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Improving Learning Quality Through NHT Cooperation Model in Indonesian Vocational Schools

Agung Listiadi, Raya Sulistyowati, and Norida Canda Sakti

Universitas Negeri Surabaya

Abstract

One of the objectives of cooperative learning is to improve student performance in academic tasks and improve student learning outcomes. This research uses action research method from Kemmis & Taggart with vocational student respondents. Student activity during Total Numbered Heads Together cooperative learning works better, and teacher-run teaching activities are significantly improved. Thus, the mastery of learning can be achieved by applying cooperative learning model type Numbered Heads Together. Student response in this cooperative learning is positive, students enjoy the learning process and are motivated to collaborate during the learning process.

Keywords: cooperative learning, Numbered Heads Together

Corresponding Author:
Agung Listiadi
agunglistiadi@unesa.ac.id

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1. Introduction

In achieving success in the learning process in accordance with the curriculum, the performance of teachers and students is required to manage their creativity by linking real situations to the classroom, but often students get bored with the same learning model every day. In learning activities not only teachers who play a full role but on the contrary, teachers still play an important role in teaching and learning process because without teachers will not succeed (Sonam Mehta & A.K.Kulshrestha, 2014). The role of teachers in the learning process of teachers as a facilitator, teachers as managers, and teachers as evaluators in learning (Park & Nuntrakune, 2013). This effective role encourages teachers to consider what methods are used in delivering the subject matter. Various learning methods ranging from lectures, demonstrations, and cooperative learning one of them can used teachers in delivering the material, but in this study chose cooperative learning because cooperative learning involves more students in the learning process (Gillies, 2014).

Menurut Sulisworo & Suryani (2014) Cooperative learning model is a learning model that requires students to work together in small groups to accomplish joint tasks and

are interdependent with one another to achieve mutual respect. Teaching and learning activities in the subjects of Accounting from all students are still below the standard score of learning and teaching mastery. The completeness of student learning result is mostly because students are often bored and happy times with activities done outside the classroom, therefore with research that will be done is expected to reduce boredom. Based on the example it seems clear that the bored state in the existing students showed a decrease in motivation to learn to students, causing less maximal in absorbing the subject matter taught and ultimately lead to decreased student achievement in students (Leasa Marleny & Corebima, 2017). From the above problems can be seen the selection of learning methods that are less precise with the existing conditions can cause various problems and can also inhibit the success of a learning process for both students and for teachers, so that learning model is needed that can increase student interest, activity, and learning outcomes and the most important is the result students can achieve the established standard of mastery and able to create an effective co-operation in learning (Kupczynski, Mundy, Goswami, & Meling, 2012). Based on the theory of cognitive learning, one of the learning models that can increase student's interest, activity, and learning outcomes is by cooperative learning model. One of the objectives of cooperative learning is to improve students' performance in academic tasks and to improve student judgment on academic learning related to learning outcomes.

2. Theoretical Framework

2.1. Understanding teaching and learning process

According to Djamarah & Zain (2006), the process of teaching and learning is a change of behavior, whether involving knowledge, skills or attitudes, even covering all aspects of the organism or personal. Teaching and learning activities such as organizing learning experiences, cultivating teaching and learning activities, assessing the process, and learning outcomes are all within the scope of teacher responsibilities (Sudjana, 2013). From the above understanding it can be concluded the core of the teaching and learning process includes activities undertaken by teachers ranging from planning, implementation, to evaluation activities. The role of teachers in teaching and learning process, among others: As a facilitator, Provide conditions required for students to learn, as a mentor Provide guidance to students to be able to learn smoothly and effectively. As a motivator Provide encouragement to students willing and keen to learn. As an organizer

organizing the process of teaching and learning in the classroom. As a resource can provide information required by the students.

