The Improve Learning Results and Creativity Student to Lesson Operation Count Numbers Through Cooperative Learning Type *Numbered Heads Together* (NHT) in Class IV S D District 6 3 Ambon-Indonesia

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Abstract

This research study was qualitative with Class Action Research (PTK) was Elementary School fourth grade students know n teachings Ambon 63 20 1 1/201 second with the number of students by 37 people. Formulation of the problem in this research is using NHT cooperative learning model to improve learning outcomes and student materials Creativity Operation Count Numbers Count?

The results showed that, by using cooperative learning model *Numbered Heads Together* (NHT) to improve student learning outcomes as seen in the results of the test cycle I gained mastery Minimum Criteria (KKM) In as much as 62.2% and the third cycle increased to 78.4%.

Keywords: *Keywords: learning outcomes, Numbered Heads Together (NHT)*

I.   Introduction

1.1   Background

Mathematics as one of the subjects taught in school was considered quite an important role in shaping students to be qualified, because mathematics is a means of thinking to examine the problems of everyday life in a logical and systematic.

Based on Observations and interviews with the authors found that students often regarded mathematics as a subject that is difficult to understand. The indication can be seen from the results of student learning are unsatisfactory. During this time students are generally capability only memorizing formulas for overcome math problems. One cooperative learning model in which a solution to this problem is the Cooperative Learning NHT type *(Numbered Heads Together.)* This model can be used as an alternative variation of the model previous learning.

NHT model is working procedures in general that, students formed groups 4-5 students, each member having one number, teacher ask questions to discuss with the group. Teachers pointing to one number to represent the group. According to *(Muhammad* Nur 2005) that cooperative learning model NHT on essentially a variation of group discussion with his trademark is simply to appoint a teacher of students who represent the group without telling in advance who will represent the group The. So that in this way for effort students always involved in the learning process in the classroom ..

With that in mind, the authors conducted research entitled "Improving Learning Outcomes and Creativity Time on Materials Numbers Count operating through Cooperative Learning Model Type *Numbered Heads Together* (NHT) on Class IV Elementary School 63 Ambon ".

1.2   Problem Formulation

Based on the above background, the research problem can be formulated as follows: *"Is the use of cooperative learning model NHT results mathematics learning materials Two Variables Systems of Linear Equations of State 63 fourth grade can be improved?".*

1.3   Research Objectives

In line with the above problem formulation, the objective of this research is to improve students' mathematics learning outcomes Elementary School fourth grade 63 Ambon, through cooperative learning model NHT, especially at similarity Material Systems Linear Two Variables.

1.4   Benefits of Research

1.4.1. Those students

1)   With the implementation of this learning model is expected to improve student learning outcomes in mathematics Matter Two Variable Linear Equation
2)   Help the students who find it difficult to be able to exchange knowledge with other students to improve student understanding.
3)   Students get excited because they feel involved in the learning process.
4)   Improve the ability to work together in groups.

1.4.2. Teachers

With the implementation of this study, teachers can find variety of teaching and learning strategies that can be used as an effort to improve student learning outcomes and appropriate to the subject matter.

1.4.3. For Researchers

Gain experience applying mathematics learning with cooperative learning model that can later be applied NHT while plunging in the field.

2.   Literatures

2.1.   Learning Definition

Learning is a mental activity that can not be observed from the outside, what's going on in a person can not be known directly only observe the person. Learning outcomes can only be observed, if someone showed the ability that has been acquired through learning. Based on the behavior displayed, it can be concluded that someone has learned.

This is in line with the opinion of Morgan, d natural (Ratumanan 1986) that learning can be defined as material behavior relative fixed and occur as a result of training or experience. According behaviorist theory, learning is a change in behavior as a result of the interaction between stimulus and response. In other words, learning is a form change experienced by students in terms of their ability to behave in a new way as a result of the interaction between stimulus and response.

