

Improving the Ability to Count Numbers in Children through the Media of Number Trains

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Abstract

The ability to count numbers 11-20 in group A through playing number trains. Early Childhood Education Teacher Education Study Program, STKIP Kusuma Negara Jakarta, 2021The purpose of this study is to contribute to the development of effective learning methods for early childhood, especially in developing the numeracy skills of children aged 4-5 years group A, Even Semester of the 2022/2023 academic year at Permata Bunda Catholic Kindergarten, Cimanggis, Depok. This research method is Descriptive research. In this study, researchers tried to describe, identify and classify learning to count numbers through the medium of number trains. The results showed that learning to count numbers through the media of playing number trains is very helpful for children to be able to learn with enthusiasm and count correctly. This study concluded that learning to count through number trains in group A aged 4-5 years at Sekolah Permata Bunda-Cimanggis is very interesting and can make children enthusiastic about learning.

Keyword: Ability to count numbers, Early childhood, Number train media.

1 INTRODUCTION

Schools are one of the parties involved in educational affairs, in addition to family and community. The role of schools becomes very important for human education. The school carries out the task of education, namely realizing the goals to be achieved as in the 1945 Constitution and participating in assuming general responsibility in the preparation of children with character to build an advanced generation.

Early Childhood Education is directed to facilitate children's healthy and optimal growth and development in accordance with the values, norms and expectations of the community (Zulianda, Muda, & Jamil, 2020). Education is carried out through the provision of rich and maximum experiences and stimuli (Ubaidillah, 2018). Therefore, a conducive environment is needed for the growth and development of children. The provision of educational stimuli for early childhood that is conducive can be implemented effectively with the help of educational institutions that provide playground services for children as pre-primary education parks. Early childhood education is a coaching effort shown to children from birth to the age of six years which is carried out through the provision of educational stimulation to help development, growth both physical and spiritual so that children have readiness to enter further education (Aprinawati, 2017). Early Childhood Education is essentially an educational objective that is organized to help the growth and development of children or focuses more on aspects of child development (Rocmah, 2012).

Education has stages that are applied based on the level of development of students, goals to be achieved, and abilities developed. Ability also has an Education service group that provides formal, non-formal, and informal education at the level and type of education (Rizqiyyatunnisa & Mahdi, 2021). The role of educators is needed in an effort to develop children's potential (Salsabilah, Dewi, & Furnamasari, 2021). This means that age is the

age that children have, which is considered very important in helping to lay the foundation of ability and the formation of quality human resources. Early childhood education is an early stage of development, one of which is the development of basic cognitive abilities, namely mathematics, number recognition (Umaternate, Haryati, & Mahmud, 2020; Rohmalina, Aprianti, & Lestari, 2020). Cognitive development is one aspect of human development related to understanding (knowledge) that is all psychological processes related to how individuals learn and think about the environment. Play is a necessity and as an important activity that children do by playing, children will increase their experience and knowledge (Zaini, 2015; Roostin, 2021). Given that the child's world is a world of play, through play children obtain lessons that contain aspects of language, cognitive, social, emotional and physical development. Through play activities with various games children can be stimulated to develop in general both thinking, emotional and social development (Kusumaningtyas, 2012; Karwati, 2014).

The problem experienced in Tk Permata Bunda-Cisalak-Depok is that group A children are only able to count numbers 1-10 while numbers 11-20 there are still many children who are not able to calculate them and the method carried out by the teacher by mentioning numbers and followed by students without any props or aids in counting such as pictures. To help improve problems in aspects of cognitive development, especially in children's numeracy skills, researchers and teachers apply it with learning by playing number train methods. Most children love to play and part of their life is that playing through play can help various aspects of a child's development. Playing number train is a game designed to develop children's cognitive abilities, especially in sorting numbers. Children can recognize and understand numbers from the smallest to the largest, children are also able to learn through games, because games are an activity that children often do, so children are not bored to carry out the learning process. To solve the problem of lack of numeracy and memory skills in these conditions, education needs to innovate activities during the learning process using number train games are expected to improve cognitive development, especially in the ability to count in children.

