

## The Implementation of Cooperative Learning Model 'Number Heads Together (NHT)' in Improving the Students' Ability in Reading Comprehension

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### Article Info

#### Article history:

Received May 11, 2016

Revised May 27, 2016

Accepted May 31, 2016

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#### Keyword:

Cooperative model

NHT method

Reading comprehension

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### ABSTRACT

The study aimed at describing the implementation of cooperative learning model of (NHT) at student of SMPN 2 Maros. The method used was a classroom action research in two cycles. Data were collected using the test for the quantitative and non-test for the qualitative by employing observation, field note, student's workbook, student's reflection sheet, and test of learning outcomes. The improvement of competence on cycle I was 44% that was categorized as extremely good, 56% were categorized as good, and no student was categorized as low. Cycle II, 84% were classified as extremely good, 16% were grouped as good, and no one was classified as low.

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## 1. INTRODUCTION

Language learning aims at improving the students' ability to communicate well and correctly, both spoken and written, and fostering the appreciation to the literary works. Learning activities should provide opportunities for students to practice what they learn so that they can obtain real experience, and make the learning process as a means to interact socially. Teaching and learning is the essential activity in the overall educational process. The change of students' behavior in teaching context is the clear output and attempts of teachers in teaching and learning process. Teaching is a special activity carried out by teachers to help and guide students in obtaining the changes and the skills developments, attitudes, appreciation, and knowledge [1]–[3].

Teachers have to be always creative and innovative in teaching in order to make students easier to understand the presented materials and to be enthusiastic in participating in the teaching and learning process [4]. Furthermore, the teaching activity conducted should be qualified and students' achievement is expected to be adequate. The teaching methods selected are in line with the topic lessons which will be presented due to the appropriate teaching methods applied are about to assist the success of learning objectives. Teachers play an important role in the learning process. Teachers should have the competence to enable the students.

Furthermore, an effort to manage the classroom effectively is that the mistake should be avoided by teachers are the excessive interference, imprecision in starting and ending the learning activities, irregularities, and long-winded in presenting the lessons.

Teaching process will be significant in case teachers can create learning atmosphere that can activate students to learn [5]. There are many methods that can be employed to make students active in the teaching and learning process and one of them is Number Heads Together (NHT) method. NHT method can be interpreted as the attempt conducted by teachers to engage students in teaching and learning process [6]. Teaching and learning activity with the implementation of NHT method affecting the students' outcome in the teaching and learning process [7]. The participation is manifested in the three stages of learning activities, namely program planning, implementation program, and evaluation program.

Based on the preliminary observation, it was found that 76 % students assumed Indonesian language teaching particularly reading comprehension was less interesting subject and unexciting. The students were uninterested in reading books on the Indonesian language subject for various reasons such as numerous materials, a lot of exercises to be completed, long paragraphs and difficult to understand. As a result, students got difficulty in doing exams. The data of learning outcomes evaluation in Junior High School 2 Maros, South Sulawesi, Indonesia showed the fluctuation of the students' comprehension in each subject, as well as the level of completeness.

Another problem is the students' ability in comprehending the texts to find out the main problem in the Indonesian language subject was still in a low level. Before the activity was carried out, teacher taught about the important information related to the activities that have to be done by students. Reading activity was done from the beginning to the end of the text. If they did not understand it yet, the reading was repeated several times. In the next activity, students were asked to answer the questions about the contents of the text prepared by teachers. The method used in the teaching and learning process was still teachers centered although students were in groups.

This research was conducted considerably in the form of learning improvement of Indonesian language subject using Cooperative Learning Model 'Number Heads Together (NHT) in improving the reading competence of Junior High School's students. This is similar to research conducted by Purnomo [8] using Numbered Heads Together to improve students' reading comprehension on English language subject conducted in Senior High School. Since the respondents were in a different level of formal education and the subject studied in this research was Indonesian language by Indonesian native speaker was noticeably distinguishable areas of study compared to previous research.

Cooperative learning model was developed based on the learning theory of cooperative constructivist. This can be seen on one of Vigotsky's theories is the emphasis on the sociocultural nature. In the Vigotsky's learning, the mental phase is higher which generally appears in conversation or collaboration among individuals. The implication of Vigotsky's theory shaped cooperative class arrangement. Another goal of cooperative learning is to create a situation to individuals for the success fueled by the function and the role of their group to achieve the three of learning objectives, the academic ability, the acceptance of individual differences, and social skill development [9].

