

IMPROVING THE STUDENTS' READING COMPREHENSION THROUGH NUMBERED HEADS TOGETHER TECHNIQUE

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Abstract: The method applied in this research was a classroom action research. After three cycles consisting of two meetings each were conducted, the appropriate model of NHT technique in teaching reading encompassed the following steps: (1) leading students to the topic by giving some questions and/or showing a picture(s), (2) connecting the topic with the students' real experience, (3) introducing the topic and explaining the instructional objectives, (4) assigning students to predict the words used in the text, (5) informing students about the things they should do in their groups, (6) reading the text clearly, loudly, and slowly and asking some students to re-read the text, (7) clarifying the difficult words and discussing the words the students have predicted, (8) asking students to predict the content, (9) giving individual task to the students, (10) assigning students to put their heads together and discuss the answer they have done individually, (11) checking the groups' answers, and (12) asking students to conclude the lesson. The finding showed that NHT technique was successful in improving students' reading comprehension. The improvement could be seen from the increase of students' average reading scores. Besides, the finding also showed that NHT technique was effective in enhancing the students' participation, especially in raising their hands competitively to answer the questions during the answer-checking session.

Key words: NHT technique, improve, reading comprehension

Reading is an activity to understand what the text contains. As one of the language skills, reading contributes to the success of language learning together with the other skills. Reading enables students to find out information from an array of texts, ranging from textbooks, newspapers, magazines, advertisements, brochures, and the like. Reading also enables students to know how English is actually used in printed and written forms. According to Harmer (1998: 68) reading is beneficial not only for careers, study, and pleasure, but also for language acquisition. He further states that reading provides good models for English writing and offers

opportunities to study language: vocabulary, grammar, punctuation, and the way we construct sentences, paragraphs, and texts.

The National Research Council (in Almaguer, 2005) found that reading is essential for success in our society. Reading is also central to a child's experiences in school and in everyday life. As an important activity in the language classroom, reading is taught most compared to other language skills. Most English tests are therefore in the form of readings. Even though reading is dominant in English classrooms, the result of students' reading test is still unsatisfactory. An obvious evidence of this can be observed from the result of the Na-

tional Examination. Dealing with the reading texts, still, a great number of students fail to achieve the expected minimum score set by the National Education Department for the English subject (Jurnal Gentengkali, 1999).

Students' difficulty in comprehending the text might not only be seen in the result of the National Examination, but also in other reading tests such as in the summative test, mid semester test, or formative test. In these tests, still, many students fail. This happens to be the case found in SMA PGRI Mojosari where most students still encounter difficulty dealing with English reading texts. Accordingly, the students' reading achievement is not satisfactory. There are some problems that underlie the unsatisfactory result of students' English reading comprehension. First, the strategy the teachers employ is basically teacher-centered where teachers dominate the class instruction. Besides, the method usually utilized by the teachers is somewhat conventional, like the Grammar Translation Method. This method is not completely bad; however, if it is used unrelentingly in all English classroom activities, it might result in a fairly insufficient outcome. Second, the teaching and learning activities are not lively. Since the teachers only look at the instruction written in the textbook, there is no apparent variation in the activities. Students are hardly engaged in interesting and various activities. Students rarely work cooperatively as they are frequently more engaged either in competitive and individual works that induce them to give up when dealing with difficult tasks. Third, students have limited number of vocabulary. If students encounter some words they do not know the meaning of, they tend to answer the question by guessing or choosing randomly if the test is in the form of comprehension questions or in the form of multiple choice. Further, they tend to ask the word meaning to other students straightforwardly or immediately look up their dictionary to get the meaning when they come across unknown new words. This

shortcoming certainly hampers students in comprehending English reading texts.

Considering the facts above, there is an urgent need to implement a strategy or technique that can help solve these problems and involve the teachers and students so that the teachers are not too dominant in the class and students can be involved in cooperative and interesting activities. By engaging students in interesting and cooperative activities, students will likely be more interested and motivated in reading as Brown (2001: 300) highlights that the "love" of reading has propelled many a learner to successful acquisition of reading skills.