2.2. Basic principles and characteristics of co-operative learning

The basic principle of cooperative learning: Each member of the group (student) is responsible for everything that is done in the group and work together (Kupczynski et al., 2012). Each member of the group (student) must know that all group members have the same goals. Each member of the group (student) must share the same duties and responsibilities among his group members (Genc, 2016). Each member of the group (students) will be subject to evaluation. Each member of the group (student) shares leadership and requires skills to learn together during the learning process. Each member of the group (students) will be required to individually account for the materials handled in the cooperative group. According to Gillies (2016) states the characteristics of cooperative learning compared with group work are: Positive Interdependence, reciprocal relationship based on the same interests or feelings among group members where success is someone else's success as well or vice versa. To create such an atmosphere, teachers need to design group structures and tasks that allow each student to learn, evaluate himself / herself and his or her peers in the mastery and ability to understand the subject matter. Conditions like this allow each student to have a positive dependence on the other group members in learning and completing the tasks that are his responsibility that encourages each group member to work together (Yoshida, Tani, Uchida, Masui, & Nakayama, 2014). Interaction Face to Face, the interaction that occurs directly between students without any intermediaries. In the absence of protrusions of individual strengths, there is only a pattern of verbal interactions and changes among students enhanced by the existence of mutual reciprocity that is positive so that it can affect educational outcomes and teaching (Maman & Rajab, 2016). There is personal responsibility regarding the subject matter in group members. So students are motivated to help their friends, because the goal in cooperative learning is to make each member of his group become stronger personality. The most important goal that is expected to be achieved in cooperative learning is that students learn these cooperative and related skills are important and indispensable skills in the community. The students know the level of success and effectiveness of the cooperation that has been done (Kupczynski et al., 2012).

According to Duxbury & Tsai (2010) states the important goals that can be achieved with cooperative learning is in cooperative learning despite covering a wide range of

social goals, as well as improving student achievement or other important academic tasks. Some experts argue that this model excels in helping students understand difficult concepts. The developers of this model have shown that cooperative reward structure models have been able to increase students' grades on academic learning and norms change related to cooperative learning outcomes can benefit both lower and upper group students working together to complete academic tasks (Sonam Mehta & A.K.Kulshrestha, 2014). Acceptance of individual differences, another goal of cooperative learning model is the widespread acceptance of different people based on race, culture, social class, abilities, and disability. Cooperative learning provides opportunities for students from different backgrounds and conditions to work interdependent on academic tasks and through a cooperative reward structure will learn to respect each other. Development of social skills, the third important objective of cooperative learning is to teach students the skills of collaboration and collaboration (Sonam Mehta & A.K.Kulshrestha, 2014). Social skills, important to the students because today many young people are still lacking in social skills. In the above objectives are expected to appreciate the opinions of others and mutually correct mistakes together, looking for the right answer and good, by looking for sources of information from anywhere just like a book package, books in libraries and other supporting books, to be assistants in searching for good and correct answers and gain knowledge, subject matter taught increasingly wider and better. According to Gillies (2016) states that the assessment and evaluation procedures are based largely on the assumption that teachers are using a competitive or individualistic reward system because cooperative learning models work under a cooperative reward structure and since many lessons in cooperative learning aim to achieve complex cognitive and social learning, different assessments and evaluations. In cooperative learning requires different testing procedures of the structure of one model built on cooperative learning. In teacher scoring should be consistent with the concept of a cooperative reward structure it is important for the teacher to appreciate the outcome of the group both the end result and the cooperative behavior that produces the end result. The last unique and important assessment and evaluation for cooperative learning is the recognition of student learning outcomes and outcomes, for example the teacher announces team results and individual learning in the classroom after learning. Determination of team score scores include: step 1 determining team score, team score is calculated by increasing the score of each individual member of the team and dividing by the number of team members. Step 2 on the team's achievement, each team receives a special certificate based on a good point system (15 $\leq$ average increase in group value

< 20), Great (20 ≤ average increase in group value < 25), and Super (average group increase value ≥25).

