

# Improving Counting Ability Through the Think Pair Share (TPS) Cooperative Learning Method in TK Aba Bendungan Wates Districts Kulon Progo Yogyakarta

Nurlayli Hasanah<sup>1\*</sup>, Minuk Riyana<sup>2</sup>, Diah Harmawati<sup>3</sup>

<sup>123</sup> Department of Early Childhood Education Musamus University Merauke, Indonesia

\*Corresponding author. Email: [nurlayli@unmus.ac.id](mailto:nurlayli@unmus.ac.id)

## ABSTRACT

The purpose of this study was to improve the numeracy skills of group B kindergarten children through the Think Pair Share (TPS) type of cooperative learning method. This study uses a collaborative classroom action research type. The research model used was Kemmis and Mc. Taggart. The subjects of this study were 20 children in group B in TK ABA Bendungan Wates. Methods of data collection are done through numeracy tests (oral), observation, and documentation. The research data were analysed descriptively quantitative. The ability to count is said to be successful if 80% of the 20 total children have reached the numeracy ability indicator in the criteria of developing as good and very good. The Think Pair Share (TPS) type of cooperative learning method can improve numeracy skills in group B children at TK ABA Bendungan. This is indicated by the percentage of the ability to count in the first cycle increased by 25% from the initial condition 45% increased to 70%. The ability to count in cycle II increased by 25% from cycle I 70% increased to 85%.

**Keywords:** numeracy skills, cooperative learning methods, think pair share

## 1. INTRODUCTION

A common phenomenon that develops in society regarding mathematics, especially at school age, is that mathematics is still often considered to be a frightening specter, only a small proportion of children enjoy learning mathematics, especially the ability to count. This is due to the low basic skills. OECD Secretary General Angel Gurría on the OECD website also stated that 32 percent of children who took the test could not solve the easiest arithmetic problem. Without the most basic skills, he is worried that the children will likely drop out of school or will have difficulty facing real life in the future. Children need skills to face reality and contribute to providing solutions in this era of globalization, "said Gurría during the launch of the PISA results. 2012 in Washington DC, USA [1].

To provide stimulation to the numeracy ability of children, stimulations are given to develop children's numeracy skills. The first numeracy ability that was introduced started from random numbers 1-3, counting in 1-5, 1-10, connecting concrete objects with the symbol of the number and mentioning the number of objects by counting [2].

Seeing the results of observations at TK ABA Bendungan, Wates District, Kulon Progo Regency DIY, it was found that there were problems with numeracy skills. It can be seen from the results of observations on the initial ability that when children are given counting activities in an independent way, there is a need for guidance from the teacher.

Seeing the problems that were seen during the observation described above, with that the collaborator teacher and researcher discussing to solve the problem. The teacher and the researcher discuss how to improve numeracy skills with the Think Pair Share type of cooperative learning method. That way the media can make it easier for children to count. Media plays a very important role in learning activities so that this study uses flannel board media as a learning medium to improve numeracy skills.

The Think Pair Share type cooperative learning method used must be adapted to the needs and development of kindergarten age children. It is hoped that this method can improve numeracy skills in group B kindergarten children in TK ABA Bendungan, Wates District, Kulon Progo Regency, DIY.

### **1.1 Early Childhood Counting Ability**

Mathematics is one type of knowledge that humans need in carrying out their daily lives. For example, when shopping, we need to select and calculate the number of items to be purchased and the price to be paid. When going to go, we need to remember the direction of the road where we are going to be, how long it will be away, and choose a path that is faster to get to the destination [3].

Development is influenced by maturity and learning factors. If the child has shown a sensitive period (maturity) to count, then parents and teachers who handle the age of 5-6 years must be responsive, to immediately provide services and guidance so that the child's needs can be met and channelled as best as possible to the development of optimal numeracy skills. Children aged 5-6 years are a very strategic period to introduce numeracy in the mathematics pathway, because 5-6 years of age are very sensitive to stimuli received from the environment. His high curiosity will be channeled if he gets stimulation / stimulation / motivation in accordance with his development task. If numeracy is given through various kinds of games, it will certainly be more effective because playing is a vehicle for learning and working for children. It is believed that children will be more successful in learning something if what they learn is in accordance with their interests, needs and abilities [3].