According to the results of observations made on group A children in TK Permata Bunda-Depok, data were obtained from 11 grade A children experiencing difficulties in recognizing mathematics, especially in the field of recognizing numbers, especially in the ability to count correctly, match, sort, and recognize symbols or number shapes from 11-20. This can be seen, for example, that children have been able to say the sequence of numbers 11-20, but children have not been able to sequence the sequence of numbers 11-20. Another problem that is obtained is the lack of media facilities or games that can make children interested in learning, for example, when the teacher explains using image media children do not pay attention to the teacher, children also cannot play directly with a game that can stimulate the level of children's numeracy intelligence, because in the introduction of numbers to children is needed supporting media facilities.

Because of these problems, researchers want to develop number train media to develop the numeracy skills of children aged 4-5 years. Playing number train is a symbolic game that will be applied in improving the counting ability of group A. This is because through number train games can improve children's counting by pointing to concrete objects. Learning that is fun, not boring, and in accordance with the principles in early childhood, so that children do not feel they are learning, children's learning activities become more comfortable and fun. According to the explanation above, it is said that the number train media can stimulate children in counting correctly, recognizing symbols, sequencing number sequences, and matching numbers. Learning used by early childhood is learning while playing, because by playing children get a variety of new experiences and knowledge. Thus, in a learning in kindergarten, teachers need to create a pleasant atmosphere by playing while learning. Basically, the learning process should be done by playing with game tools, namely a medium, because a game in a child's life cannot be separated, therefore presented a problem chart and a solution chart for solving the problem.

2 RESEARCH METHODS

This study used the Classroom Action Research (CAR) method. CAR is the study of social situations with a view to improving the quality of actions in them. The entire process of review, diagnosis, planning, implementation, monitoring, and influence creates the necessary links between self-evaluation of professional development.

Before doing cycle, the study made the following preparations: collecting data on children to be studied, data obtained from direct observation of children. determining the time of research implementation is in July with the implementation time of 6 meetings in two cycles. Cycle I consists of 3 meetings and cycle II consists of 3 meetings, each meeting is 30 minutes and adjusted to the scheduled study time. Provide explanations to children to always be present at every visit. Observe all activities carried out by children on fine motor skills in each child. Discuss with collaborators about the next activities.

The Action stage in cycle is when the researcher carries out the planned Action planning unit, namely number card activities to be carried out for 3 meetings, which are carried out in two cycles carried out for (30 minutes), adjusted to the learning time that has been scheduled by the school. the activities carried out in this stage are Meetings (1) Research prepares the media to be used then arranges the place according to the activities to be carried out. Children and research Jointly discuss what are the rules during the activity, Together tidy up the equipment that has been used to its place. children and research conversations about the activities that have been carried out and children's experiences during the activity. Meeting (2) prepares the media to be used then arranges the place according to the activities to be carried out today. Researchers and children have a conversation about the activities to be carried out. Researchers tell children today's activities as a whole scissors. Researchers show the media that can be used. Next children and researchers together discuss what are the rules of the activity take place. After all children finish playing, Together tidy up equipment that has been used opportunity. Children and researchers talk about the activities that have been carried out and children's experiences during the activity. Meeting (3) Research prepares the media to be used then arranges the place according to the activities to be carried out today. Researchers and children talk about the activities carried out. Researchers show the media that can be used.

Furthermore, children and researchers Jointly discuss what are the rules during the activity. After all children have finished playing, together tidy up the equipment that has been used to their place. Children and researchers talk about the activities that have been carried out and children's experiences during the activity. After the data is collected, researchers process the data. Here will be seen successful The actions given by the study to children during the activity took place in Improve children's fine motor through number train activities.

3 RESULT AND DISCUSSION

Based on the results of observations made in the pre-cycle, the ability to sort numbers from small to large (11-20), children have not seen an increase because children still use number posters and LK books, with an average grade score of 32.10%. After being given action in cycle 1, there was an average increase per class of 66.19% and an increase of around 34.09%. In cycle 1, it can be seen that some children have been able to obey and follow the learning rules implemented, out of 11 children there has not been a complete achievement with a score of 75%. The following table compares the increase in the ability to sort numbers through the medium of number cards, before and after being given action, namely data in the table above if presented in graphic form, it will appear as follows: From the comparison garfik above, it can be concluded that between pre-cycle and cycle 1 there is an increase produced by each child, improvement has been seen but has not reached the criteria of success. This is because children are not used to learning to use media, so the research will continue to the next cycle or cycle II.