2.3. Understanding numbered heads together

Many ways we can do to improve the quality of learning. One of them is using the right model in Teaching and Learning Process. Of course the model we use tends to lead to Creative Learning Model. There are several Creative Learning Models. One of them is the Number Head Together (NHT) (Leasa Marleny & Corebima, 2017). Learning model is quite often used by educators in conducting Classroom Action Research. According to Maman & Rajab, (2016). Number Head Together (NHT) is an approach that involves more students in the material covered in a lesson and checks their understanding of the content of the lesson. Instead of asking questions to the whole class, the teacher uses a four-stage structure of numbering, asking questions, sharing and responding. From the above description can be concluded that Numbered Heads Together (NHT) is a method of learning where each student is given a number later created a group then randomly assigned the teacher to call the number from the students. This learning model usually begins by dividing the class into several groups. Each student in the group was deliberately numbered to facilitate group work performance, change group positions, compile material, present, and get feedback from other groups (Maman & Rajab, 2016). Numbered Heads Together (NHT) is basically a group discussion variance in which the trademark characteristic is that the teacher only designates a student representing his group, without telling who will represent the group first. This guarantees the total involvement of all students. It is also an excellent effort to improve individual responsibility in group discussions. Numbered Heads Together (NHT) has several advantages: each student becomes ready for all, can conduct the discussion earnestly, the clever student can teach the less intelligent students, the values of cooperation between students more tested, motivated student creativity and insight students develop, because they have to seek information from various sources (Leasa Marleny & Corebima, 2017). Numbered Heads Together (NHT) also has several disadvantages, namely: the possibility of the number being called, recalled by the teacher; not all group members are called by the teacher. While on technical constraints, for example the seating problem is sometimes difficult or less support organized group activities, especially for classes with the number of students over 35.

2.4. Understanding learning outcomes

Everything from what we do is certainly to achieve an outcome, as well as learning. After carrying out a learning activity is expected someone can get a result from the activity for example from not knowing to know, from not understand so understand, and from not knowledgeable become knowledgeable. There are several definitions of learning outcomes expressed by experts among others. Learning outcomes are patterns of actions, values, understandings, attitudes, appreciations and skills (Suprijono, 2013). According to (Sudjana (2013), According to the results of learning is the result obtained by students from the teaching and learning process that appears in the form of behavior as a whole that consists of cognitive, affective and psychomotor elements in an integrated student self. From the above description of opinion can be concluded that the learning outcome is an internal capability possessed by a person or individual and allow someone to do something or show performance According to the results of learning is the result obtained by students from the teaching and learning process that appears in the form of behavior as a whole that consists of cognitive, affective and psychomotor elements in an integrated student self. From the above description of opinion can be concluded that the learning outcome is an internal capability possessed by a person or individual and allow someone to do something or show performance certain. In learning behavioral changes that must be achieved by the learner after carrying out learning activities formulated in the objectives of learning. In the process of learning, learning outcomes are important because it can be a guide to know how far the success of students in learning activities that have been done. Learning outcomes can be known through evaluation to assess and assess whether students have mastered the knowledge learned on teacher guidance in accordance with the objectives formulated. Learning outcomes are influenced by various factors, either factors that come from within the individual or internal factors as well as factors that come from outside the individual or external factors (Sudjana, 2013). Internal factors include physiological factors and psychological factors. Which is a psychological factor of intelligence, achievement motivation and cognitive abilities. Based on the three domains used in the national education system mentioned above, it can be described whether the application of cooperative learning model type Numbered Heads Together (NHT) has been able to meet the three domains in achieving learning outcomes that have been established in the national education system. From the explanation in the previous discussion, the domain of Cognitive with respect to the intellectual learning outcomes of knowledge or memory of students in the learning process. In the application of cooperative learning model type Numbered Heads Together (NHT)

obtained good learning outcomes, where students can gain knowledge not only from the teacher explanation but when students form several small groups in the thinking step together with members of the group seen that students can provide knowledge owned by exchanging opinions and discussing with members of his group.

2.5. Research questions

Based on the description of the background above, then in this study the researchers raised the problem as follows:

1. How is the process of applying cooperative learning model type Numbered Heads Together on accounting subjects?
2. How is the effectiveness of student learning outcomes after the application of cooperative learning model type Numbered Heads Together on accounting subjects?
3. How does the student response to the application of cooperative learning model type Numbered Heads Together on accounting subjects?

3. Methodology

This type of research uses Action Research with quantitative descriptive method. Classroom Action Research is action research conducted with the aim of improving the quality of classroom learning practices (Kemmis & Taggart, 1982).

