Improving students' reading comprehension through cooperative learning strategies using numbered heads together

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ABSTRACT

This research aimed at improving students reading comprehension through cooperative learning strategies using numbered heads together in MTs Ma'arif 2 Muntilan. This was classroom action research with 3 cycles. There were 4 steps in conducting the research; (1) Planning; (2) Acting; (3) Observing; (4) Reflecting. This research involved 27 students of eight graders. The instruments used in this research were observation, interview, test (pre-test and post- test), field-notes, questionnaire, and documentation. It was found that the students' average score in pre-test was 46, the first post-test was 59. The second post-test was 81 and the third post-test was 94. It meant that the post-test was higher than pre-test. Besides, the students also had been well interested during the learning process in each cycle. In conclusion, the findings of this research showed that through CL strategies using NHT could improve the students' reading comprehension. Hence, it is recommended for the further researcher to use NHT as an alternative strategy in improving the students' reading comprehension.

1. Introduction

Time travels continuously which brings different eras that have their own characteristics on each. Nowadays, we live in the modern era, which are so many technologies and facilities can be accessed to fulfill the continuity of our life. All of the aspect is always renewed, transformed and improved. Similarly with the teaching program, it is the time to change and enhance our capacity to make students more interested in learning; especially in English subject; it is to be the one of important things in the world that should be taken note as Crystal (2000) says "English is a global language" (p.1). It means English is used to exchange the information by people around the world as the medium of interaction.

English in Indonesia is still used as foreign language; therefore our government policy remarks the English program to be a mandatory in this era of communication and globalization. According to Widyaiswara (2014) argues about English is decided as foreign language that was learnt in junior and senior high school in 1967 with the purpose is to give opportunity to the students in accessing knowledge and technology to strengthen the international relationship. It means the function of English in junior high school as an organ of capacity build-up students in science, technology and arts.

The purpose of teaching English language in the school is to develop the students' language skills. There are four major skills that should be mastered by students in learning English such as listening, speaking, reading, and writing which all of them is to develop the learners' ability and skills.

One of the skills that cannot be neglected is reading skill because the success of their study depends on the greater part of their ability to read. Therefore, reading is essential not only to get the information but also to comprehend the text. Reading is always involved in examination, either midterm or final term; we can find almost of the question in the exam is testing the reading skills.

Although students have received English subject since they are in elementary school and learn with more time allocation in junior high school, based on observation when doing preliminary study in MtsMa'arif 2 Muntilan, the student had difficulties and weaknesses to understand the contents of reading and information in reading. The fact was based on the result of examination that many students failed in reading section. This situation was caused by the students who were not able to comprehend the reading text. The problem can be indicated by some factors. One of the factors is learning strategies in which the teacher less developed the learning model/ method maximally to enhance their reading skills.

Moreover, the researcher found in MTs Ma'arif 2 Muntilan the learning process was still monotonous. It was less variety of learning process; made the students uninterested and unmotivated to study because of the activity always same. Besides, the students did not get the benefit of learning English that caused their reading comprehensionis low; they only asked to read the LKS book in order it made the student got difficulties on comprehending the reading text so that it is not effective. Menges and Weimer (1996) as cited in Tsay& Brady (2010: 8) states that "active learning in the context of higher education is often a social and informal process where ideas are casually exchanged through student involvement and intellectual and interpersonal activities". The statement means, to make the students in the process of learning can be active and get them motivated in the classroom, the teacher should be creative to make the learning process activities. So, the students can cooperate in help each other.

The concepts of teaching and learning should tell in wide of the effective teaching and learning process. Sequeira (2012) argues "the modern teacher is a facilitator: a person who assists students to learn for themselves. Instead of having students sitting in rows, they are likely to be in groups, all doing something different; some doing practical tasks, some writing, some not even in the room but in another part of the building using specialist equipment or looking up something in the library" (p. 4). She argues that, a teacher is facilitator to guide the students in learning process in giving them tasks.