Reading is a language activity as the second receptive skill after listening. The transmission of information through writing for a variety of purposes is the important thing that has become a necessity. A variety of information such as news, stories, or the assortment of knowledge is very effectively announced by means of writing, namely in the form of newspapers, magazines, books, or literature. In general, the appropriate discourse which is taken as the test of reading ability is not really different with the test of listening ability. The selection should be considered in terms of difficulty level, short and long, content, type or form of discourse. The external factors are divided into two categories, namely the elements of reading and the reading environment. The elements on reading or textual features include linguistics text (difficulty of reading material), and the organization of text (the available help in the form of chapters and sub-chapters or organization of writing). The quality of environment includes: the preparation of teachers before, during, or general atmosphere of task completion (barriers or encouragement). All these factors are not mutually exclusive, but interrelated. The taxonomy of Burret is the taxonomy specifically which was created to test reading comprehension. Robinson [10] states the level of reading comprehension based on taxonomy of Burret in reading comprehension, namely literal comprehension, reorganization, inferential comprehension, evaluation, appreciation.

## 2. RESEARCH METHOD

The research used the classroom action research. The phases of implementation of the research consisted of four components. The four components were planning, action, observation, and reflection. Furthermore, the four components were linked in a cycle of activity. In brief, the steps taken by the teacher was to deliver the objectives and to motivate students, to provide information, to organize students into study groups, guide group work and learning, evaluate, and give reward. Teaching and learning using NHT method was started with numbering. The teacher divided the class into small groups. Each person in each group was numbered according to the numbers of members in the group. Once the group was formed, then the teacher asked some questions to be answered by each group and provided the opportunity for each group to find the answers. On this occasion, each group brought together "Number Heads Together" to think and discussed the answers.

The next step, the teacher called the students who had the same number from each group. They were given the opportunity to give answers to questions received from the teacher. The work was ongoing until all of the students with the same number from each group got a turn to present the answers to the teacher. Based on the answers, the teacher could develop a more in-depth discussion, so the students could find the answers to these questions as the intact knowledge. In applying the cooperative method 'Number Heads Together' (NHT), the teacher was only a facilitator and the students more fully participated in learning.

The process of implementation was conducted gradually until the research was successful. The procedures started from (1) action planning, (2) action implementation, (3) observation and evaluation, and (4) analysis and reflection. This research sited in SMP Negeri 2 Maros located at Jalan Dr.Ratulangi No. 68 A Bontokapetta Village, Lau District, Maros regency. This research was conducted in the second semester of academic year 2012/2013 from February to April 2013. The subjects were the students of class VIII D at SMP Negeri 2 Maros totaling 25 people, consisting of 10 male students and 15 female students. The research procedures were to plan action and to act planning. The sources of data in this research were the Indonesian teachers who taught in class VIII and class VIII D at SMP Negeri 2 Maros, Academic Year 2012/2013.

The data of the research were in the form of observations based on the findings in the field, that is the implementation results of the learning process of reading comprehension with NHT method, the results of the students in the group to read the text through worksheets, the documentation of lesson plan, and the record toward learning implementation of reading comprehension skills with NHT cooperative model. The data includes the data implementation and evaluation of the students' ability to read comprehensively the contents of text. The students' reflection sheet was a sheet used to obtain the data or to obtain clarification from the students about the data that were considered not clear yet. This format was also used to obtain the data on students' responses to the learning process implemented. Students' worksheet was the format used by the students to practice writing the answers from reading the content. This format was used in the teaching and learning process in the classroom, while the assessment format of the students' work was the students' final test results, in the form of individual test based on the quotes of reading that was discussed previously and the anew reading quotes that can measure the implementation of the implementation of the method NHT. This format was used to obtain the data on learning outcomes at each meeting in a single cycle.

The data collection technique in the research was the learning outcome test in the form of multiple choices at the end of each cycle. It was used to measure the achievement of learning outcomes or the students' reading competence after participating in the teaching and learning activities. Field notes were used to observe the implementation of NHT method. Written documents were used to acquire and to examine data in the form of learning devices made by the teachers and the worksheets in the form of the students' work in their group. Techniques of data analysis were done in three stages, data reduction, data display, and conclusion. Data reduction was the process of simplification of the data obtained through observations by selecting the data according to the needs of research. From the selection of the data, those then presented a more simple exposure (description) in the form of successive exposure data, then finally be concluded in the form of a short statement sentences and dense but containing a broad sense.

### 3. RESULTS AND ANALYSIS

#### 3.1. Results

Based on the results of the implementation of cooperative learning model 'NHT' method, first cycle took place in three meetings. From the interviews and the observations, the researcher concluded that the students did not know what they were learning. For the first meeting, most students did not understand what had been read in the learning activities. Meanwhile, the teacher as the practitioner said that he still had difficulty in applying the NHT method especially in organizing time and finding the appropriate materials for reading comprehension materials, although those had been already written in the lesson plans. It can be seen also in the field notes, the teachers were less able to manage the class and to provide evaluations and to give awards to the students. During the implementation, the record was carried out by using the observation sheet. For easing of implementation, the researcher observed the activities taking place while filling the prepared list of observations. Most students still expected help from other members of their group and they did not contribute to the group, moreover the answers were agreed in advance. Similarly with the aspects of attitude, it appeared that all of the students did not show discipline in doing the task group within the allotted time. The language politeness revealed by the students was still not good. It could be heard for the students to taunt like *dongo, tolo* (stupid) when other students asked, gave answers, or discussed in the group.

