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Efforts to Develop Cognitive Abilities in Children Aged 4-5 Years Using Number Wheel Media at Cahaya Utara PAUD Pawangdesa Gunjan Asri

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Abstract
This research aims to discuss how to improve children's cognitive development by playing with number pinwheels for students in the group (4-5) years old at Cahaya Utara Pawang PAUD. The type of observation that we used in this research was (PTK) Classroom Action Research using 2 cycles, in each cycle we held 3 meetings, the students we studied were 11 children where these participants were group A. The technique used in this research used observation and documentationResearch is carried out in a systematic, empirically reflective and rational manner regarding every action that has been carried out during the research. Meanwhile, in this research, data analysis was carried out using an analysis model consisting of: Planning, Implementation, Observation and reflection. The results of research at Cahaya Utara Pawang preschool in cognitive development using number wheel media are very important because in learning activities in kindergarten an educator must be imaginative and have the ability to create a fun teaching and learning atmosphere so that students do not get bored quickly in learning. Kindergarten is an institution that is very important in developing children's cognitive abilities. As we know, this age is a golden age and will not happen again, therefore an educator must pay very careful attention.

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1. INTRODUCTION

According to the latest Law in Indonesia Number 20 of 2003 concerning the National Education System. Article 1 point 14 states that Early Childhood Education (PAUD) is a guidance action aimed at newborn children up to 6 years of age, carried out by providing stimulus in education in a systematic and targeted manner to help increase growth in early childhood. .in order to prepare children to enter a higher level of education.

Early childhood education or (PAUD) is intended for children who have just been born until the child is 6 years old, where at this age children really need stimulation or simulation that can support their growth and development optimally so that children can grow and develop according to their age stages so that Children can participate in activities well and are ready for further education. Adequate learning media will support the teaching and learning process of students. When these learning tools and materials support teaching and learning activities there, it will attract children's interest in learning, therefore researchers use media that has never been tried at Cahaya Utara Pawang PAUD, namely number wheel media. This media is able to foster children's interest and curiosity because This media not only develops cognitive aspects, but this number wheel media is able to stimulate developmental aspects in early childhood, such as abilities that can support the growth and development of early childhood so that they get maximum results in learning activities. At this age, children really need maximum stimulation because this age is the golden age for children or we often hear the term Golden Age.

Thus, it can be concluded that education in early childhood is a stimulation effort carried out for children aged 0-6 years which aims to develop all the potential that exists in children, because early childhood is like blank paper that has no stains. even a little, so that children are able and developed to face life in this world where the educational environment will help provide strokes and colors on the paper.

2. PROBLEM

problems found during research activities carried out at Cahaya Utara Pawang PAUD were found to be cognitive development problems. Problems that occurred at Cahaya Utara Pawang PAUD occurred because of limited teaching materials that could attract children's attention and interest in recognizing numbers. So, from the results of observations of learning activities and interviews at the Cahaya Utara PAUD, the researcher took the initiative to use the number wheel media in learning activities to improve students' cognitive abilities and also learning using the number wheel media has never been done at the Cahaya Utara Pawang PAUD school. So, it fosters children's curiosity in knowing and distinguishing numbers 1-10.

3. METHOD

In this research method we use the Classroom Action Research (PTK) method which is carried out logically, structured and empirically reflective of the various actions carried out in this research so that we get results that are in line with those targeted for children's development because at this age brain development Children are very important as determinants of the future.

4. RESULTS AND DISCUSSION

Early childhood education (PAUD) is an effort to develop human beings starting from an early age or from the time the child is born until the child is 6 years old, where this development must be carried out very well and carefully because at the age of 0 to 6 years old it is This is a very important period, like the popular language, the Golden Age (golden age), as this golden age is the determining factor for children's further education, therefore it is highly recommended to stimulate children's abilities from as early as possible.

The latest Law in Indonesia Number 20 of 2003 concerning the National Education System (Directorate of Early Childhood Education 2020).Article 1 no 14 states that Early Childhood Education (PAUD) is a development effort focused on newborn children up to the age of six years, which is carried out by providing stimulation from an early age through education to increase physical and spiritual growth and development so that children have skills. for elementary school education. In early childhood education, parents can choose or direct their children to enter a school according to their age, where early childhood education (PAUD) can be achieved through formal, non-formal and informal education. Piaget believes that children's intelligence develops through an active learning process when learning activities take place, therefore children must be involved in every learning activity to provide opportunities for children to see directly and be involved in activities that can increase the use of all the child's five senses so that Children can develop according to their age (in Sujiono, 2012).

Understanding the number wheel

The Number Wheel is a tool or media that is used as a teaching aid in learning activities carried out to recognize the concept of numbers and order numbers in early childhood by learning while playing (by Nabila 2023).