There are many alternative strategies to engage students in reading activities. One of which is the cooperative learning strategy. Johnson, Johnson, and Holubec (1994) avow that cooperative learning is an instructional use of small groups through which students work together to maximize their own and each other's learning. Cooperative learning is a strategy that is now widely recognized as one of the most promising practices in the field of education. This strategy is expected to give alternatives when dealing with students' problem in reading comprehension and overcome boredom in the reading class activities.

NHT technique is one of the cooperative techniques that can be applied for an ESL/EFL reading activity (Kagan in Richard and Renandya, 2002). NHT includes a simple four-step technique that can be utilized repeatedly with a variety of curriculum materials and be applied to almost all subject areas, to every grade level, and to any places in a lesson (Olsen & Kagan in Yeh, 2004). NHT technique encompasses dividing the class into small (4 members), heterogeneous learning groups within which students number themselves (1 to 4). The number given to students is intended to help students concentrate on doing their task since they will be called upon by the teacher to give the answer based on the number they have. Next, the teacher gives questions based

on the text students read. Then, students “put their heads together” in response to each teacher’s question based on the text; come up with their best answers, and make sure that everyone on the team knows the answer. One randomly selected student from those who raise their hands then responds to each question and the teacher checks with other students for agreement. Since students are given time to discuss possible answers prior to responding, it is more likely that everyone, including lower achieving students, will know the correct responses. Moreover, since groups cannot predict who will be called upon to respond, they are more likely to ensure that everyone knows the answer.

NHT technique has several advantages. First, it can improve students’ academic achievement and be applied to almost all subject areas. According to Lai (in Yeh, 2004) cooperative learning strategies including NHT technique is helpful in fostering the four language skills, strengthening grammar and vocabulary power, and improving English competence. Second, it can increase students’ engagement. Third, it decreases dominance from clever students so that students’ equal participation will be apparent. Since students have to answer the questions, all students including the shy or weak ones should participate in reporting the answer. Fourth, it motivates students to learn. NHT can motivate students since the technique has the sense of competition and fun for students. Besides, students will be motivated because they are helped by their teammates. Being motivated, students will participate actively during the lesson. Fifth, it encourages peer tutoring from smart students who know the answer to other team members who do not. Having to tutor peers and receive peer-tutoring renders the exchange of information much more dynamic than rote memorization and individual textbook work (JALT presentation 2006 in Backwell, 2006).

Based on the above-mentioned benefits for

English learning, the researcher is interested in implementing NHT technique to improve the reading comprehension of the second year students of SMA PGRI Mojosari.

METHOD

The design of this research was Classroom Action Research (CAR) since this research was focused on the teaching and learning activities in the classroom. This action was designed to improve the students’ reading comprehension through NHT technique. The classroom action research design of this study was a collaborative classroom action research in which the researcher was assisted by one of the English teachers of SMA PGRI Mojosari.

In conducting the research, the researcher followed a number of steps. The steps included preliminary study prior to analyzing and identifying problems as the preparation, followed by Kemmis’ cyclical process – action planning, plan implementing, observing, and reflecting (Kailin, 1997).

In the planning stage, the researcher and his collaborator made a careful action preparation prior to the implementation of the action based on the result of the preliminary study. The preparation consisted of designing a suitable model of NHT technique and the lesson plans for teaching reading, developing the materials and media and determining the success criteria. The success criteria encompassed (1) the students’ reading average quiz scores were improved at least 25% from the pre-test result and (2) the students participate actively during answer-checking session. The students are considered active if 50% of them raise their hands competitively to answer the questions.

In the implementation stage, the plan regarding with the teaching and learning of reading through NHT technique was implemented after all of the preparations had been made. In implementing the action, it was decided that the researcher acted as the implementer of NHT technique in teaching reading

whereas his collaborator played a role as the observer whose job was conducting the observation during the teaching and learning process.