3.1. Subjects and object research

Teacher Field of Study, is the subject of research as an observer in research. In addition, the research subjects are also vocational students in Surabaya. Class determination was taken using purposive sampling technique by assigning a vocational class of 40 students. The object of this research is the application of cooperative learning model type Numbered Heads Together.

3.2. Data sources

Primary data is intended as data about the use of cooperative learning model type Numbered Heads Together obtained from the learning activities undertaken by teachers and students, student responses in schools through questionnaires and student learning

outcomes obtained from the value of formative tests and the value of student tasks. Secondary data is intended as data obtained from school profiles, daily test scores or reports on student learning outcomes in the form of report cards provided by the school.

3.3. Research design

The research design used is in accordance with the Class Action Research design. In this study involved teachers, students, and observers. In this study the researcher also acts as a teacher in the class that will be studied in the study of Accounting. Action Research is implemented because it is able to offer new approaches and procedures that promise more immediate impact in the form of improvement and improvement of teacher professionalism in managing the teaching and learning process in the classroom. Implementation of data collection in this study was conducted in three cycles and each cycle in this study followed the flow of action research design. The research design used is in accordance with the Class Action Research design. In this study involved teachers, students, and observers. In this study the researcher also acts as a teacher in the class that will be studied in the study of Accounting. Action Research is implemented because it is able to offer new approaches and procedures that promise more immediate impact in the form of improvement and improvement of teacher professionalism in managing the teaching and learning process in the classroom. Implementation of data collection in this study was conducted in three cycles and each cycle in this study followed the flow of action research design.

Based on the research flow, this research is carried out with several stages: Phase 1 planning (Plan), in this stage before conducting research, the researcher formulate the problem, purpose, and make the plan. Stage 2 action and observation (Action and Observation), at this stage what action the researcher will do as a change effort made and observe the results or impact of actions that have been done by researchers to students. Stage 3 reflection (Reflection), at this stage the researcher examines, view and consider the results or impact of the action to be performed. Stage 4 revision (Revised), at this stage based on the results of reflection, the researchers made a design revision to be implemented in the next cycle. Likewise, the design on the application of cooperative learning model type Numbered Heads Together done in three cycles.

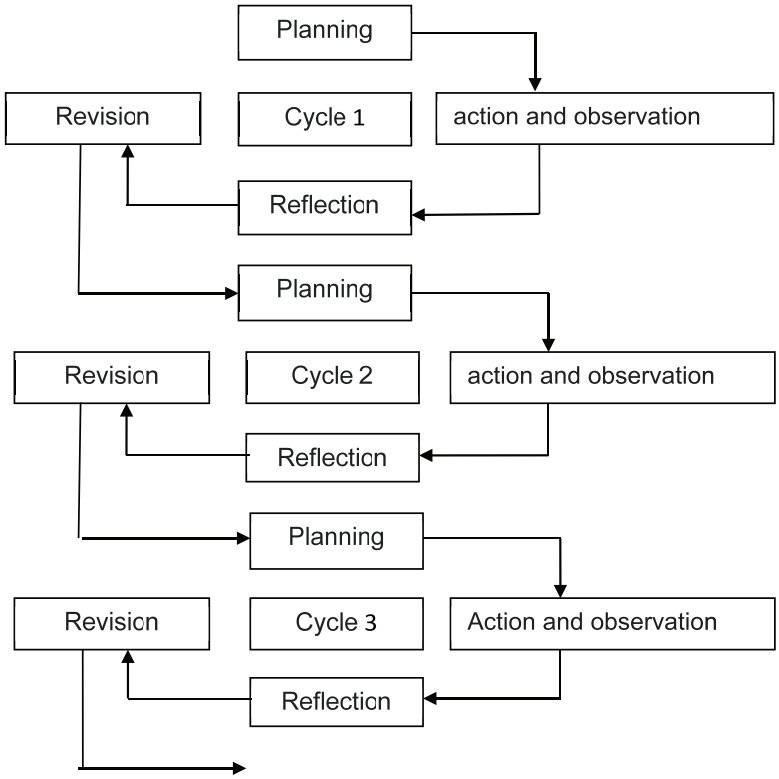

Figure 1: Classroom action research flow.