Arguing this issue, the researcher develops the post method in teaching reading comprehension which is appropriate with the condition of students so that the students do not get bored when learning.As Slavin (1995) explaines "Cooperative learning has been suggested as the solution for wide array of educational problems; it is to encourage students to interact with each other" (p.2). Cooperative learning means of emphasizing thinking skill and increasing higher in order learning as an alternative to be able to be in form of grouping and remediation; it can improve race relations and as a way to prepare students for increasing work force collaboratively, like in 2013 curriculum which focuses on morality, responsibility, religiosity, etc. Such as mentioned in Ministry of Education and Culture 2012 (as cited in Ahmad, 2014, p.7) "The main purposes of this curriculum are to shape the individuals who are faithful in God, good in characters, confident, successful in learning, responsible citizens and positive contributors to the civilization". In line with Cooperative Learning which has five pillars learning out comes based on Johnson, Johnson and Smith (1991) as cited in Jones A and Jones L (2008) which is included: " positive interdependence, promotive; face to face interaction, individual accountability, social skills and group processing" (p.62).

Based on the explanations above, the researcher implements Cooperative Learning strategies using numbered heads together models. Cooperative learning strategies using numbered heads together is assumed can increase the students' comprehension by making the process of learning being active. The word "active" means the students can involve each other in their learning activities because the learning process in MTs Ma'arif 2 Muntilan is passive and monotonous. This research uses Numbered heads together strategy which is done by giving each student a number. Yet, beforehand they have known; only one student will be called to represent their group. After that they share the information about the right answer to their group members then from this they will not be afraid whose number will be chosen.

In conclusion, the implementation of Cooperative Learning strategies using numbered heads together can solve the students' problems in comprehending the material on reading text at MTs Ma'arif 2 Muntilan because it has strong effects on student learning, as well as other positive outcomes in the academic, social, affective and psychological. It can be applied for any subject and all levels in the school.

2. Method

The design of this research is classroom action research (CAR) which aimed at improving students' reading comprehension through cooperative learning strategies using numbered heads together at MTs Ma'arif 2 Muntilan. It was chosen because it provided a method that could be done by the researcher to identify a problematic situation and the problems students face. The subjects of this research were the students for second grade (VIII B) at MtsMa'arif 2 Muntilan which consisted of 27 studentsin academic year 2015/2016.

Action research is a way of improvements and changes in educational practice by studying the issues. According to Ferrance (2000) "Action research is a process in which participants examine their own educational practice systematically and carefully, using the techniques of research" (p.1). It means, in doing action research we need to be carefully to choose the steps in order to make it successful. In addition, the definition of action research that is taken from Carr and Kemmis (1986) as cited by Riding, Fowell and Levy (1995) they state that "All adopt a methodical, iterative approach embracing problem identification, action planning, implementation, evaluation, and reflection". It means this research consists of four major phases; the first is planning the theory formulation, the second is action what intervention is carried out, the third is observation of the data collection of intervention and the forth is reflection of the data analysis.

In drawing the conclusion of research, it was made from the data getting on the research instrument. Thefirst, researcher collected the result of the interview and observation to describe what happened in the teaching and learning process. Itwas in form of observingtheteacher, observingtheclassroomand observingthestudents. Second, to find out whether the student's reading comprehension improved or not after treatments the researcher collected the result of test, both pre-test and post-test in each of cycle based on the students' score. Third, in analyzingthestudentsinterestheresearcherdistributedthequestionnaire. Then, After all of data were collected, the researcher analyzed it to find out the result.

In this research procedures, the researcher used Carr and Kemmis (1986) ideas which includes planning, acting and observing as well as reflecting.The first steps is planning, In this stage, the researcher carry out the problems that appear in reading comprehension by giving some question to the English teacher (interview), observe the students learning process. Before giving the treatment to solve the problems which are faced by the students, the researcher was given the pre test first. It was purposed to measure the students' reading comprehension. Besides that, to maximize the classroom action the researcher was prepare the instructional planning for overall session such as the designing teaching lesson plan, adapting syllabus for learning, deciding the topic for the first and second cycle, preparing the teaching aid such as reading text that used for the first, second cycle and third cycle, making post tests in the form of question and answer sheet at the end of each session.

