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THE CONTRIBUTION OF CONSTRUCTIVIST GAMES (BLOCKS MEDIA) TO THE INCREASEMENT OF COGNITIVE ABILITIES

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ABSTRAK

Penelitian tindakan kelas ini bertujuan untuk mengetahui adanya peningkatan kemampuan kognitif anak melalui bermain balok. Subjek penelitian adalah anak kelompok Busia 3-6 tahun di RA. Nurul Amiin, Citayam, Depok yang berjumlah 23 anak terdiri dari 9anak perempuan dan 14 anak laki-laki. Peneliti menggunakan metode penelitian tindakan kelas dengan observasi dan dokumentasi untuk mengumpulkan data. Analisa data yang digunakan dalam penelitian ini adalah analisis deskriptif kualitatif. Hasil penelitian menujukkan adanya peningkatankemampuan kognitifanaksebesar 90% berdasarkan evaluasi hasil dari siklus I dan siklus II. Sehingga dapat disimpulkan bahwa pelaksanaan pembelajaran dengan memanfaatkan media balok untuk meningkatkan kemampuan kognitif anakdapat dilaksanakan dalam proses pembelajaran.
Kata kunci: *Media balok, Kemampuan kognitif*

ABSTRACT

This study used classroom action research. The aim of this study is to determine an increased ability of the children's cognitive by playing blocks. The research subjects were children in group A & B Age 3-6 Years old of RA. Nurul Amiin, in a total of 23 children consisting of 9 Girls and 14 boys. Researchers used the method of action class research with observation and documentation to collect data. Analysis of the data used in this research is the analysis of descriptive and qualitative.The results showed an increased ability of the students cognitive at 90% based on the evaluation of the results on the first cycle and second cycle. It can be concluded that the implementation of learning by utilizing blocks media to improve children's cognitive abilities can be implemented in the learning process.
Keywords: *Blocks media, Cognitive ability*

INTRODUCTION

Early childhood is a figure of unique individuals who are at the age range 0-8 years. This particular stage is also known as the "Gold Period", in which children are in the golden period of development and growth. This is because the growth and development of children are currently moving quickly and is the basis of the development of the next stage. Development and growth in early childhood consist of several aspects, one of the important aspects of children is cognitive. This aspect is said to be important because it's related to the development of creativity and the imagination of children to adjust to the environment. One of the forms of cognitive abilities in the social life of children is in the form of abstract thinking which is also called the cognitive scheme. The cognitive scheme is described as the

basic structure of the thinking process. An example of such a scheme is the so-called classification scheme. When children aged 5-8 are faced with a set of images of red flowers and white flowers, it is apparent that the child understands the classification of red flower groups and groups of white flowers. So the child already has a number of basic structures with good integration such as collecting various objects in a particular classification and how to arrange hierarchy various groups in the classification.

By looking at the ability of children to classify objects through the game. By playing, the child becomes stimulated to explore the power of imagination. Imagination is the ability of individuals to combine elements of experience in certain situations that generate new behaviors. This is important in the development of creativity (Haditono, 2002). As in a research conducted by Sabta (2010), the activity of children in the learning implementation by utilizing the block media to improve the cognitive ability of children in cycle 1 shows the percentage of 50% and increased in cycle 2 to 85% this means that the child is motivated and feels happy in following the learning process. Children play individually or in groups. Children who play individually will only be interacting and show interest in exploring and manipulating their own toy objects. Furthermore, playing using objects also fosters creativity and problem solving (Haditono, 2002).

A block is a standard equipment that must exist in an early childhood classroom and it is essential for implementing a creative curriculum. Unit block is a small block with various forms, it can provide learning activities that allow children to understand the concepts needed in mathematics such as geometry, art, creativity, social and other emotional (Sabta, 2010).

This study will be focusing on the contribution of constructive games with cognitive abilities in children aged 3-7 years. Based on my observations on the twenty three subjects of the students of RA. Nurul Amiin, the researchers figured out the contribution of a constructivist game (blocks media) with cognitive abilities of children. This will be our main interest because the child's cognitive abilities are influenced by informal education environment. Regarding this matter, the family holds up an important role that is the first life environment and directly related to children. In the children environment, the family is the most influential on cognitive ability, especially when it comes to developing a stable imagination. Conversely, if the family environment does not provide a positive atmosphere it will be resulting in a negative cognitive abilities.

Cognitive ability is a process of thinking, that is, the individual's ability to link, evaluate and analyze an event that includes grouping objects that have colors, shapes, size and matching circles, triangles, rectangles and recognizes numbers (Jawati, 2013).

Cognitive ability is the ability of individuals to connect, assess and evaluate an event that affects hereditary factor, maturity, a formation of imagination, interest in talent and individual freedom in being creative (Rita, 2012). According to Merdiana (2014), a constructive play is a form of games to build and create a real work that is in the mind of the child by using materials such as, lego (blocks), puzzles, geometry and so on without weighing the benefits but getting the pleasure gained from making. This is strengthened by Perwitasari (2013), Playing play-doh as well as playing blocks called constructive games. Constructive play activities stimulate creativity and imaginative children. The child must imagine what shape to be formed, and the taste of art is also required so that the results are easy to see. The constructive game helps the child to be creative so that the child will be

able to do: Flexible thinking, having an original way of thinking, elaborative, imaginative, feel happy when exploring the environment, asking lots of questions, having strong curiosity, being experimental, like to receive new stimuli, being interested in doing many things, not easily feel bored.