3.4. Research instruments

In this study the instruments used include learning instruments in the form of Syllabus, Learning Implementation Plan (RPP), Student Book, and evaluation questions / test sheets. The research instruments are: observation sheet consisting of cooperative learning type of Numbered Heads Together. Questionnaires to measure student responses Researchers used a Guttmann-scale questionnaire that was made in multiple choice and could also be made in a checklist. Respondents' answers can be the highest score is worth (1) and the lowest score (0). Research using Guttmann scale if you want to get a clear or firm answer and consistent to a problem that is asked. Data collection techniques used in this study is by observation methods, documents, questionnaires, and interviews.

3.5. Data analysis technique

After doing a series of data, the next step is to do data analysis. Data analysis is intended to determine the results of a series of research activities that have been done. The method used in this research is Quantitative Descriptive method. Descriptive research is used to describe the activities of teachers, students and the responses or opinions

of students in learning. While quantitative data is data in the form of numbers obtained from the value of student pre-test and post-test. Observation of teacher activity is done in accordance with the management of teachers in applying cooperative learning model type Numbered Heads Together, while the student activity is done when the learning process takes place. To analyze the results of the assessment given by observers on the ability of teachers in managing cooperative learning and student activities during teaching and learning activities used an assessment with Likert scale 1-5 (Riduwan, 2009).

Table 1: Criteria limitations of management of learning.

Score	Explanation
1	Very Poor
2	Below Average
3	Above Average
4	Excellent

Table 2: Criteria score assessment of the learning.

Score	Explanation
1.00 – 1.50	Very Poor
1.60 – 2.50	Below Average
2.60 – 3.50	Above Average
3.60 – 4.00	Excellent

4. Findings

4.1. Application of cooperative learning model numbered heads together

The third important objective of cooperative learning is to teach students the skills of collaboration and collaboration. Social skills, important to the students because today many young people are still lacking in social skills. In the above objectives are expected to appreciate the opinions of others and mutually correct mistakes together, looking for the right answer and good, by looking for sources of information from anywhere just like a book package, books in the library and other supporting books, to be assistants in searching for good and correct answers and gain knowledge, subject matter taught increasingly wider and better. Analysis of learning result data from applying cooperative learning model is as follows:

TABLE 3: Student learning outcomes.

Respondents	Grades	Criteria	Value	Criteria	Grades	Criteria
7	80	P	50	NP	80	P
8	60	NP	80	P	80	P
23	60	NP	70	P	90	P
24	80	P	60	NP	100	P
3	60	NP	80	P	90	P
33	70	P	90	P	90	P
34	60	NP	90	P	90	P
6	50	NP	60	NP	90	P
1	70	P	60	NP	80	P
2	90	P	90	P	80	P
9	80	P	90	P	80	P
35	90	P	50	NP	60	NP
36	60	NP	70	P	90	P
12	90	P	90	P	100	P
13	90	P	80	P	60	NP
14	80	P	90	P	100	P
28	80	P	80	P	90	P
29	90	P	90	P	90	P
17	60	NP	80	P	60	NP
18	90	P	90	P	70	P
19	90	P	90	P	90	P
20	90	P	70	P	100	P
38	80	P	80	P	90	P
39	80	P	90	P	100	P
15	60	NP	90	P	90	P
16	70	P	90	P	90	P
25	80	P	90	P	90	P
41	80	P	90	P	90	P
42	80	P	60	NP	100	P
21	80	P	60	NP	90	P
22	90	P	60	NP	50	NP
31	60	NP	90	P	90	P
32	80	P	80	P	70	P
4	60	NP	90	P	90	P
5	60	NP	80	P	90	P
37	60	NP	90	P	90	P
27	90	P	60	NP	90	P
40	60	NP	90	P	90	P
10	60	NP	90	P	90	P
11	90	P	90	P	100	P
mastery learning of The classroom		**65%**		**78%**		**90%**
P: Passing an exam						
NP: Not Passing an exam						

Based on the above table, it can be summarized data mastery learning students are presented as follows:

Table 4: Degree of learning.