The second steps is action, it was the implementation of previous planning. Action refers to what the researcher really was done in the classroom setting during the processes of teaching reading through cooperative learning strategies using numbered heads together. There were three phases what the researcher was done in very session namely pre-activities, while-activities, and pots-activities. The teaching learning activities started with pre activities. In this phase the researcher was greeted the students, checked their present list, gave motivation and try to introduce the general view of the material. The second phase was while activities, the research given the reading text to the students and asked them to discuss and did the task in group based or reading text was given. In this phase the researcher was use numbered heads together reading strategies to teach reading comprehension. In this phase the researcher was divided it into three categories, the first category was exploration, gained information from the students about the material which would discussed. In here, the researcher was taught narrative text. Second category was elaboration, consisted of giving explanation about the material. The last category was confirmation; in this step, the researcher used numbered heads together

reading technique in teaching reading comprehension by giving opportunity to the student to read and learn the text in their group.The last phase was post activity. The researcher concluded the material and asked them to answer the question based on the number that researcher was chosen.

Then, the third steps is observation, it was done while the researcher was teaching to see whether the technique could improve the students' ability or achievement in reading comprehension. It is mainly intended to know if there are any chances of students' behavior, attitudes, and motivations in learning and practicing reading and they are certainly reflected through their activity and creative participation and involvement in reading English. This step, the researcher tried to know or find out what happened in doing action in the classroom. Then, the researcher observed the class activities to find out the problem, students interested and problems while learning process.

The last steps is reflection, In this action research, reflection purposed to know whether the students understood the material which are given on the basis of teaching reading through numbered heads together strategies. The present classroom action study was divided into two cycles where each cycle consists of two seasons and the total tests got four. The research evaluated the result of learning process to get feedback whether it runs well or not. Besides that, the researcher analyzed pre-test and post-test to know their scores whether it increased or not. The result of the entire reflection in cycle 1 used as a feedback and basis plan and carried out the action in cycle II in a way to improve. The point of reflection was looking at the result in the first cycle; the researcher revised the weaknesses of the planning in the first cycle through making a new teaching scenario. The teaching scenario formulated might solve the problem which is evident in the first cycle. In the cycle two, the cycle process is not too far from the first cycle.
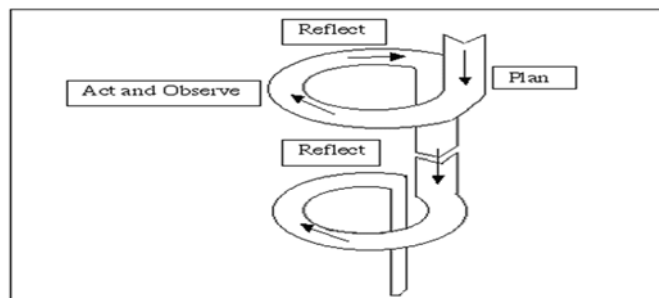

Fig. 1. The Action Research Cycle (McTaggart et al., 1982)

To analyze the data, the researcher collected the result of test, both pre-test and post-test to find out whether the student's reading comprehension were improved or not after treatments based on their score. Then, after all of data collected, researcher was analyzed and calculated from the result of observation, in-depth interview, and the result of both pre- test and post- test. In analyzing the result of observation, the researcher was used field- notes. While, to analyze the result of interview, the researcher categorized the students' answers and majority answers. Then, choose the data based on categorization that was taken from observation, interview and result of pre- test. If the result of post-test is higher than pre-test, it implies that Cooperative Learning strategies using numbered heads together could be effective to be used as a method to teach reading.

In analyze the quantitative data; researcher was used statistics descriptive with the conclusion based on the students mean score. Mean is the average data that is get in form of numeral. According to Sutrisno (1998) "mean is the total of scores divides with the total of person". from the explanation the researcher will use formula of mean:

$$\bar{x} = \frac{\Sigma X}{N}$$
(1)

Notes:

$\bar{x}$: Mean

∑X : total students score

N : total of students

After that, the resulted of qualitative data connect with the answer of the problem. As the criterion for success, researcher will use Kriteria Ketuntasan Minimal (KKM) that was decided by the teacher (75).

Then, from the data students interest for each cycle it was calculating with total score based on scale that used. The scales used are not agree, doubtful, agree, very agree. After that, it will change to be percentage (%). To know the students reading comprehension are interest or not the percentage of students interest compare with cycle I, cycle II and cycle III. The comparison of interest can be get because the interest instrument that used is same.

3. Findings and discussion

Based on preliminary study, it reviews the identification of the field problems and the actions to solve the problems. In this part the researcher collected the data by using interview, observation and pretest. The followings are the detail explanation of this research.

