



International Journal of Multidisciplinary Research and Growth Evaluation



International Journal of Multidisciplinary Research and Growth Evaluation

ISSN: 2582-7138

Received: 25-11-2021; Accepted: 12-12-2021

www.allmultidisciplinaryjournal.com

Volume 2; Issue 6; November-December 2021; Page No. 334-337

Analysis of assignment methods in mathematics introduction to geometry materials in early childhood education

Indah Abdiana ¹, Dadan Suryana ²

¹⁻² Masters Study Program in Early Childhood Education, Padang State University, Indonesia

Corresponding Author: Indah Abdiana

Abstract

Introducing mathematics to early childhood is taught directly because children also have to see it concretely. Mathematics can't be separated from everyday life, children also like mathematics if the way teachers and parents teach is fun and creative. Mathematics is not only an activity about counting, addition, subtraction, multiplication and division, but there are many mathematical activities that are part of our daily life. One of the learning methods in Early Childhood Education is the assignment method, using the assignment method especially in introducing the concept of introducing mathematics to early childhood in geometric shapes material, which can make it easier for children to understand geometric shapes around children in a fun way. Through fun activities that are liked by children and which can be easily understood by children, especially in introducing geometric shapes to early childhood. There are several kinds of learning methods that exist in the school, namely the play method, the field trip method, the conversation method, the demonstration method,

the project method, the storytelling method, and the assignment method. The method used in this research is descriptive qualitative research. Geometry material is an introduction to the concept of forms such as circles, triangles, and squares. From the findings of research conducted by researchers at TK Mutiara Ibu Jambi related to learning the introduction of mathematics to geometry material used by teachers by using the assignment method in introducing mathematics learning, especially in geometry material, the research findings were when teachers used the assignment method in introducing the introduction of mathematics to the material. geometry in early childhood, children can understand the concepts of geometry, it turns out that children can recognize geometric shapes, namely round shapes, triangle shapes, and square shapes, children can also distinguish colors according to geometric shapes that have been taught previously by the teacher.

Keywords: Early Childhood Mathematics, Assignment Method, Geometry

Introduction

Mathematics is one of the branches of early childhood cognitive development which is an activity in recognizing number symbols for early childhood. Introducing mathematics to early childhood is taught directly because children also have to see it concretely. Mathematics cannot be separated from everyday life, children also like mathematics if the way teachers and parents teach is fun and creative. Mathematics is not only an activity about counting, addition, subtraction, multiplication and division, but there are many mathematical activities that are part of our daily life.

According to Suryana (2018) ^[17], the introduction of mathematics in early childhood is not only counting activities but can also be introduced to the material of numbers, numbers, symbols. Children can be introduced to mathematical skills in the ability to match, group, organize, count, separate, measure, and compare. Children can also be introduced to mathematical activities in the concept of space, numbers, number symbols and the concept of shape.

According to Misrawati and Suryana (2022) ^[5] Mathematics is needed to stimulate the development in thinking and memory abilities of children in order to influence the other aspects of child development.

Introducing mathematics to early childhood begins with simple things and real examples that are around, such as by singing children's songs, for example my balloon song, by singing at the same time can increase children's knowledge about the concept of subtraction. And there are many examples of introducing mathematics to children in other activities. In introducing the concept of shape to early childhood, it can be introduced to parents at home, for example introduced in the form of plates such as round shapes, televisions such as rectangular shapes, hats such as triangular shapes.

But in reality parents rarely or even no one teaches children about geometric shapes that are around children at home. Because when at school there are still children who still do not understand the concept of introducing mathematics. For example, in the form of geometry, when children are asked about what shapes are shown, there are still children who do not understand, for example, when asked which shapes are triangles, squares, or circles, there are still children who do not know or cannot distinguish which shapes are asked by the teacher. In this case, parents and teachers play an important role in developing the ability to recognize mathematics skills in children.

