IMPROVE THE COGNITIVE DEVELOPMENT OF EARLY CHILDHOOD THROUGH THE COLOR RECOGNITION EXPERIMEN METHOD

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ABSTRAK

Masalah yang melatarbelakangi penelitian ini adalah pelaksanaan pembelajaran di KB Manbail Huda yang masih dominan menjadikan siswa sebagai objek verbalisme sehingga kurang memberikan kebebasan dalam mencari pengalaman yang lebih mendalam. Penelitian ini bertujuan untuk meningkatkan perkembangan kognitif anak usia dini. Landasan dalam pelaksanaan penelitian ini menggunakan teori tentang metode eksperimen dan teori perkembangan kognitif anak. Penelitian ini diharapkan memberi jawaban terhadap rumusan masalah (1) bagaimana penerapan motode eksperimen dalam pembelajaran pengenalan warna? (2) apakah penerapan eksperimen dalam pembelajaran pengenalan warna bisa meningkatkan kemampuan kognitif anak?. Berdasarkan rumusan masalah tersebut penelitian ini bertujuan (1) mengetahui penerapan motede eksperimen dalam pembelajaran pengenalan warna (2) mengetahui peningkatan kognitif anak melalui penerapan metode eksperimen dalam pembelajaran pengenalan warna. Jenis penelitian ini menggunakan penelitian tindakan kelas. Berdasarkan hasil temuan penelitian, Berdasarkan hasil temuan direkomendasikan (1) guru hendaknya menggunakan suatu metode yang lebih kreatif dan variatif agar anak tertarik dan senang mengikuti kegiatan yang disampaikan oleh guru (2) bagi sekolah diharapkan memberikan perhatian yang lebih terhadap metode pembelajaran yang dilakukan oleh guru khususnya untuk meningkatkan perkembangan kognitif anak usia dini. Selanjutnya bagi peneliti lain diharapkan adanya penelitian lebih lanjut dalam bidang kemampuan anak yang belum pernah dilakukan.

Kata kunci: Perkembangan Kognitif Anak Usia Dini, Metode Eksperimen

ABSTRACT

The problem behind this research is the implementation of learning in KB Manbail Huda which is still dominant in making students the object of verbalism so that it does not provide freedom to seek deeper experiences. This study aims to improve the cognitive development of early childhood. The basis for carrying out this research is using the theory of experimental methods and the theory of children's cognitive development. This research is expected to provide answers to the formulation of the problem (1) how is the application of the experimental method in learning color recognition? (2) can the application of experiments in learning color recognition improve children's cognitive abilities?. Based on the formulation of the problem, this research aims to (1) determine the application of

the experimental method in color recognition learning (2) to determine the cognitive improvement of children through the application of experimental methods in color recognition learning. This type of research uses classroom action research. Based on the research findings, it is recommended that (1) teachers should use a more creative and varied method so that children are interested and happy to participate in the activities presented by the teacher (2) for schools to be expected to pay more attention to the learning methods carried out by the teacher. especially to improve the cognitive development of early childhood. Furthermore, for other researchers, it is hoped that further research in the field of children's abilities has never been carried out.
Keywords: *Early Childhood Cognitive Development, Experimental Method*

INTRODUCTION

The growth of early childhood is expected to be able to provide stimulation and encouragement to the entire cognitive development of children they have. There are five aspects of child development that we know of, namely physical motoric aspects, intellectual aspects, social emotional aspects, and language aspects. All these aspects develop rapidly in early childhood. However, an important aspect to be developed in the process of children's education is the cognitive or intellectual aspect. At the pre-operational stage, children begin to show clearer thought processes and begin to recognize several symbols including language and images (Suyanto, 2005). Cognitive development in children's education is needed to develop knowledge about what they know through the five senses that children have.

One aspect of the ability that can be used to improve children's cognitive development is the ability to recognize colors through an object. The ability to recognize colors in children can be seen from the ability to name colors, convey the results of color experiments, and classify colors. The ability to recognize colors is adjusted to the abilities of early childhood. Color recognition for children aged 3-4 years is in recognizing 5-7 kinds of colors (Winda, 2008).

Color recognition in children aims to provide knowledge to children as a provision for further knowledge. This corresponds to Piaget's stage of cognitive development. The pre-operational stage according to Piaget is in children aged 3-4 years marked by the ability to recognize several symbols and at a later stage being able to solve simple problems that still have attachment to previous abilities. For this reason, learning color recognition is important for children as the initial ability to move

on to the next ability according to the stage and characteristics of the child.

The characteristics of good early childhood learning are to invite children to be directly involved in learning and learning while playing. However, in classroom learning activities in general, teachers still use behavioristic theory. Behavioristic theory holds that learning is the formation of behavior and the importance of input or stimulus and output or response (Asri, 2002:22). This theory does have a great effect on the world of education, especially the learning process. However, this theory also has weaknesses, one of the weaknesses is emphasizing the child as an object and creating verbalism that controls the child's memory. as in color recognition learning, in practice the teacher tends to directly show or give the names of colors. So that children do not get the opportunity to get direct experience.