### **1.2 Understanding the Cooperative Learning Method Type Think Pair Share**

Think Pair Share (TPS) was first introduced by this method by Frang Lyman and colleagues at the University of Maryland as quoted by Arends, stating that think pair share is an effective way to vary the atmosphere of class discussion patterns. Assuming that all the recitations and procedures used in think pair share can give children more time to think, to respond and help each other. The teacher estimates that only completes the short presentation or the child reads the assignment, or the situation becomes a question mark [4].

Frank Lyman described this method as having three steps [5]:

Step 1: Think. You ask a question to the whole class and allow them a short time to "think" about the response.

Step 2: pair. Designated partners (desk mates, buddies) to pair up and discuss the best answers, or even the most novel possibilities. In some cases, you could even have them write their team responses.

Step 3. Share. You now call on the pairs to share their thinking with the class. Responses can be recorded on the chalkboard.

Frank Lyman describes this method as having three steps:

Step 1: Think. You ask the whole class the question and allow them to "think" about the answer in a short amount of time.

Step 2: partner. Designated friends (table mates, friends) to pair up and discuss the best answers. In some cases, they can even write down their team response.

Step 3. Share. You now call on your partner to share their thoughts with classmates. Responses can be recorded on the board.

Douglas Fisher and Nancy Frey [6] explain the steps for Think Pair Share, which are as follows:

Think Pair Share is a cooperative discussion strategy that allows students to discuss their responses with a peer before sharing with the whole class. There are three stages of student action:

- 1) Think. The teacher engages students thinking with a question, prompt, reading, visual, or observation. The students should take a few minutes (not seconds) just to think about the question.
- 2) Pair. Using designated partners, students pair up to discuss their respective responses. They compare their thoughts and identify the responses they think are the best, most intriguing, most convincing, or most unique.
- 3) Share. After students talk in pairs for a few moments, the teacher asks pairs to share their thinking with the rest of the class.

### **1.3 Definition of Media**

Arief S. Sadiman [7] explained that media is all that can be used to convey the sender's message to the recipient so that children's thoughts, feelings, concerns and interests can be stimulated so that the learning process occurs. In this study, the flannel board is a medium for counting.

## **2. METHODOLOGY**

This type of research is classroom action research. Kusumah and Dwitagama [8] define classroom action research as action research conducted by classroom teachers.

Kemmis & Mc. Model. Taggart is a classroom action research model, this model [8] has four components, namely: planning, action, observation and reflection, these components are a series in one cycle and the number of cycles depends on the problem to be solved.

This research was conducted at TK ABA Bendungan, Wates District, Kulon Progo Regency, DIY, consisting of 2 cycles. Each cycle was carried out according to the components of the Kemmis and McTaggart models, namely planning, implementing, observing and

reflecting. With two cycles it can be observed an increase in numeracy skills through the Think Pair Share type of cooperative learning method.

The subjects of the research were group B children at TK ABA Bendungan, Wates District, Kulon Progo Regency, DIY. Subjects totalled 20 children. Boys 9 and girls 11. Methods of data collection using arithmetic tests, observation, and documentation. The assessment indicators are mentioning the sequence of numbers and recognizing the symbols of numbers, connecting the numbers with the writing. The instrument used was the observation sheet (observation). The observation sheet is in the form of a checklist by putting a check mark (✓). The data analysis technique used quantitative descriptive data analysis. Quantitative descriptive, namely the results of the study are described and presented without making conclusions that can be used in general or generalizations.

This study is successful if the results get a percentage of 80% or 16 children out of 20 can achieve the numeracy ability indicator with the criteria developing good and very good. Indicators of numeracy skills in this study use number sequences and recognize number symbols, connecting numbers with writing.

### 3. RESEARCH RESULTS AND DISCUSSION

#### 3.1 Research Result Cycle I

The first cycle was conducted in 2 meetings. The first meeting of the first cycle used the think pair share type of cooperative learning method with a game of arranging colour patterns. The second meeting of the first cycle used the think pair share type of cooperative learning method with games to compose geometric patterns.

**Table 1.** Percentage Results of Counting Ability in Cycle I

Class	Present age	
B1	Initial Ability	Cycle I
	45%	70%.

Based on table 1, it can be seen that the percentage increase in numeracy skills in cycle I reaches 25% from the initial condition 45% increases to 70%.

The results of the percentage of the number of children on the criteria for developing Good and developing Very Good in cycle I also increased. To make it look clearer, it can be seen in Table 2 as follows.