At school the teacher can introduce the concept of geometric shapes to children through the integrated learning method. According to Mursid (2017) ^[7] the learning method is a way in the process of learning activities in achieving learning goals for children at school so that children can adjust to their environment. One of the learning methods in early childhood is the assignment method, using the assignment method especially in introducing the concept of introducing mathematics to early childhood in geometric shapes material, which can make it easier for children to understand geometric shapes around children in a fun way. Through fun activities that are liked by children and which can be easily understood by children, especially in introducing geometric shapes to early childhood. Based on the background above, therefore, the researcher will conduct research on "Analysis of Assignment Methods in Mathematics Introduction to Geometry Materials in Early Childhood Education"

Theory

Types of methods in early childhood education

According to Mursid (2017) ^[7] learning methods are ways in the process of learning activities in achieving learning goals to children at school so that children can adjust to their environment. There are several kinds of learning methods that exist in the school, namely the play method, the field trip method, the conversation method, the demonstration method, the project method, the storytelling method, and the assignment method.

a. The playing method

According to Mursid (2017) ^[7] through playing activities children will be able to coordinate their muscles and children can also develop language skills and develop their emotions. By playing, children can experiment with various kinds of materials, tools, imagination, and can solve problems that exist in everyday life. With the play method can develop various kinds of intelligence that exist in children.

b. The field trip method

According to Sumitra and Panjaitan (2019) ^[16] the field trip method is a learning activity carried out in the outside world that is useful so that children can know or observe what is in the environment around children and in the school environment.

c. Conversation method

According to Sari, Saparahuningsih and Indrawati (2019) ^[12] the conversing method is the conversing method is a child's activity in dialogue to increase children's courage in telling stories and develop children's language development in receptive language skills and expressive language skills. The conversation method can also increase the courage of

children to tell stories and can create a better atmosphere or socialize with friends and teachers.

d. Demonstration method

According to Rangkuti (2021) ^[10] the demonstration method is a method used to show a process or working method of an object related to the learning material by explaining its activities one by one first. The demonstration method is useful when teaching learning activity materials which are movements, processes or things that are routine at school.

e. Project method

According to Oktari (2021) ^[9] the project method is a learning activity carried out by involving children directly from planning to evaluate the results of activities. Children are given a fun learning experience by using objects or natural objects and teach children to analyze the results of the activities they do in class.

f. Storytelling method

According to Mursid (2017) ^[7] the storytelling method is a learning activity that provides learning experiences for early childhood by bringing stories orally. Such as seeing illustrations from picture books, hearing the teacher read a storybook, using hand puppets, and also role playing. Using the storytelling method can develop children's ability to listen to stories from teachers who can develop language, moral, social and religious development.

g. Assignment method

According to Darmiati and Jannah (2017) the assignment method is a process of learning activities that must be carried out by children who get assignments so that they can be done well. The task is given to the child so that the child can do the task based on the instructions that have been given to the teacher. Giving assignments that are given regularly, periodically, will instill positive learning habits and attitudes which in turn can motivate children to learn on their own, practice on their own, and be able to relearn. The teacher's role in the assignment method is to see how well the child understands the material that has been taught from the previous teacher. In all types of existing methods, the assignment method is suitable in introducing mathematics to early childhood geometric materials. Because the previous teacher will explain the material about geometry and after that the child will be given the task of what geometry shape looks like.

Cognitive

According to Shah (2014) cognitive is a human domain in mental behavior related to understanding, consideration, information processing, problem solving, intentionality, and individual beliefs.

According to Piaget in Sofyan (2015) ^[13] cognitive development is the ongoing process that is carried out internally in the brain when humans are thinking. Cognitive abilities develop gradually with physical development and the nerves that reside in the human brain.

According to Hasibuan and Suryana (2022) ^[5] children's cognitive abilities are in line with children's language development, namely understanding words, issuing what children think, problem solving abilities or *problem solving*. According to Zulherma and Suryana (2019) ^[20], cognitive development is an ability that has been possessed by children

since they were toddlers.

Based on the statement above, it can be concluded that cognitive development is human behavior related to understanding internally in the human brain while carrying out thinking activities and digging up information and solving problems that are being experienced by humans.

Geometry

According to Susanto (2011) ^[18] geometry is a branch of mathematics concerned with questions of shape, size, relative position of figures, and the nature of space. Recognize geometric shapes for early childhood including triangles, squares, and circles. Geometry itself is part of cognitive development which is included in the scope of logical thinking.

According to Sa'ida (2021) ^[11] geometry is a learning activity in mathematical thinking which is the ability to think critically from concepts higher than previous knowledge. In learning to understand the concept of geometry, a child must be able to recognize various geometric shapes that exist in the surrounding environment. Understanding the concept of geometry needs to be taught to children because understanding the concept of geometry is needed in everyday life, by introducing the concept of geometry to children, children can develop problem solving skills.

According to Hamida and Aulina (2021) ^[4] the ability to recognize geometric shapes is very necessary for early childhood as the basis for the ability to recognize geometric shapes, classify shapes, distinguish sizes, think rationally and can know simple concepts in everyday life. can develop their spatial intelligence or form.