Based on the observation toward the action implementation in the first cycle, it was found that the students' learning activities with the cooperative learning had not reached the goal yet as expected. The learning implementation had not shown yet the students' participation actively in the true sense. Although the teachers had implemented coherently the stages of learning, but the students' activities were still procedural. Moreover, the students' activities in the teaching and learning process were still much more to be at the level of physical activities; on the other hand, mental activity was still not implemented optimally and effectively. Although some students had already appeared to be active in providing answers and composing texts with their own sentences, most of them still had not participate actively yet, they were somewhat difficult to read literatures (text) in the learning activities. In groups, the students less communicated to give information each other about the contents of the text. The students were still carried in the classroom atmosphere that had to be order and were not allowed to be noisy, so each one of them was reluctant to talk. As a result, the knowledge and the understanding gained were very minimal, and the process of obtaining the comprehension about developing the ability to think critically and creatively. The teachers' activities to motivate students and to give feedback were not optimal yet. It is very influential on the students' seriousness in participating in teaching and learning process. Moreover, the learning management was not in accordance with the planning expected. It was evidenced that the evaluation and the reflection activities were not implemented at the end of the learning with on the reason of insufficient time.

Various constraints in the teaching and learning process were coped with in this cycle. The suboptimal parts of the learning process were tried to be improved, while the optimal parts were maintained to support the improvements. The students listened to explanations and answered the teachers' questions excellently. The cooperation shown by the students was also very good. All of the students were active in the group activities according to the tasks given. The students' creativity looked improved from the cycle I particularly when they wrote the results of group discussion in the flipchart. The responsibilities as the members of the group also looked very good. The students in their group felt responsible for the success of the group in reaching achievement. The discipline attitude was also demonstrated by the groups in completing their tasks. The shouts of the words such as *Dongo* (stupid) were replaced by the steady, agree, and yes.

The learning process carried out through NHT method has shown the improvement toward the competence of the students' reading comprehension in the second cycle. Based on the observation of the action implementation in the second cycle, it can be said that the students' reading competence was better than in the first cycle. The findings of the research based on the reflection in the second cycle are by giving brief and clear explanation of the activities that would be carried out according to the stages of the activities in cooperative learning, the students' readiness to participate in the learning improved. The spirit and the determination to learn can be seen from the students' enthusiasm to answer the greetings from the teachers and the students' readiness to accept the lesson. The learning process took place smoothly. All of the students did activities actively in line with the expectations. This was the impact of the explanation given by the teachers before the learning process began. The students' cooperation improved. It occurred because each group was given reading texts individually before being discussed in the group. All of the students

contributed to the group in working on the worksheets, it was observed in the observation sheets and field notes. The students' creativity in completing the tasks group motivated by the availability of the tools used in the learning activities as required in contextual learning. In terms of responsibilities, each individual was responsible for the questions asked by the teachers in the implementation of NHT method.

The improvement of the students' competence in reading comprehension in the research was taken from the learning out test on the post test conducted at the end of each cycle in the form of multiple choice questions. Having conducted a comprehensive descriptive analysis of the results of the research concluded that the action implementation in stages starting from cycle I to cycle II successfully improved the students' competence in reading comprehension in the teaching and learning process. The improvement of reading competency in the teaching and learning process was also followed by the improvement of learning outcomes through the implementation of NHT methods. The score achievement is 80 KKM as the indicator of the success set has been achieved in the second cycle, both for the process assessment and outcome assessment. Therefore, the researcher decided to end the research in the second cycle.

### 3.2. Discussions

This research proved that the learning improvements occurred in all indicators from cycle to cycle. Despite the fact that in the aspect of lesson planning, the implementation of learning approaches with NHT method need to be designed carefully, especially relating to the packaging material and the preparation of the stage activities that give the students opportunities actively in the teaching and learning process. The supported facility in a school is one of the factors that cooperative learning 'NHT' model can be applied. The implementation of cooperative learning with NHT method was supported by the role of the teachers as the facilitators who managed the learning activities. The role of teachers did not dominate the class and flexible learning activities stages, as well as varied forms of activities allow the improvement of reading comprehension competence. The implementation of NHT method at each cycle show that the actions taken affected on improving the students' competence in every aspect observed, although the objectives and contents of each cycle were different. Thus, the improvement of the reading comprehension competence occurred because the remedial action was done in implementing cooperative learning with NHT method.

