reasoning concepts, such as the concept of numbers (more, less, equal) and difficulties in expressing causal relationships and the origin of the occurrence of simple experimental activities. Therefore, Mathematics and Science need to be taught to early childhood so that they know how to think symbolically and also train them in logical and systematic thinking. Therefore, the researcher is interested in raising a research entitled "Analysis of Mathematics and Creative Science Learning in Early Childhood Al-Kausar Perjuangan Kindergarten"

Methodology

In this study, the researcher uses a descriptive method with a qualitative approach. Researchers use this method because they want to identify the symptoms of a problem in detail and as they are. This research is qualitative, namely research where the data used is in the form of descriptions in accordance with what is obtained in the field. This research will be carried out at Al-Kausar Kindergarten in JL Perjuangan. Data collection techniques are carried out through observation, interviews and documentary documentation such as books, journals and related articles as a solution for early childhood science learning.

Results and Discussion

Science is a way of observing thinking when looking at the world around us, science can be said to be good knowledge about the phenomenon of human adaptation to the environment. Science for early childhood because children can get to know the concept of the environment in a simple way in daily life. In addition to science, early childhood science must also be introduced to mathematics because these two sciences are very important in improving children's mindset. Plus mathematics is needed in daily life. Science and mathematics in children can develop children's cognition and other developmental aspects. Learning activities can be done with simple activities, namely playing while learning so that children feel not bored and bored and the teacher's goals are optimally achieved.

The purpose of learning science and mathematics in children is to provide the development of children's way of thinking when solving problems that occur in daily life, besides that it can foster children's sensitivity to the surrounding environment. Learning activities can indeed be done without media, but of course this will make it difficult for children to understand, so learning media is needed to help children understand what science and mathematics are. Learning media is a tool, both methods and creative techniques that are carried out in terms of making communication between teachers and children effective in the learning process. The benefits of using learning media are as follows:

1. The delivery of learning information messages is clearer, more interesting and concrete, which was not a verbal transmission but can be repurposed into a learning activity that is disappointing.

2. Overcoming the problem of limited space, time and also sensory power. In the case that when the teacher wants to tell a past event, of course, the object of the event can be presented with a movie model, etc.
3. It can foster the activeness of children.
4. It can provide a sense of desire and motivation in children.
5. It can make children's memory better so that children can learn on their own.
6. It can create a closer interaction between children and teachers.
7. Children get the same experience and perception of information.

From the results of the observations made by the author at AlKausar Kindergarten Medan Perjuangan, it shows that if the existing teachers introduce science and creative mathematics to children with fun play activities by adjusting the theme they want to learn, of course, on each theme will be taught so that the learning media and themes that want to be conveyed are appropriate. which are as follows:

1. Introducing science by way of rainbow experiments

Children are taught to know the type of rainbow color, namely with the medium of chaca candy where children place candy in water according to the color of the rainbow kemudai is given water so that the color of the candy comes out and forms a rainbow. This activity provides children with knowledge about the colors of the rainbow.

2. Introducing science in gardening

Gardening activities can stimulate children's motor and sensory nerves because when children plant a plant, it will certainly foster a sense of ownership of the plant and make children have a sense of responsibility to care for and maintain the plants they plant.

3. Introducing science by playing tug-of-war

Activity ii certainly provides knowledge for children to train speed, accuracy and cohesiveness. In addition, children will learn about friction force when tug-of-war.

4. Identifying mathematicia by arranging bottle caps according to numbers

Teachers at Alkausar Kindergarten introduce mathematics in a very creative way so that with this activity can make children more enthusiastic and focused in counting, with the activity of arranging bottle caps according to numbers starting with children choosing and adjusting numbers in order then pasted on paper

according to the number of numbers on the paper. In this way, it can help children in counting, recognizing numbers and training children's sensory and motor nerve abilities.

5. Introducing mathematics to fairy tale books

Creative activities are carried out by telling a fairy tale for example about kancil and crocodiles where there is a story session of kancil jumping over the swamp to cross the river, now there the teacher arranges the children to march on the floor where the floor media is used as a reference for jumping and counting, this activity helps children to be disciplined and increase children's motivation because of jumping and jumping and makes Ana feel happy.

6. Introducing mathematics through watercolor activities

In this activity, children are trained to observe the results of the colors they do with watercolors, the method is that children drip watercolors according to the direction of yangman in the first cavity 1 drop, the second cavity 4 drops and so on after that the child uses different brushes to erase the paper so that a different concentration color is produced from each drop of watercolor in the cavity. Verbally, this activity certainly gives children a strong memory so that children can independently carry out activities without asking many questions.

7. Introduction to mathematics by singing

In this creative activity, children sing by memorizing numbers, multiplication and others which are related to mathematics. This activity can help children's memory in memorization.

8. Introducing mathematics by making frames from ice cream sticks

Making frames from ice cream sticks can increase children's knowledge of mathematics where children will certainly calculate ice cream sticks first to form a frame so that the frame has the same size in each shape.

Conclusion

Based on the explanation above, it can be said that science and mathematics learning is given by teachers as creatively as possible to foster a sense of willingness and enthusiasm for children to understand science and mathematics. Because basically rainbow experiments, gardening and tug-of-war activities provide children with knowledge to know the basics of science and the environment. In addition, doing activities such as arranging bottle caps, getting to know numeric with fairy tale books,

singing and using ice cream sticks is a learning medium that is easy for children to understand so that children are not bored and bored in learning mathematics.

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