According to Cania *et al* (2020) ^[1] geometric materials are abstract concepts that are given symbols. The activity of introducing mathematics in geometry material to early childhood by inviting children to observe various kinds of geometric shapes that exist around the child's environment. Like a child observing the shape of a book in the form of a rectangle, a wall clock in the shape of a circle.

In the opinion above, it can be concluded that geometry material is an introduction to the concept of forms such as circles, triangles, and squares. Geometry material can also be found in everyday life, for example, there are round shapes such as the shape of a bicycle wheel, triangular shapes such as the shape of an ice cream container, and square shapes such as the shape of a door. Understanding of geometric concepts can be applied to everyday life so that children can develop problem solving skills.

There are nine indicators on the development of recognizing geometric shapes developed through the level of achievement of children's development in the scope of logical (cognitive) thinking development listed in PERMEN No. 137 of 2014 as follows:

1. Classifying objects based on function, shape, color, or size,
2. Classifying objects into the same group or similar groups or groups in pairs with two variations,
3. Grouping objects based on five series of sizes or colors.

Method

Type of research is descriptive qualitative research. According to Sugiyono (2019) ^[15] qualitative research is a research method carried out in real conditions (*natural setting*). This research is also an ethnographic method because the data that has been collected and the analysis is

qualitative.

According to Emzir (2013) ^[3] the purpose of this qualitative descriptive research is to be useful for readers in knowing what is happening in the environment when the research is conducted and what events and activities occur in the research. Through qualitative descriptive research methods, researchers will be able to describe thoroughly the results of research that have been found based on the conditions that occur so that readers will see an overview of the research carried out. Data collection techniques used are observation, interview, and documentation techniques.

Results and Discussion

From the findings of research conducted by researchers at TK Mutiara Ibu Jambi related to the introduction of mathematics to geometry material used by teachers by using the assignment method in introducing mathematics learning, especially in geometry material. When the teacher does the assignment method to the child and the teacher gives the child an assignment regarding the material that has been explained by the teacher and the child is told to distinguish geometric shapes, namely round, triangle, and square, and the child will also be invited to choose a geometric shape according to the color. It turns out that children can recognize geometric shapes, namely round shapes, triangular shapes, and square shapes, children can also distinguish colors according to geometric shapes that have been taught previously by the teacher. When the teacher teaches children to distinguish geometry according to shape, color, and size through the assignment method, the child easily understands the color difference in the geometric shape. This is also in line with the research of Cania *et al* (2020) ^[1] that there is a positive influence in the use of Glowing City Media in effective learning to improve the ability to recognize geometric shapes in children aged 4-5 years in TK Negeri Pembina 2 Pekanbaru. Because the research results can be achieved by the research subject will be influenced by many factors. However, there are many other factors that affect early reading skills in children. All the factors that affect the students' early reading ability can be improved maximally. In Ningsih and Nafiqoh's research (2020) the use of the project method has a goal that becomes a benchmark for learning for children, one of which is knowledge to achieve these goals, from a number of knowledge it can be a concept, idea and other materials related to children's cognitive. Basically, the ability to recognize geometric shapes is one of the cognitive abilities. In the research of Suarsini *et al* (2014) ^[14] it was shown that the method of giving assignments assisted by the mathematical box media for children's cognitive abilities in classifying geometric shapes is very effective for improving learning outcomes, and therefore teachers really need to apply the method of giving assignments assisted by mathematics box media for children's cognitive abilities. in grouping geometric shapes intensively and sustainably in order to improve children's learning outcomes.

Conclusion

There are several kinds of learning methods that exist, namely the play method, the field trip method, the conversation method, the demonstration method, the project method, the storytelling method, and the assignment method. Geometry material is an introduction to the concept of forms such as circles, triangles, and squares. Geometry material can also be found in everyday life, for example, there are round

shapes such as the shape of a bicycle wheel, triangular shapes such as the shape of an ice cream container, and square shapes such as the shape of a door. Based on the results of research conducted by researchers at TK Mutiara Ibu Jambi, during teaching and learning activities the teacher uses the assignment method in introducing the introduction of mathematics to geometry material in early childhood. So that children can provide an understanding of geometric concepts that can be applied to everyday life so that children can develop problem solving skills such as children can know which geometric shapes are, what colors are in geometric shapes. Therefore, it is necessary to introduce mathematical concepts to geometry material in early childhood through the method of giving assignments at school.