The trend found from the research is the relation between the improvements of the students' ability in reading comprehension through the implementation of NHT method with contextual learning techniques [11]. In answering the questions related to the text, the students were very influenced by the fun atmosphere in the class and varied activities could foster the students' spirit. The clear and complete instructions by the teachers were also the important parts in the implementation of the NHT. Giving award such of good and outstanding words, as well the acknowledgments are the parts that should not be forgotten by teachers in classroom management. The efforts made by the teachers to make the class and learning activities belonged to the students are badly needed in applying NHT method particularly on the reading comprehension aspect.

The students' activity took place in a lively and conducive classroom atmosphere. Each group understood what to do in the learning activities. The poor students could understand the content of reading if they got the explanation from the group members. The existence of awareness that the success of individual is determined by the success of the group which made the students attempted so that their group members could answer well without reading the notes. Thus it is certain that all of the students were ready to answer any questions about the content of reading. The selected reading texts were also tailored to students' knowledge and the new things that they may not know.

The implementation of cooperative learning method 'Number Heads Together (NHT)' model can improve students' competence in reading comprehension at the junior high school level by the following steps. Step one (1), teacher provided a preliminary understanding of the learning objectives on the reading comprehension covering reading extensively news and reading intensively articles, gave motivation both in the form of question and in the form statement. Step two (2), teacher presented information in the form of text news and articles taken from a variety of sources such as students' guide books, electronic books, newspapers, and the internet. Step three (3), teacher divided students into 5 groups of 5 people per group by counting and the students are given number 1, 2, 3, 4, and 5. Each group was given the name to make it more interesting. Step four (4), teacher guided all of the students in each group to think, discuss, and convince each member of the group to know the answers of the questions on the worksheets. Step five (5), the teacher called the students with the particular number, then the students whose numbers were the same raised their hands

and gave answers to the entire class. Step 1 to step 5 were performed on the first cycle although it was not optimal.

The next step was the step six (6) in which the teacher distributed sheets of paper and asked the students to rewrite down the answers to each question asked in the worksheets. Step seven (7), the students exchanged the group's works with the large sheets of paper with another group to correct each other. Step eight (8), teacher provided reinforcement and feedback on the students' works. Step nine (9), the students displayed the result of group works on the classroom wall. Step ten (10), teacher gave award to the students in the form of smiles on the students' works displayed. Steps 1 through step 10 were done on the second cycle. The Learning steps performed in the second cycle had followed the steps of contextual learning activities that always emphasize the cooperative learning activities. The students were not only divided in groups but were also facilitated, directed, and supervised by teachers at every stage of learning to construct their own knowledge belonged and acquired.

The data of test result in the first cycle and second cycle show that the students' competence in reading comprehension are higher through the implementation of varied NHT method. The students' ability to answer final test in each cycle improved from cycle I to cycle II. There was even one of the students getting the perfect score of 100. The research found that in order to gain correct understanding in reading, a reader should take advantage of the information he/she has. The information obtained from the results of previous readings and other information sources. The perfection of the students' reading results can improve in each cycle because the students were able to connect new information contained in the text by thinking together in a group and to make sure each member of the group understood the information in the text [12].

The implementation of cooperative learning model 'Number Head Together (NHT)' apparently improved the students' competence in reading comprehension [13]. In the teaching and learning process, the students seemed happy and excited so that they became active and creative. This happens because in the cooperative learning model 'Number Head Together (NHT)', the number of members consisted of 3 -5 people. The Grouping of the students could encourage their involvement in the teaching and learning process. The achievement of success indicators in the second cycle was able to improve the students' competence in reading comprehension. The students were able to find the main information and additional information. The information obtained can be an issue in a discussion.

Finally, it can be concluded that the implementation of learning models 'Number Head Together (NHT)' improved the junior high school students' competence in reading comprehension through action research. This research showed that the learning improvement on aspects of participation, creativity, responsibility, and attitude toward learning the Indonesian language which was indicated by good and very good category. Since the Indonesian language subject as native language for respondents, it was considerably easier for students to understand. This research proved different results compared to previous findings by Purnomo [8] who conducted research using Numbered Heads Together in improving students' reading comprehension on English language subject that learning improvement was effective on merely participation aspect.

#### 4. CONCLUSION

Based on the analysis, discussion, and the proof of research the results conducted, it can be concluded that the implementation of the Number Heads Together (NHT) method improved the competence in reading comprehension in the aspects: (1) find the main problems, (2) distinguish between fact and opinion; (3) identifying information, (4) find key information, and (5) formulate the problem from the main problems. Besides, the improvement of learning activities with good and very good category in all aspects observed, namely: (1) participation, (2) cooperation, (3) creativity, (4) responsibility, and (5) the students' attitude in learning the Indonesian language. Based on these findings, it is suggested that language teachers use cooperative learning model 'NHT' to improve students' competence in reading comprehension in learning the Indonesian language.

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