The experimental method is the provision of opportunities for individual students or groups to be trained to carry out a process or experiment that will develop the potential and creativity of children (Bhari, 2005). The purpose of using this method is to provide opportunities for children to be able to find and find answers to the problems they face by conducting simple experiments. The experimental method has the advantage of making children more confident in the conclusions that have been obtained from experiments carried out by themselves.

METHODE

This study aims to increase the cognitive development of early childhood through the color recognition experiment method. This research is expected to provide answers to the formulation of the problem (1) how to apply the experimental method in learning color recognition? (2) can the application of experiments in color recognition learning improve children's cognitive abilities?. This research uses classroom action research with several data collection techniques, namely (1) Observation (observation), observations are carried out by researchers simultaneously with the action, namely by observing the level of ability to recognize colors. Observations are carried out using observation sheets filled with ticks or checklist. (2) Documentation is

done by taking photos of learning activities (Yoni, 2010). The steps used in data analysis in this study are qualitative analysis and quantitative analysis.

RESULTS AND DISCUSSION

Researchers programmed the plan with the hope of achieving two cycles through the same stages. Overview of Research Settings at each stage carried out in the study. Furthermore, the lesson plan will be described which includes 4 (four) stages in each cycle, namely (1) planning, (2) implementation, (3) observation, and (4) reflection.

1. Planning
    a. Prepare learning tools such as RPPH.
    b. Setting up supporting devices, in this case the researcher uses the color method.
    c. Prepare activities and prepare assessments.
2. Implementation
    a. Introduction
        1) The teacher welcomes the children.
        2) The teacher attends, greets and prays before the activity.
        3) The teacher conveys the theme and rules of today's game.
    b. Core activities
        1) The teacher explains and conveys the lesson before the color mixing activity.
        2) The teacher explains the rules and etiquette while at the activity site.
        3) The teacher invites the children to experiment with colors.
        4) After the child mixes the colors, what happens after the colors are mixed.
    c. Closing
        1) The teacher asks again what the child has seen.
        2) The teacher closes the activity with messages, prayers before going home and greetings.
3. Observation

    The researchers paid attention to the children during the activity and recorded the results of the observations and

then analyzed and evaluated the learning outcomes. The results of the observations made are used as a guide for planning learning in the next cycle.

4. Reflection

The researchers recorded the results of the observations and then analyzed and evaluated the learning outcomes to ensure that by increasing the child's ability to express and tell experiences or events that were experienced and could increase the enthusiasm for learning at KB Manbail Huda Kaliuntu Jenu Tuban.

After describing the research setting, the researcher started the research by:

1. Pre Cycle

Table 1.

Observation sheet before classroom action research is carried out

NO	Name	Indicator				Achieved Value	Score (%)	Information	
		A	B	C	D			T	BT
1	M. Arsya	1	2	2	1	6	37,5%		BT
2	Dewi Nuryati F.	1	1	1	2	5	31,25%		BT
3	Riska Putri A.	1	2	1	1	5	31,25%		BT
4	Ayu Munawaroh	1	2	1	2	6	37,5%		BT
5	M. Ulil A.	3	3	2	2	10	62,5%	T	
6	Kunta Muhammad I.T	2	2	2	1	7	43,75%		BT
7	Sabilla Angela P.	2	2	2	1	7	43,75%		BT

Table 2.

Distribution of Pre-Cycle Completeness Distribution

No	Information	Frekuensi	Prosentase
1	Tuntas	1	14,3%
2	Belum Tuntas	6	85,7%
Jumlah		7	100%

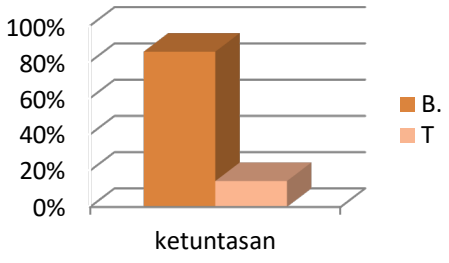

Figure 1. Distribution Diagram of Pre-Cycle Completeness

Information :

T : Finished

BT : Not Finished Yet

The table above can provide an overview and it can be concluded that after an assessment was carried out in the pre-cycle, the percentage value of the Manbail Huda family planning child in the pre-cycle reached 14.3%, meaning that the class had not yet reached completeness. So the research needs to do the next step in the first cycle.

2. The First Cycle

The results of observations during learning in this cycle, some children did not look enthusiastic, both children who mixed colors, besides that children also could not recognize colors well.

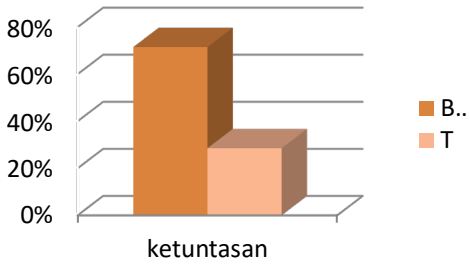

Figure 2. Distribution Diagram of First Cycle Completeness

Information :

T : Finished

BT : Not Finished Yet

In the table above, the researcher concludes that after the assessment was carried out in the first cycle, the percentage value of Manbail Huda's family planning children in the first cycle reached 28.5%, meaning that the class had not yet reached completeness.