Cycle	∑ students	∑ Students P	∑ Students NP	Mastery learning of the classroom
1	40	26	14	65%
2	40	31	9	78%
3	40	36	4	90%

In cycle 1, the test results are known that classical mastery in the class reaches 65%. Based on the provisions of the value of classical minimally is 70%, so that in this cycle 1 for classical completeness has not been achieved according to school requirements. In cycle 2, the test results are known that classical mastery in the class reaches 78%. Based on the provisions of minimal classical thoroughness then, classical completeness has been achieved in accordance with the provisions of the school. In cycle 3, the test results are known to reach 90%, then the classical completeness is also achieved according to school requirements.

Table 5: Student activity in co-operative learning activities typeNumbered Heads Together.

No.	Aspects observed	The results of the observation								
		Cycle 1			Cycle 2			Cycle 3		
		O1	O2	$\bar{X}$	O1	O2	$\bar{X}$	O1	O2	$\bar{X}$
1	Move quickly to where his group is Move quickly to where his group	2	3	2,5	2	3	2,5	3	3	3
2	Listen/pay attention to teacher or friend explanations	2	2	2	3	4	3,5	3	4	3,5
3	Reading and writing are relevant to teaching and learning activities	3	2	2,5	2	3	2,5	4	3	3,5
4	Working/discussing the teacher's questions on the questions asked	2	2	2	4	3	3,5	3	4	3,5
5	Delivering opinions	2	3	2,5	2	3	2,5	3	4	3,5
6	Ask students or teachers	2	3	2,5	3	3	3	4	3	3,5
7	Answering questions	2	3	2,5	3	3	3	3	4	3,5
8	Summarize the subject matter	2	2	2	4	3	3,5	4	3	3,5
∑		17	20	2,3	23	26	3	26	30	3,4
$\bar{X}$		**2.3**			**3**			**3.4**		
Category		Below Average			Above Average			Above Average		
Note: *O: Observer.										

Based on the above table, according to the observer activity of learning management by teacher has increased during three cycles, the management of cooperative learning model type Numbered Heads Together in cycle 1 reaching average 2.3 with good predicate. In cycle 2 the learning management reaches an average of 3 with good predicate. In cycle 3 the learning management reaches an average of 3.4 with good predicate. Providing questionnaires of student responses to learning activities by using cooperative learning type Numbered Heads Together. Student response is said to be positive if the percentage of the number of students who have an opinion with the category of happy and agree more than 80%. Based on the questionnaire results can be known how far the student response to the implementation of the implementation of cooperative learning model type Numbered Heads Together as follows:

Table 6: Student response to learning modelcooperative.

No.	Description	Satisfied	Unsatisfied
1	How do you feel during this learning activity?	95%	5%
2	What do you think during this learning activity?	95%	5%
3	How do you think of:		
	a. Subject matter	90%	10%
	b. Evaluation / quiz	90%	10%
	c. Learning atmosphere in class	90%	10%
	d. How to present the material by the teacher	90%	10%
		Satisfied	**Unsatisfied**
4	What do you think if the subject then uses this kind of learning?	80%	20%
5	What do you think if other subject matter is taught using NHT type cooperative learning model?	80%	20%

Student response analysis is distinguished based on three levels namely the level of pleasure and level of agreement at the level of pleasure almost all students express happy to follow lessons, subject matter, the atmosphere of the class until the way of presentation of the material by the teacher. At the novelty level some students also stated newly especially on how the presentation of the material by the teacher. Then for the level of agreement most students agree but nevertheless for the disagreement of applying the model to the Numbered Heads Together the same lessons as the others can be seen the percentage tends to be bigger than the displeasure and the unfavorable. Disagreements expressed by students in broad outline according to them that the cooperative learning type Numbered Heads Together there are friends who are not directly involved in the discussion. Then when applied to other learning they disagree

because if all the lessons using the cooperative learning model type Numbered Heads Together takes a long time and the students become bored when executed on each subject.