In the observation stage, the data gathering using reading quizzes in addition to observation checklist and filed notes were carried out. The data gained from these instruments were used to confirm whether the success criteria were conformed or not. Besides, they were also used to identify facets of the technique that needed to be modified in the subsequent plan.

In the reflection stage, the researcher made two kinds of conclusion, the each cycle-based conclusion and the final conclusion. The conclusion of each cycle was made to determine whether or not another cycle was needed while the final conclusion was made to describe the model of teaching reading using NHT technique that had been improved.

FINDINGS

After three cycles of implementation, the research finding yielded the final revised procedures of the NHT technique for teaching reading. The steps of the technique used in Cycle 2 were indeed successful in helping students improve their reading comprehension. Yet, they lacked one of the principles of NHT –individual accountability. Therefore, in the third cycle, the principle was enhanced to the initially formulated steps that finally resulted in the final steps that encompassed (1) the teacher shows asks some leading questions to the students, and sustains with the topic-related picture (pictures), (2) the teacher connects the topic with the students' real experience, (3) the teacher introduces the topic and explains the instructional objectives, (4) the teacher asks students to predict the words used in the text, (5) the teacher informs what students should do in their groups, (6) the teacher reads the text clearly, loudly, and slowly for the students, (7) the teacher clarifies the difficult words and discusses the

words mentioned by the students, (8) the teacher asks students to predict the content of the text, (9) the teacher hands out one small paper to each student and asks them to answer the questions individually, (10) the teacher asks the students to put their heads together, discussing the answers they have done individually, and putting the piece of 'puzzle' complete, (11) the teacher checks the groups' answers toward the text and (12) the teacher asks students the conclusion of the lesson they have learnt.

Furthermore, the research finding showed that the use of NHT technique could increasingly motivate and help students learn for better text understanding. This can be seen from the result of students' reading comprehension quizzes that was gradually improving. It means that there was a positive impact of NHT technique toward the increase of students' ability in answering the quiz based on the reading text. The students' average score in pre-test was 50.58; in the first quiz the average score was 60.44; the average score in the second quiz was 74.44; and the last quiz showed that students' average score was 76.23. Besides, the finding also showed that NHT technique was effective in enhancing the students' participation, especially in raising their hands competitively to answer the questions during the answer-checking session.

DISCUSSION

As one of the Kagan's structures and part of the cooperative learning strategies, NHT definitely plays a vital role in a majority of subjects – language, physics, mathematic, history, social – to mention a few. This is because its uniqueness and its adaptive, free content nature that it can be applied in a number of different subjects. Besides, it's fun, game-like procedures that induce students' active participation in the lesson. Also, the principles that it carries along are definitely helpful in social-relationship building, making students

in groups to interdependence positively, one advantage for all and all advantage for the one (group), to be individually accountable for its task, to participate equally and to interact simultaneously. Further, it is very helpful technique for students with learning disabilities (Harper & Maheady, 2007). In addition, it is in alignment with Dewey's perspectives, social interdependence theory, Piaget and Vygotsky's cognitive developmental theory, behavioral learning theory, and multiple intelligences theory.

The result of this study using NHT technique indicated that there was an increase in students' scores from 19.49% to 50.71%. The result was in alignment with the previous study results. Maheady, Malette, Harper & Sacca (in Kames and Collins, 1997) compared the effects of NHT to a whole-group questioning strategy on the social studies test performance and on-task rates of a heterogeneous group of third-graders reporting that higher score as much as 15.79% was gained by using NHT (i.e., whole-group average = 68.50% vs. NHT average = 84.29%). Then Kagan and High (2002) reported the increase of fourth grade students' scores in reading jumped from 53% to 85%, a 32% increase after Kagan's structures were applied. Maheady, Michielli - pendl, Malette and Harper (in Harper and Maheady, 2007) compared the effects of Response Cards and NHT with Whole-Group Question-Answer (WGQ&A). Results showed that pupil quiz scores were always higher under either response cards or NHT conditions. Students mean averaged 81.6% for NHT (range= 68% - 87%), 81.5% for RC (range=63% - 96%) and 73.2% for WGQ&A (range=54% - 94%). Dotson (in Kagan, 2007) conducted an experimental research at 6th grade of social studies using Kagan structures. The result revealed that higher curriculum-based assessment scores 85.47% with Kagan structures vs. 76.92% for control group. In addition, Mele (in Kagan, 2007) conducted a study in a high school by using Kagan structures for teaching

chemistry. The result of her study revealed that class averages increased from approximately 75% to 83%.