Based on the study of various theories conducted by researchers, it can be concluded that the dynamics of constructivist game contribution with students' cognitive abilities is the psychological value of students when creating a structure using blocks. This is in accordance with previous researches such as Perwitasari (2013) research, stating that the Child must imagine the shape to be made, and the taste of art is required so that the results are easy to see. Then Sabta's research (2010) states that cognitive ability is one or several capabilities to acquire and use knowledge in order to solve problems and adapt to the environment like playing blocks. Then Rita's research (2012), cognitive ability is the ability of individuals to connect, assess and evaluate an event in which affects heredity factor, maturity, the formation of imagination, interest, talents and individual freedom in creating.

RESEARCH METHODOLOGY

The location of the research is the object of research where the research activities conducted. The researchers conducted this study in RA. Nurul Amiin Griya Valley complex number 20, Raga Jaya Village, District Bojong Gede City Bogor. The researchers choose this environment because there are children aged 3-6 years who are in the early development stage, making it easier for researchers to gathers information about the contribution of constructivist games with the improvement of cognitive abilities of early childhood residing in this complex.

This study lasted for 3 months, ie in April to June 2017. The implementation of the activities carried out from 10-20 April 2017. The implementation of the activities took 2 weeks, between the second and third weeks of April. The implementation of the activities is done with two cycles. In the first cycle, the first meeting was held on Monday 10 April 2017, the second meeting was held on Tuesday, April 11, 2017, the third meeting was held on Wednesday, April 12, 2017, and the fourth meeting was held on Thursday 13 April 2017. Meanwhile, in cycle II, the first meeting was on Monday, April 17, 2017, the second meeting was held on Tuesday, April 18, 2017, the third meeting was held on Wednesday, April 19, 2017, and the fourth meeting on Thursday, April 20, 2017. Based on the problems that the researcher studied, the research subjects are children who are in RA.Nurul Amiin Griya Valley complex number 20, Raga Jaya Village, District Bojong Gede Bogor City. A group of A and B children consists of 23 children, 14 boys, and 9 girls. This research uses classroom action research. Classroom action research is a reflective study of actions, or actions undertaken by teachers ranging from planning to assessing actual action in the classroom in the form of teaching and learning activities to improve the learning conditions undertaken (Kemendiknas, 2010: 194). According to Myrnawati, et al(2016: 20) Classroom action research is a reflection of learning activities in the form of an action, which deliberately appear and occur in a class together.

RESULT AND DISCUSSION OF RESEARCH

Table 1. Overview of research subjects

Gender	Students
Boy	14
Girl	9
Total	23

Based on table 4.1 above that the number of male students is 14 people and there are 9 female students.

Tabel 2. Overview of the observation scores of the first cycle of students

Assessment criteria	Score	Students
BSB	4	1
BSH	3	0
MB	2	4
BB	1	18
Sum	--	23

Based on table 4.2 above that at the first meeting aspect 1 children who got score 1, there are 18 children, in aspect 2 there are 4 children got score 2, on aspect 3 got score 3 counted 0 children, on aspect 4 all children got score 4 as 1 child. While in the second meeting of aspect 1 there are 14 children, on the 2nd aspect there are 6 children who got score 2, on the 3rd aspect there are 2 children who got score 3, and aspect 4 all children got score 4 there is only 1 child. So it can be concluded that in cycle 1 is in aspect 4 is the child's own exploration through the blocks media gets the lowest score, this is because there are many children who can not do their own exploration with the blocks media.

With the method of playing blocks, it facilitates the improvement of cognitive abilities of children because this playing activity stimulates the child to develop his idea to form structures that are more interesting because the block complete each others forming a more dramatic structure. This is consistent with Piaget's research opinion in Sabta (2010), dividing the four levels of development of the ability to think of developing knowledge, namely sensorimotor stage, concrete pre-operational, concrete operational and formal operational. Child kindergartens are at the pre-operational stage because the child has used logic in place.

Blocks have a place in the hearts of children and become a favorite choice throughout the year even until the school year ends. When playing with blocks, many of the findings occur. Similarly, problem-solving occurs naturally. Their simple to complex form of construction can indicate an increase in their thinking. The reasoning power of the child will work actively. The concept of geometry knowledge they will find itself like the name of the shape, size, color, understanding of the same / not the same.

The results of data analysis at cycle 1 of the first meeting reached an average value of 35% and the second meeting reached an average value of 50%. From the analysis of the data, it can be seen that there is an increase of cognitive ability of children from cycle 1

meeting 1 and meeting 2. Because the cognitive ability of children in cycle 1 reaches 75% as expected by the researcher, the researchers continue the research again in cycle 2.

The results of data analysis in the second cycle of research meeting 1 reached the average value of 80% and meeting 2 reached the average value of 90%. Then it can be seen that there is an increase in the cognitive ability of the results of research cycle 1 and cycle 2. Because cognitive ability has reached 89% then the researcher ended this research on cycle 2. From the above explanation, it can be concluded that by playing blocks, it can improve cognitive abilities of children groups A and B ages 3 to 5 years and 5 to 6 years in RA.Nurul Amiin Griya Valley complex number 20, Raga Jaya urban village, Bojong Gede district, Bogor city.

CONCLUSIONS

Based on the results of the research that has been described, it can be concluded that the activity of children in the implementation of learning by using blocks media to improve the cognitive abilities of children in cycle 1 shows the percentage of 50% and increased in the cycle 2 to 90% this means children are motivated and feel happy in following learning process.

The cognitive ability of children aged 3 to 6 years in the implementation of learning by utilizing the block media in cycle 1 shows the percentage of 50% and increased in the cycle 2 to 95% this means that from two indicators studied include mentioning the forms of geometry and creating structures increase in variety.

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