5. Discussion

5.1. The application of cooperative learning model

Planning stage is done before implementing teaching and learning process. Several things are planned in the learning process, including preparing the material that will be taught in the first cycle, namely: Trading Company and Cost of Goods Sold, and preparing syllabus research instruments, Learning Implementation Plan (RPP), pretest and posttest sheets, teacher activity in the management of cooperative learning model, and student activity sheet. Stage of action and observation, on learning activities begins by conveying the title of the subject of 'Trading Company and Cost of Goods Sold', with time provided 2 x 45 minutes. The teacher explains the learning objectives to be achieved at the end of the lesson and motivates the student by linking the initial knowledge such as providing questions about the knowledge of the trading company on the cycle. In the core activities the teacher starts learning by explaining the material about the Trading Company and Cost of Goods Sold, the students pay attention to the explanation given by the teacher, then the teacher gives the opportunity to the students to ask questions. The teacher then divides the students into seven groups, each consisting of 5-6 people. This division is based on the value of the previous subject (daily recall value) and the randomized absence number. Then the teacher assigns 1- 6 numbers to each group member. Once the group is established and conditioned, the teacher gives a different problem and asks the students to discuss the questions in their group. In cycle 1, one group answers the definition of Cost of Goods Sold price is group 1, the two groups calculate net purchases of groups 2 and 3, the two groups calculate merchandise available for sale groups 4 and 5 and calculate the Cost of Goods Sold is group 6 and 7. As students discuss in groups of teachers around to observe, guide and help difficulty students and teachers keep reminding students to perform the cooperative skills described earlier in the cycle. After the time specified for the discussion and solving of the questions given by the teacher has been exhausted, the teacher calls the number at random and the student called the number presents the result of the group discussion and is responded by another group in the enthusiastic discussion session of the student not yet visible so that at the time of discussion only certain groups responded answers

presented. The teacher gives points to the group that answers and responds to the answers that have been presented. In closing activities the teacher together students summarize the material that has been learned then the teacher gives the posttest to the students. The reflection stage, in accordance with the description of the action and observation that in the introduction the teacher conveys and explains the material taught and conveys the objectives clearly and in detail. Teachers provide motivation to students so that students can open the insight they have with the plus picture directly in the real world given by the teacher. In the core activities of time taken to explain the material long enough because the material given new so that students ask more, then the teacher divides the students in some groups, the time is much because the teacher should arrange students to hold the discussion calmly, the teacher should give much clues to students because students are still unfamiliar with learning cooperatively. Teachers are skilled enough to guide students in their groups and guide students in presenting random discussion results but students are still less enthusiastic in responding to other group responses. Teachers are very open to students when students find it difficult to understand questions to be solved as well as clues that students do not understand. In the learning process both when explaining and discussing the teacher monitor the students in each group as well as performing the final assessment. At the end of the learning the teacher concludes and ties the material that has been taught with the problems that have been discussed this gives the students encouragement to ask so that there is feedback between teachers and students. Furthermore, the teacher gives the test sheet individually done. During the learning activities irrelevant behavior arose during group discussions. Based on the above description can be drawn conclusions about the deficiencies that must be improved from cycle 1 to the next cycle, among others: a. Lack of explanation given by the teacher, so that students still often ask about the learning. b. The role of teachers who are still dominant in organizing students into groups, presenting material, and guiding students so that learning activities are still focused on the teacher. c. Students are still confused with the learning that is being done. d. In summarizing the teacher's material is still less so that at the end of the learning students often ask about the material. e. In the process of discussion students' ability in question is still very less. f. In summarizing the material the students are still unable to grasp the explanation from the teacher. g. Student learning completeness in class still need to be improved, because still under the criteria of completeness established by school. The revision stage, referring to the results of the explanations in the reflection, the revisions that teachers need to make easier for organizing the students should be more emphasized and clarified about the instructions to be done in cooperative learning