The result of this study also indicated that most low and average achievers gained the advantages using NHT. There were 22 students (76.67%) whose mean scores improved; most were average and low achievers. This result is pertinent with the viewpoint stated by Harper and Maheady (2007). They point out that students with learning disabilities benefited as much as did their normally achieving peers and improved their academic achievement by using peer-mediated technique such as NHT. In relation with students' active engagement, particularly in raising their hands to respond to the teacher's questions, Harper and Maheady (2007) reported that in teacher-directed questions to whole class, only three pupils (15%) typically raised their hands to respond. In contrast, an average 18 out of 21 students (85%) responded actively to each question when RC was used, and almost every designated team member responded actively to every teacher question when NHT was in effect (98%). This result is in line with the result of the study on the number of students, who raised their hands to respond to the teacher's questions, there were 26 out of 30 students (86.67%) who raised their hands in the first meeting, 21 students (70%) in the second meeting, 18 students (60%) in the third meeting, 17 students (56.67%) in the fourth meeting, and 25 students (83.33%) who actively participated in raising their hands to respond to the question in the fifth and sixth meeting successively.

CONCLUSION

After the NHT technique was implemented and developed through three cycles, it is concluded that the appropriate model of strategy using NHT technique in teaching reading encompasses the following procedures: (1) leading students to the topic by giving some questions and/or showing a picture(s), (2)

connecting the topic with the students' real experience, (3) introducing the topic and explaining the instructional objectives, (4) assigning students to predict the words used in the text, (5) informing students about the things they should do in their groups, (6) reading the text clearly, loudly, and slowly and asking some students to re-read the text, (7) clarifying the difficult words and discussing the words the students have predicted, (8) asking students to predict the content, (9) giving individual task to the students, (10) assigning students to put their heads together and discuss the answer they have done individually, (11) checking the groups' answers toward the text by using NHT, and (12) asking students the conclusion of the lesson.

NHT technique has been proven to improve or progress the reading comprehension in addition to enhancing the participation of the second year students of SMA PGRI Mojosari, especially in raising their hands to respond to the teacher's questions. NHT is proven effective not only because the technique has some cooperative learning-related benefits in terms of improving students' academic performance, enhancing motivation toward learning, increasing time on task, and leading to more positive social behaviors; but also because it has the sense of fun and competition, especially in the answer-checking session. Psychologically, if students feel fun about their learning, they will be more mo-

tivated to study, thus, they ultimately can achieve better.

In conjunction with the effectiveness of NHT in improving the reading comprehension of the second year students of SMA PGRI Mojosari, in the first cycle of the implementation of the technique, the students' reading comprehension score was improved, but not to the level required to meet the criteria of success. The students' average score in the first cycle was 60.44. The increase of the students' average score from the pre-test to the first quiz was only 19.49%, yet, it didn't achieve the criteria of success. In the second cycle, the students' reading comprehension was better than the first cycle with the average score of 74.44, and in the third cycle the average score was 76.23. The second quiz revealed that the students' reading ability was improved as much as 41.17% and the last was 50.71%. Most students whose scores improved were average and low achievers, whereas the scores of high achievers tended to fluctuate.

Pertinent with the effectiveness of NHT in enhancing students' participation, NHT has successfully encouraged students to actively participate in answer-checking session by raising their hands competitively. In the first meeting, there was 86.67% of students who raised their hands, 70% in the second meeting, 60% in the third meeting, 56.67% in the fourth meeting, and 83.33% in the fifth and sixth meeting successively.

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