Table 1. Field problems in the English teaching and learning process in class VIII B of MTs Ma'arif 2 Muntilan

No.	Problems
1.	The students were not interested in the material given by the English teacher.
2.	The teacher could not create interesting reading activities.
3.	The students got bored with the classroom activities.
4.	The students lacked vocabulary mastery in understanding texts.
5.	The students were passive during the English teaching and learning process.
6.	The teaching and learning process was dominated by the teacher.
7.	The teacher did not use any interesting media to engage students with the lesson.
8.	The teacher did not give interesting materials.
9.	The materials were mostly taken from text books and *LKS*.
10.	The teacher only focused on translating when he taught reading to the students.
11.	There was a lack of variation of the teaching strategies in reading.

Pretest Result

$$\overline{X} = \frac{\Sigma X}{n} \tag{2}$$

Where,

$\overline{X}$: Mean

ΣX : total students score

N : total of students

(Taken from Sutrisno (1998)

$$\text{So, } \overline{X} = \frac{1160}{25} = 46 \tag{3}$$

The Result of Cycles

- Cycle 1

$$\overline{X} = \frac{1599}{27} = 59 \tag{4}$$

The mean score of post test Cycle 1 was 59

- Cycle 2

$$\bar{X} = \frac{2184}{27} = 81 \tag{5}$$

The mean score of post test Cycle 2 was 81

- Cycle 3

$$\bar{X} = \frac{2435}{26} = 94 \tag{6}$$
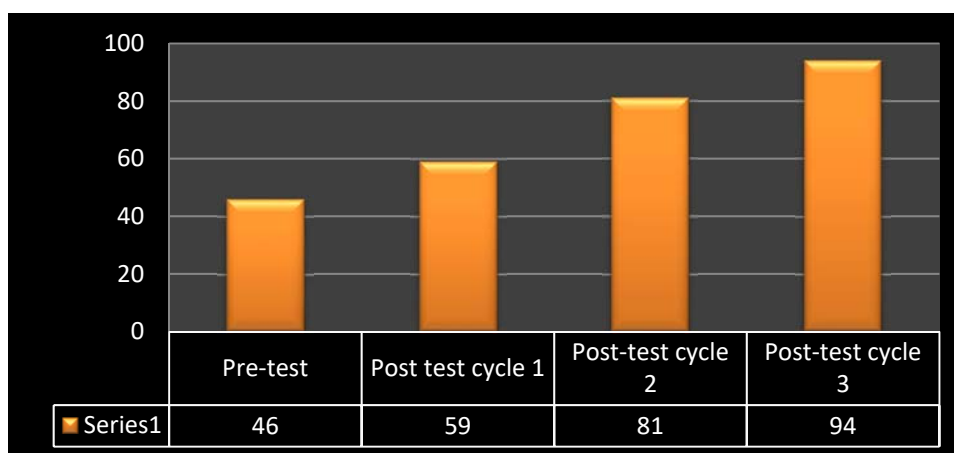
The mean score of post test Cycle 3 was 94

	Pre-test	Post test cycle 1	Post-test cycle 2	Post-test cycle 3
Series1	46	59	81	94

Fig. 2.   Figure of improvement the students' reading comprehension

Comparison between Each Cycle

In Cycle 1, the implementation of numbered heads together was successful to improve students' reading comprehension ability and involvement. Numbered heads together gave students situation which could make them active in the process of teaching and learning of reading. They were trained to perform mutual interaction with the students and the teacher. They were given opportunities to share ideas and knowledge about the materials to the other students. Besides, the use of interesting media and reading activities also supported the success of Cycle 1. However, there were still some problems occurring in implementing the actions related to the students' reading comprehension ability, motivation, and involvement. Therefore, the researcher tried to solve the problems so that in Cycle 2 the students' reading comprehension ability could be improved successfully. The researcher also giving reward to the best group in form of dictionary improved the students' motivation to read English texts and participation during the teaching and learning process.

Cycle 2, the activity helped the students in understanding the narrative text since theycould ask their friends in the same team if they did not understand. By workingtogether with their friends, they could avoid the confusion as they could discusstogether. This activity also aimed at ensuring the individual accountability. The students, who in Cycle I always made some noise, tried their best to be able toready and answer the questions when the researcher called them. It can be seen on interview transcript (Appendix). From the interview the students enjoyed the activity because they could help one another in order to achieve the common goal. The collaborators and the researcher observed them when they conducted the activity.   Besides, the researcher could manage all students during the cooperative learning strategies using NHT. The students who always made noise during the Cycle I,

in the Cycle II could cooperate with the group since the researcher changed the sitting arrangement of these students. The changing of the sitting arrangement had made these students more concentrated with their own group. They stopped joking with other students and started to pay attention with the lesson. In order to optimize the role of individual in the group, because the implementation of NHT is more cooperative learning activity that requires the individual contribution in the group that followed by individual.