References

1. Cania, Sukma, Novianti Ria, Chairilisyah Daviq. Pengaruh Media Glowing City terhadap Kemampuan Mengenal Bentuk Geometri pada Anak Usia Dini. *Jurnal AULAD*. 2020; 3(1):53-60.
2. Darmiyati, Jannah, Antung Miftahul. Meningkatkan Kemampuan Matematika Awal Anak USIA Dini Melalui Model Direct Instruction Kombinasi Model Make A Match dan Pemberian Tugas. *Jurnal Pendidikan Anak Usia Dini*. 2017; 1(2):7-16.
3. Emzir. *Metodologi Penelitian Pendidikan Kuantitatif dan Kualitatif*. Jakarta: PT Rajagrafindo Persada, 2013.
4. Hamida, Aisyah Izza, Aulina, Choirun Nisak. Pengaruh Media Tangram terhadap Kemampuan Mengenal Bentuk Geometri Anak Usia Dini. *Jurnal Pendidikan Anak Usia Dini*. 2021; 4(2):8-16.
5. Hasibuan Rahyana, Suryana Dadan. Pengaruh Metode Eksperimen Sains Terhadap Perkembangan Kognitif Anak Usia 5-6 Tahun. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*. 2022; 6(3):1169-1179.
6. Misrawati, Suryana Dadan. Bahan Ajar Matematika Berbasis Model Pembelajaran Tematik Terhadap Kemampuan Berhitung Anak Usia Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*. 2022; 6(1):298-306.
7. Mursid. *Pengembangan Pembelajaran PAUD*. Bandung: PT Remaja Rosdakarya, 2017.
8. Ningsih Siti Ratna, Nafiqoh Heni. Pengaruh Penggunaan Metode Proyek Terhadap Kemampuan Mengenal Bentuk Geometri Anak Usia Dini. *Jurnal Ceria (Cerdas Energik Responsif Inovatif Adaptif)*. 2020; 3(1):52-58.
9. Oktari Rici. Penerapan Metode Proyek untuk Meningkatkan Kecerdasan Naturalis Anak Pada Kelompok B di PAUD Budi Mulya Bengkulu Selatan. *Jurnal Pendidikan Islam Al-Affan*. 2021; 2(1):69-77.
10. Rangkuti Darajat, Rangkuti Darmina Eka Sari. Peningkatan Kemampuan Kognitif Anak Mengenal Konsep Angka Melalui Metode Demonstrasi di TK/PAUD. *Jurnal Pendidikan Tambusai*. 2021; 5(2):5410-5416.
11. Sa'ida Naili. Pemahaman Konsep Geometri Aud Pada Pembelajaran Berbasis STEAM. *Jurnal Pendidikan dan Pembelajaran Anak Usia Dini*. 2021; 8(1):1-7.
12. Sari Mutiara Purnama, Saparahayuningsih Sri, Indrawati. Meningkatkan Kemampuan Berbicara Melalui Metode Bercakap-cakap Berbantuan Media Audio Visual Pada Kelompok A PAUD Pertiwi I Kota Bengkulu. *Jurnal Ilmiah Potensia*. 2019; 4(1):18-21.
13. Sofyan, Hendra. *Perkembangan Anak Usia Dini dan Cara Praktis Peningkatannya*. Jakarta: Infomedika, 2015.
14. Suarsini Luh, Suarni Ni Ketut, Wirya I Nyoman. Penerapan Metode Pemberian Tugas Berbantuan Media Kotak Matematika Untuk Meningkatkan Kemampuan Kognitif. *Jurusan Pendidikan Anak Usia Dini*. 2014; 2(1):1-10.
15. Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta, 2019.
16. Sumitra Agus, Panjaitan Meida. Meningkatkan Kecerdasan Naturalis Anak Usia Dini melalui Metode Karyawisata. *Jurnal Pendidikan Anak Usia Dini*. 2019; 3(1):35-42.
17. Suryana Dadan. *Pendidikan Anak Usia Dini Stimulasi Dan Aspek Perkembangan Anak*. Jakarta: Prenadamedia Group, 2018.
18. Susanto Ahmad. *Perkembangan Anak Usia Dini*. Jakarta: Kencana Prenada Media Group, 2011.
19. Syah Muhibbin. *Psikologi Pendidikan Dengan Pendekatan Baru*. Bandung: PT Remaja Rosdakarya, 2014.
20. Zulherma, Suryana Dadan. Peran Executive Function Brain Dalam Perkembangan Kemampuan Kognitif Anak Usia Dini Pada Kurikulum 2013. *Jurnal Pendidikan Tambusai*. 2019; 3(2):648-656.