Numeracy is a child's ability to understand and recognize the concept of numbers. The concept of numbers in Early Childhood (AUD) is a systematic process of introducing numbers from an early age using the media of a number wheel for children to explore and raise children's curiosity and critical thinking, so that it can improve children's ability to recognize numbers so that children can learn in a fun way. and without any coercion (According to Han, et al (2017).

This number wheel media can not only stimulate children's cognitive abilities but there are many other aspects of development that can be developed using number wheel media depending

on how the teacher develops children's abilities using this media because the more creative the teacher is in using the **media**, the more aspects there will be.

The number pinwheel game is one of the media or teaching aids that can improve children's ability to order numbers in the learning process in Early Childhood Education, which aims to create a fun and enjoyable learning atmosphere for children.

Benefits of number wheel media

a. **Develop children's ability to count**
In learning with this media, it can help children to recognize and count in a fun way, not only by looking at numbers, but with this media it can attract children's interest in learning activities, because the use of this number wheel media has never been done in learning activities with media. the.

b. Developing children's fine motor skills
In this activity to train Fine Motor skills, children can be seen in the activity of spinning the number wheel where in this activity the children will take turns spinning the number wheel so that this learning activity can be carried out evenly.

c. Develop children's social and language abilities
This number wheel game can also train children's social and language skills, such as when children are able to wait patiently for their turn and after spinning the number wheel the child can name the numbers on the circle on the number wheel.

d. Increasing Children's Motivation in Learning Activities
The Number Wheel Media is very good for increasing children's motivation and interest in learning activities, because young children see new and unique media that really attract children's interest and foster curiosity in learning.

e. Improve children's cognitive abilities
In learning activities carried out using the number wheel media, it is very important to train and stimulate children's cognitive abilities so that they can understand the concept of numbers and children can order numbers 1-10.

Learning outcomes of learning using number wheel media
CYCLE I

NO	**NO**	**INFORMATION**
1	DILAN ALFARIZKI	**MB**
2	DIRLI PARSAN PRATAMA	**BB**
3	GISELA NAFELA	**MB**
4	KAYLA SERLY SIFABELA	**MB**
5	GETTING AROUND	BSH
6	NATAN AEROSPACE	**MB**
7	QALISA AMANDA SAPUTRI	**MB**
8	ROMI KURNIAWAN	**MB**
9	SINGGIH ASGAF	**BSH**
10	RAFKA AQIZA ZAFRAN	**BSH**
11	ZIDAN TANZILUL HILMI	**BSH**
	BSB	**0**
	BSH	**4**
	MB	**5**
Amount	**BB**	**1**

From the results of the research in cycle 1, the abilities of students at Cahaya Utara PAUD Pawang, Gunjuan Asri Village, had 11 students and the ability to recognize numbers had varying abilities. Of these 11 students, there were 4 children who could already recognize numbers, 5 people and starting to recognize even though they are still just memorizing without

knowing the numbers 1-10 correctly and 1 child who really can't recognize the numbers from 1 - 10.

CYCLE II

NO	NO	INFORMATION
1	DILAN ALFARIZKI	**MB**
2	DIRLI PARSAN PRATAMA	**MB**
3	GISELA NAFELA	**BSB**
4	KAYLA SERLY SIFABELA	**BSH**
5	GETTING AROUND	BSH
6	NATAN AEROSPACE	**BSH**
7	QALISA AMANDA SAPUTRI	**MB**
8	ROMI KURNIAWAN	**MB**
9	SINGGIH ASGAF	**BSB**
10	RAFKA AQIZA ZAFRAN	**BSB**
11	ZIDAN TANZILUL HILMI	**BSB**
Amount	**BSB**	**4**
	BSH	**4**
	MB	**3**
	BB	**0**

The learning outcomes in Cycle II obtained satisfactory results because using the number wheel media can motivate and foster children's curiosity in learning activities so that they get maximum results compared to the results in Cycle II. There are 4 children who have developed very well (BSB). There are 3 children who have developed according to expectations (BSH), and 4 children who have begun to show their ability to recognize and count numbers.

5. CONCLUSION

Early childhood education or PAUD is an effort to provide stimulation to children starting from birth until the child is 6 years old which is carried out through providing stimulation in education to help physical and spiritual growth and development so that children are ready to continue their education to a further level. . The number wheel is a tool or media that is used as a teaching aid to recognize the concept of numbers and sort the sequence of numbers in PAUD by playing. The benefits of the number wheel media are improving cognitive abilities, developing children's ability to count, developing fine motor skills in children, developing abilities. children in social and language, as well as increasing children's motivation in learning activities. Application of number wheel media.

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