**Table 2.** Interpretation of Increasing Children's Counting Ability in Cycle I

Class	Criteria	Initial Ability		Cycle I	
		Result	Percentage	Result	Percentage
B	Very Good	2 child	10%	4 child	20%
	Good	7 child	35%	10 child	50%
	Enough	11 child	55%	6 child	30%
	Less	-	-	-	-
totals		20 child	100%	20 child	100%

Based on Table 2, it can be seen that the numeracy ability of children, namely 20% or 4 out of 20 children, has reached the very good development criteria, 50% or 10 children out of 20 have reached the criteria developing good and 30% or 6 children still have the criteria developing Enough.

Seeing from table 1, the percentage of children's numeracy achievement still reaches 70%, not yet the success indicator, which is 80%, so the conclusion needs to continue to the next cycle.

The researcher and the class teacher reflected at the end of cycle I. In the reflection, all the obstacles or things that were not done in the research implementation in cycle I. Based on the results observed (observations) in the first cycle, the obstacles encountered such as.

- a) Teachers do not provide motivation and reinforcement to children.
- b) The games used are not very interesting.

Seeing these conditions, the learning process, media, and activities need to be improved so that they can make children interested. After discussing it with the class teacher, things that need to be improved in cycle II are arranged. As for what was fixed in cycle II such as.

- a) In cycle II children need to be motivated and given an explanation before the teacher gives the task of compiling a pattern with the TPS cooperative learning method, explaining that rewards will be given to children who are able to complete tasks and are able to work together according to the indicator of numeracy ability assessment in the form of star-shaped stickers.
- b) Provide reinforcement to children who are able to complete tasks by working together.
- c) The media used for children to count is made with bright colours.

#### 3.2 Research Result Cycle II

Action planning in cycle II is made from the results of reflection in cycle I. Meeting 1 in cycle II the teacher

provides a cooperative learning method type think pair share with a game of composing patterns with various kinds of pictures. In the second meeting in cycle II, the teacher gave a think pair share type of cooperative learning method with a game of arranging patterns with various kinds of colour geometry. In the second cycle, a competition was made to make a quick task to complete the task in groups and the results were the right reward.

Based on the results of observations (observations) there was an increase in children's numeracy skills in cycle II, for more details it can be seen in table 3 below.

**Table 3.** Results of the Percentage of Counting Ability in Cycle II

Class	Percentage		
	Initial Ability	Cycle I	Cycle II
B	45%	70%	85%

Based on Table 3, it can be seen that the increase in the percentage of arithmetic ability in cycle II by 25% from cycle I 70% increases to 85%.

The results of the percentage of the number of children in good criteria in cycle II also increased. For more details, it can be seen in Table 4 below.

**Table 4.** Interpretation of Increasing Calculation Ability in Cycle II

Class	Criteria	Initial Ability		Cycle I		Cycle II	
		Result	%	Result	%	Result	%
B	Very Good	2 child	10%	4 child	20%	9 child	45%
	Good	7 child	35%	10 child	50%	8 child	40%
	Enough	11 child	55%	6 child	30%	3 child	15%
	Less	-	-	-	-	-	-
Totals		20	100%	20	100%	20	100%

Based on table 4, it can be seen that the achievement of children's numeracy skills in cycle II is 85% so that the indicators of success have been achieved. Seeing from these data, it can be concluded that in cycle II 85% of children have developed their numeracy skills optimally.

Based on the results of reflection in cycle II, the children's numeracy ability has reached the indicators of success. So, this is the reason that this research is sufficient until cycle II.

### 3.3 Discussion of Research Results

This classroom action research (CAR) was carried out in 2 cycles. Each cycle carried out two meetings. Each cycle consists of planning, acting, observing and

reflecting. In cycle II is the solution to the obstacles that exist from cycle I. Based on the research that has been carried out during the two cycles of this research results:

1. Think Pair Share type cooperative learning can improve children's numeracy skills.
2. Media and games that are modified as media for counting can make it easier for children.

## 4. CONCLUSIONS

Judging from the results of the research and discussion, it can be concluded that with the Think Pair Share (TPS) type of cooperative learning method the numeracy ability of group B children at TK ABA Bendungan Wates can be increased. It can be seen from the percentage of the ability to count in the first cycle increased by 25% from the initial condition of 45% to 70%. The ability to count in cycle II increased by 25% from cycle I 70% increased to 85%. Through the Think Pair Share (TPS) type of cooperative learning method, it can make it easier for children to count. It can be seen that after counting activities using the Think Pair Share (TPS) type of cooperative learning method, then the child is tested to count with an indicator of the ability to count with similar objects; count by color; count by shape; and calculating based on size after being observed by the observer the results shown that the child can develop better.

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