In order, the researcher also give reward to the best groupto make the students' participation during the English teaching and learning process, the rewards were given had successfully encouraged the students to do their best. Their involvement to ask and answer questions increased. When this action was done, there were more active students. They were more motivated in reading English texts. They competed in worksheet to get reward asthe best group. The reward was also given to the student who showed good cooperation and good achievement during the lesson.

The Students' Interest in Learning Reading Through CL Using NHT

The additional data required for the present class action study were collected through administering questionnaire to the subjects under study at the end of cycle. The questionnaire was used to know the students' response toward the implementation of numbered heads together in the teaching learning process. It consisted of ten items of statements. The answers to the questionnaire were qualitatively scored using rating scale 4-1. The score gathered from administering questionnaire showed the subjects' changing attitude and motivation in reading comprehension through CL strategies using NHT.

The first and the second questions asked about English in general. First question asked about the likeness in English subject; in cycle I there was 63% the students like English subject, in cycle II it was only improved 64% and in cycle III it was significantly interested 79%. Then, second question asked about the important of English. In cycle I there was 74% students' answer it is important; in cycle II 77% they feel it is important while in cycle III they feel it was important 85%.

The third question asked about the reading comprehension, there was 74% the students like reading comprehension in cycle I; the liked of reading comprehension was 77% in cycle II then cycle III to be 85% they liked reading comprehension.

The forth until ten questions asked about the using NHT strategy in learning English; especially reading comprehension. The result of forth question in cycle I was 75%, cycle II 79%, cycle III 83% it is asked about their satisfying in learning English using NHT strategy.

The fifth question talked about the liked on comprehending the reading using NHT, there was 73% they liked it in cycle I but in cycle II they decreased to be 72% after that in cycle III they feel liked was 79%.

The sixth question asked about how far using NHT can help them on comprehending the text in English. The students answer 79% in cycle I, then in cycle II they answer 74% and in cycle III the result was 79%.

The seven question asked about the learning using NHT can motivate them. The result in cycle I and cycle were same 70% they feel could motivate and in cycle III they answered 78% was motivated them in learning.

The eighth question asked about their involvement in learning using NHT. There was 70% in cycle I the students' involvement in teaching and learning, in cycle II the result was 73% and cycle III was 78% their involvement.

The ninth question asked about the teaching reading comprehension by the teacher before. In cycle I there was 81% then cycle II was 78% and cycle III was 75%.

The last question asked about their opinion about the appropriately of using NHT in learning reading. In cycle I they feel 79% appropriate for easier them in reading, cycle II got 77% and cycle III got 79% for it.

In conclusion, by seeing the students' response that was distributed in questionnaires the students' likeness in English subject from cycle to cycle is improved. Then, each of cycle they also improved their satisfying in learning English using NHT strategy; especially reading comprehension.

4. Conclusion

Based on research finding as written above, the classroom action research in improving students reading comprehension through cooperative learning strategies using numbered heads together in MTs Ma'arif 2 Muntilan can be concluded as follows. First, the English reading comprehension of the eighth grade students of MTs Ma'arif 2 Muntilan could be improve through cooperative using numbered heads together. The improvement of teaching strategy could be clearly seen by comparing score of pre-test to post tests in cycle I, cycle II, and cycle III. The mean of pre- test that was gathered from 27 students was 46. This data obtained before the researcher applied NHT in teaching reading. After that, the mean score improved to 59 in cycle I. While after following the second cycle treatments the students' mean score increased 81 of achievement. Then, the next following third cycle increased enormously to 94. As a result, it could be concluded that NHT could improve the reading comprehension of the eighth grade students of MTs Ma'arif 2 Muntilan.

Second, the questionnaire that the researcher had given to the subjects under study showed the students' positive changing learning behavior. The interest of the subjects understudy to learn English especially reading comprehension was increased by the use of NHT. It was supported by requiring data from the questionnaire item to the subjects.

Acknowledgment

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