Based on observations of the fest cycle activities, the researchers reviewed several things, namely that children were still lacking when doing color mixing experiments, reflection was carried out to find out more and get better results in improving the ability to recognize colors through experimental methods on children in KB Manbail Huda Kaliuntu Jenu in a simple way. then it is necessary to carry out the second cycle.

3. The Second Cycle

The results of observations during learning in this cycle, some children did not look enthusiastic, either children who mixed colors often repeated. In addition, many children are still shy when doing

color mixing experiments. Based on the research in the second cycle, the data on the achievement of children's learning outcomes is obtained below.

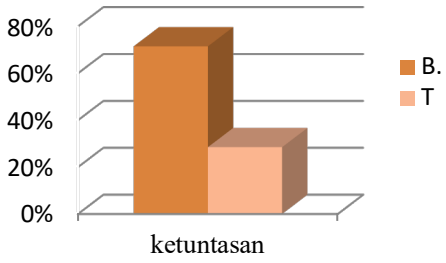

Figure 2. Distribution Diagram of Second Cycle Completeness

Information :

T : Finished

BT : Not Finished Yet

From the table above, the researcher can conclude that after the assessment was carried out in the second cycle, the percentage value of the Manbail Huda family planning child reached 85.71%, meaning that the class was complete, the class was said to be complete if the class completeness score reached 75%.

Based on observations of the second cycle of activities, the researchers reviewed from observations, reflections were carried out to find out more and get better results in improving children's cognitive through the experimental method of mixing colors in KB Manbail Huda Kaliuntu Jenu children. From these observations, the ability to recognize color has increased with the expected goals.

The application of the experimental method in color recognition learning is carried out in two cycles, and each cycle consists of three meetings. The results of the pre-action observation showed that the ability to recognize colors in children aged 3-4 years at KB Manbail Huda Kaliuntu Jenu Tuban was still in the category of not being able to. The learning process is still one-way and children are more passive. Color recognition learning is carried out by teachers by tending to give color names directly without involving children's activities. So with the implementation of the use of experimental methods in learning, it is hoped that it can improve children's ability to recognize colors more freely and from experience.

This is in accordance with the opinion of Susanto which states that the selection of learning methods

also pays attention to the characteristics of children. In general, children want to always move, have a strong curiosity, like to experiment and test, are able to express creatively, have imagination, and like to talk (Susanto, 2011). The use of experimental methods in color recognition activities will give children experience to do (doing) so that the learning carried out is not only memorizing but will also be more meaningful for children. In addition, in the experimental method the materials and tools used are concrete, so that children gain direct experience to do simple experiments with colors. Children's learning experience will increase or contribute greatly to children's knowledge if it is obtained through the process of action or experiencing directly what they learn (Rasyid, 2009).

The results showed that the ability to recognize colors in pre-action was obtained by 14.3% with complete criteria, then in the first cycle there was an increase by obtaining 28.5% in the completion criteria, in the second cycle there was also an increase with 85.7% in the completion criteria, so that the increase the results of the ability to recognize colors from the implementation of pre-action and cycle I showed an average percentage increase of 75%. In the second cycle, the percentage increased to 75% from the first cycle.

In the first cycle, although there are things that are still lacking, the children have experienced an increase in the ability to experiment. Even so, there are still children who do not understand how to conduct experiments. So the teacher needs to teach repeatedly so that children can mix colors well. In cycle II, children who usually always ask for help from the teacher, are willing to do experiments. Although the mix is not very visible. In cycle II there were several children who experienced a fairly rapid increase. During the second cycle, children are also given the opportunity to experiment according to the theme, so that children are not confused when mixing colors or experimenting. Another factor that increases color recognition ability is the intensive interaction between researchers and children. The interaction that has been built is a factor that influences the achievement of the learning objectives to be achieved.

CONCLUSIONS

Increasing the ability to recognize colors in children aged 3-4 years through the experimental method is carried out by providing opportunities for children to experiment with mixing colors. The learning steps that are applied are by preparing the tools and materials that will be used for the child then the child does a color experiment according to the task given. The application of the experimental method was carried out to improve children's cognitive according to the planned plan. The increase occurred in each cycle for 2 cycles. In the first cycle, the percentage of children's learning outcomes reached 28.5% (not yet developed), so improvements were needed in the second cycle. In the second cycle the percentage of children's learning reached 85.71% (developed as expected). Based on the research findings, it is recommended (1) teachers should use a more creative and varied method so that children are interested and happy to participate in the activities presented by the teacher (2) for schools are expected to give more attention to the learning methods carried out by teachers in particular to improve early childhood cognitive development. Furthermore, for other researchers, it is hoped that further research in the field of children's abilities has never been carried out.

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