so that they can be responsible for their respective groups. Teachers should motivate students more about the importance of asking and responding in cooperative learning. Teachers provide motivation in the form of awards for students' activeness during the learning takes place. Teachers provide more guidance on the material to students who have not completed their study independently. The analysis of student responses is differentiated by three levels: the level of pleasure, the level of novelty, and the level of approval at the level of pleasure almost all students express happy to follow lessons, subject matter, and classroom atmosphere to the way of presentation of material by teachers. At the novelty level some students also stated newly especially on how the presentation of the material by the teacher. Then for the level of agreement most students agree but nevertheless for the disagreement of applying the model to the Numbered Heads Together the same lessons as the others can be seen the percentage tends to be bigger than the displeasure and the unfavorable. Disagreements expressed by students in broad outline according to them that the cooperative learning type Numbered Heads Together there are friends who are not directly involved in the discussion. Then when applied to other learning they disagree because if all the lessons using cooperative learning model type Numbered Heads Together takes a long time and students become bored if done on each subject, learn it independently.

5.2. Effectiveness of learning outcomes

In cycle 1 known mastery learning of individual has been achieved by 26 students with the completeness criteria of at least 70 in accordance with applicable provisions. For individual accounting subject's minimal mastery is 70, while the unfinished student is a number of 14 people with a value under 70. Meanwhile, for classical completeness in the class reached 65%. So in this cycle 1 for the classical completeness has not been achieved according to the provisions of the school. In cycle 2 known mastery of individual has been achieved by 31 students with the completeness criteria of at least 70 in accordance with the provisions. While the students who have not completed a number of 9 people with values below 70. Meanwhile, for classical completeness in cycle 2 reached 78%. So in this cycle 2 for the classical completeness has been achieved according to the provisions of the school. When compared with the cycle 1 for individual completeness and classical improvement that is in the completeness of individual increased from 28 students to 31 students, while the classical mastery of 66% to 78%. In cycle 3 individual mastery learning achieved by 38 students. Meanwhile, for classical completeness reaches 90%. Based on the provisions then, classical completeness is

also achieved according to school requirements. Based on the results of individual and classical completeness above can be seen there is an increase in mastery over each round so that generally can be said by using cooperative learning model Numbered Heads Together effective in improving student learning outcomes.

5.3. Student response to cooperative learning model

Based on the student's response, it is known that students are happy to follow the lesson with the cooperative model of Numbered Heads Together as well as for the subject matter given in this case, the cost of goods sold, income statement, capital change report, and balance sheet at trading company. For opinions during class lessons in the classroom most of the new states. At the level of novelty material the students learned that for the subject matter, the quiz, the atmosphere of classroom learning and the way of presentation of the material by the teacher most of the students stated new. Meanwhile, at the level of agreement and disagreement, most students agreed to use Numbered Heads Together for the next subject. Then for the possibility of applying cooperative learning model in other lessons most of the students agreed. From the whole discussion it can be said that cooperative learning type Numbered Heads Together on the cost of goods sold, income statement, capital change report, and balance sheet for trading companies get positive response from students. Although acceptable to most of the students, but there are states that are not happy, not new, and do not agree so in this case still need improvements so that will be accepted by students completely.

6. Limitation and Further Research

From the results of this study, it is advisable for researchers who will develop this kind of learning model in the future to pay attention to motivation to teachers. Model of cooperative learning type Numbered Heads Together requires high motivation on the teacher so that when done, then the preparation of teachers must be really mature and the classroom atmosphere becomes active both teachers and students. In order for the implementation of learning to take place well then the emphasis of the information must be clear so that the behavior is not relevant to students do not appear. Teachers need to pay attention to the selection of subject matter material that will be used in applying cooperative learning model of Numbered Heads Together type, because not all subject matter is suitable to apply cooperative learning model of Numbered Heads Together type.

7. Conclusions

Based on the results of research using the Action Research design for three cycles in teaching and learning activities with cooperative learning model type Numbered Heads Together on accounting subjects obtained conclusion that is, the application of cooperative learning model type Numbered Heads Together on accounting subjects conducted by researchers always experience grade increase with good qualification. For student activity also experienced an average increase in each cycle with Good qualification. With the implementation of cooperative learning type Numbered Heads Together learning achievement increased visible from the completeness of the classical achieved. Students' responses or opinions to the Totaled Heads Together cooperative learning activities are positive overall and this is something new for students.

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