Furthermore Ormrod (1995) in (Ratumanan 1986) describes the two different definitions of learning. The first definition states that *"Learning is a relatively permanent change in behavior due to experience,"* learning is a relatively permanent change in behavior due to experience. While the second definition states that *"learning is a relatively permanent change in mental associations due to experience,"* Learning is a relatively permanent mental changes due to experience. The first definition gives the emphasis on mental changes.

This study notions give *"warning"* that a learning orientation, not solely on the *"results"* but also the *"process"* committed to obtain these results.

2.2.   Cooperative Learning Type *Numbered Head Together* (NHT)

Model *Numbered Head Together* is a type of cooperative learning which consists of four stages used to review the facts and basic information that serves to regulate the interaction of students. learning model can also be used to solve problems that limited the level of difficulty. NHT structure is often referred to as a group think. NHT is used to involve more students in reviewing the material covered in the lesson and check their understanding of the lesson content. The stages in the NHT learning among others, numbering, ask questions, to think together, and the answer (Trianto, 2007)

3.   Research Methods

3.1.   Data Sources and Data Types

    a.   Sources of Data

    Sources of data in this study is a fourth grade student Ambon District 63 school year 2011/2012 the number of students with 37 students.

    b.   Type of data

    Type of data obtained is quantitative data (the value of learning outcomes) were analyzed descriptively (eg: find the value of the percentage of successful studies). Whereas qualitative data is data that a form of sentence that gives information about the picture and the expression level of students' understanding of a subject (eg, interviews, questionnaires, observation sheets for teachers and observation sheets for students

3.2. Research Instruments

Instruments used in this research emphasis is in the form of *essay* test questions used as much as 3 to see the value in the form of cognitive learning outcomes of students. Hereinafter to see the attitude of the students used instrument in the form of student observation sheet.

3.3.   Setting Research

a. Preliminary

  Phase 1: Preparation

    Teachers do apperception

b. Core activities

  Phase 2: Implementation of cooperative learning NHT

  The first stage

  1.   Numbering: The teacher divides the students into groups of 4-5 people and each member is numbered 1-5.
  2.   Students joined with members of each

The second stage

Asking questions: The teacher asks a duty to do the questions on the worksheet.

The third stage

Thinking together: students think together and unify their opinions to answer questions in the worksheets and convince each member of the team knows the answer.

The fourth stage

1.   Replied: Teacher calls students with a certain number, then call the appropriate number of students with raised hands and try to answer any questions or presentation results of group discussion for the entire class. Another group was given the opportunity to argue and ask for the results of his group discussions.

2.   Teachers observe the results obtained by each group and give encouragement to the group who have not been successful. Teachers provide strengthening exercises as the result of workmanship LKS.

c. Cover

Phase 3: cover

1.   Students and teachers concluded that the material had been taught.
2.   Teachers give homework
3.   Teachers remind students to relearn material that has been taught and further material.

3.3.   Data Analysis Techniques

Data analysis, which describes how the data obtained were analyzed to determine the final result (Arikuto, 2007:39). Analysis of the data used in this study is the analysis of quantitative data and qualitative data analysis.

3.3.1.   Quantitative Data Analysis

Quantitative data analysis using descriptive statistics to determine the level of mastery of each of the students. The formula used (Ruseffendi, 1992: 328) is as follows:

$$\text{Complete value} = \frac{\text{number of Correct answer students}}{\text{Number of holes correct}} \times 100$$

Furthermore, from the value of mastery will be converted based on the following table:

Table 3.1: Value of Mastery Students

Criteria to Completeness Minimal Students	Information
≥60	Complete
< 60	Not Completed

Sources of SDN 63 Ambon

N jam analyzing learning outcomes such as **cognitive** aspects, the researchers assessed the attitudes of students in the learning process is learning through **affective** appraisal and **Psychomotor.**

4.   Results and Discussion

4.1.   Results

To see the results of cognitive development, can be seen in the following table:

Table 4.1: Test Results Cognitive development

Value	Cycle I		Cycle II		Cycle III		Ket.
	Frequency.	%	Frequency.	%	Frequency.	%	
≥ 60	23	62.2%	26	70.3%	29	78.4%	Complete
<60	14	37.8%	11	29.7%	8	21.7%	Not Completed

results can be found in appendix 13, p. 1 23

Table 4.2 Value Affective Development

Value	Cycle I		Cycle II		Cycle III		Ket.
	Frequency.	%	Frequency.	%	Frequency.	%	
≥ 60	22	59.5%	32	86.5%	37	100%	Complete
<60	15	40.5%	5	13.5%	0	0%	**Not Completed**

Table 4 .3. Psychomotor development of Rana

Value	Cycle I		Cycle II		Cycle III		Ket.
	Frequency.	%	Frequency.	%	Frequency.	%	
≥ 60	24	64.9%	34	91.9	37	100%	Complete
<60	13	35.13%	3	29.7%	0	0%	Not Completed

4.2.   Discussion

Based on observations in Table 4.1, Table 4.2 and 4.3 Table, it appears that the first cycle students gain mastery learning based on the cognitive aspects of achieving 62.2% of students who received ≥ 60 out of 37 students only 23 students scored ≥ 60. While assessment affective aspects of achieving 59.5% ≥ 60 got value of 37 students 22 students who got value ≥ 60, and 64.9% of students grades psychomotor got value ≥ 60 of 37 students 24 students who received ≥ 60 So completeness indicator study results have not been achieved.

Based on the results above act implications for students' observations attitude and the way teachers teach. The lack are still there as well as student learning outcomes of the material Operation Count Numbers count in the first cycle of action that has not reached the predetermined criteria of completeness, the study continued in the second cycle. Things that should be improved is the teacher should learning implemented in accordance with lesson plans that have been made, other than that the teacher should be able to manage time as efficiently as possible so that all the activities in a learning scenario can be implemented as planned. In addition, teachers must be able to lead students to be active in discussions with them as to the lack of good noise in the classroom, students who do not want to reprimand cooperate defender with friends and touched his group's more motivating to them.

At the second cycle, cooperative learning model *Numbered Heads Together* (NHT) re-implemented in accordance with the division of the group in cycle I. based on the observation on the second cycle, the activities of teachers in implementing the teaching and learning has improved, where the deficiencies that occur in the first cycle is to be improved gradually, although not perfect, among others, mastery learning model NHT good enough to make the teacher can implement activity appropriate learning steps in learning scenarios. Teachers are able to manage time well, and guidance to groups that have difficulty is almost evenly.

Test results on the second cycle based, Table 4.2 also increased to cognitive aspects of 62.2% to 70.3% That means undergone increased by 8.1%. Whereas affective aspects when compared with Table 4.1 shows that of the 59.5% increase to 86.5%. This is an increase of 27%, psychomotor aspect also increased from 64.9% to 91.9% and increased by 27%. See shortcomings that still exist and the final test results that have not reached the indicators of success, this research continued on the third cycle.

In the third cycle of action, cooperative learning model *Numbered Heads Together* (NHT) re-implemented. Based on the results of observations made in the third cycle, it can be said that teachers and students have learning activities in accordance with what is expected. Deficiencies in the second cycle was done can be repaired. Teachers are able to carry out all phases of activity on the RPP as well. Students already pay more attention to the teacher's explanation and discuss in active group and have been able to express their opinions seta more accountable for the performance with his group of friends.

The results of tests conducted at the end of the third cycle also increased cognitive aspects of 70.3% to 78.4%, from 86.5% affective aspects to 100%, as well as psychomotor aspects of 91.9% to 100%. By this means the third cycle has achieved mastery learning criteria that have been established. While the results of observations of teaching practices can be said to be perfect, ie 100% of the components in the scenario has done well as expected. Student learning outcomes for each cycles can be seen in the graph.

5.   Conclusion

Based on the above discussion, it can be preserved collected that using cooperative learning model *Numbered Heads Together* (NHT) to improve student learning outcomes as seen in the results of the test cycle I gained mastery Minimum Criteria (KKM) as much as 62.2% and the cycle of III increased to 78.4%.

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