From the table above, it can be seen that in the second cycle the overall total acquisition score was 280 with an average acquisition percentage of 79.54%, the lowest acquisition value of 24 with a percentage of 75% gain and the highest acquisition value of 27 with a percentage of 84.37% and an average score of 25.45 with an average percentage of 79.54%, this has reached the expected achievement level of 75%. Thus the increase in children's writing ability in cycle II has reached the expected success rate of 75%, then the study is stopped in cycle II. Based on the table and graph above, it can be concluded that the data above shows an increase in the ability to write numbers and can be said to have reached success indicators. This data shows that the ability to write 4-5 years old in Tk Permata Bunda when viewed from the percentage of pre-action, cycle 1 and cycle II achieved has exceeded the planned success indicator of 75%. Research conducted in Tk Permata Bunda in improving the ability to write numbers in early childhood using the Montessori method, consisting of 2 cycles with 3 meetings per cycle, which includes planning, action, observation and reflection. During learning activities, researchers use observation sheets which later these data are used to determine the improvements that occur in children.

With writing activities using the Montessori method (number card media) has seen an increase such as children can say numbers 11-20 and sort them, children can imitate the writing of numbers 11-20, children can say numbers 11-20 correctly and precisely without help. Based on the results of observations in cycle 1 actions, in the activity of sorting numbers through number cards using the Montessori method in children aged 4-5 years at Tk Permata Bunda there is an increase in terms of the value gain, when compared to the value of pre-action gain, but this is not in accordance with the specified success criteria. The average score in cycle 1 was 21.18 with an average acquisition percentage of 66.19% and the acquisition of 19 with a percentage of 59.37%, while the highest score was 23 with a percentage of gain of 71.87%.

The acquisition of values on the indicator items is crossing out with a value of 61 percentage of obtaining an average value of 69.31%, drawing indicators with a value of 58 percentage of obtaining an average value of 6.90%, indicators practicing writing small numbers 1-10 with a value of 31 percentage of obtaining an average value of 70.45%, indicators sorting large numbers 11-20 with a value of 83 percentage of obtaining an average value of 62.87%. When compared to pre-action, cycle 1 experienced an increase of 34.09%. Although there has been an improvement, it still does not meet the expected success criteria and the research will continue to cycle II. In cycle II, the average score of the ability to sort numbers in children was 25.45 with an average percentage of value acquisition of 79.54%. The lowest score was 24 with a score acquisition percentage of 75%, while the highest score was 27 with a score acquisition percentage of 84.37%.

The value obtained on the indicator items are the indicator sorting numbers 11-20 with a value of 82 with an average value of 93.18%, the indicator writes the numbers 11-20 with a value of 68 the percentage of obtaining an average value of 77.27%, the indicator mentions the numbers 11-20 with a value of 33 the percentage of obtaining an average value of 75%, the indicator sorting the numbers on the train with a value of 97 the percentage of obtaining an average value of 73.48%. When compared to the percentage value of cycle 1, cycle II has increased by 4.27%, and this criterion has reached the completeness criterion. Based on the results of observations of cycle 1 and cycle II actions, the ability to count numbers in children aged 4-5 years at Tk Permata Bunda has increased, with numeracy learning activities. From the urian above, it can be said that numeracy learning activities in children and the success rate are as expected.

4 CONCLUSION

Based on the results of research and discussion about improving the ability to count numbers 11-20 in children aged 4-5 years at Tk Permata Bunda, Depok District-West Jakarta, in the 2022/2023 school year, it can be concluded that the ability to count can be

improved through the media of number trains. The increase can be seen from the percentage increase from the pre-action stage and after the class action. The results of observations from pre-action got a percentage of 32.10%. The results in cycle 1 got a percentage of 66.19% and after cycle II the percentage of writing ability increased to 79.54%.

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