

**A COMPARATIVE STUDY OF STUDENTS' READING
COMPREHENSION ACHIEVEMENT BETWEEN STUDENTS WHO ARE
TAUGHT THROUGH *NUMBERED HEADS TOGETHER* TECHNIQUE
AND THOSE THROUGH *PREDICTIVE READING* TECHNIQUE**

Indah Ansani Putri , Ujang Suparman, Deddy Supriyadi
Email: anshannyputri@ymail.com
Institution: University of Lampung

Abstract: The objective of this research is to find out whether there is any significant difference of students' reading comprehension achievement between the students who are taught through NHT technique and those through PR technique. The research was conducted at SMAN 1 Seputih Raman, Lampung Tengah. Two classes were taken as the sample of the research; class XI IPA 4 and class XI IPS 4. Pretest-posttest control group design was applied in this research. The result in both experimental classes showed that there was a significant increase of students' reading comprehension achievement after they were taught through NHT technique and PR technique ($p < 0.05$; $p = .000$). The data analysis showed that the mean score in the experimental class increased from 61.48 into 73.81. Meanwhile, the mean score in the control class increased from 58.50 into 66.92. It can be concluded that NHT technique is more effective to help the students improve their reading ability than PR technique is. Thus, it suggests that the English teacher should apply a technique especially NHT technique in teaching reading comprehension as one of alternative techniques.

Keywords: Reading comprehension achievement, Numbered Heads Together (NHT) technique, Predictive Reading (PR) technique.

**STUDI PERBANDINGAN PENCAPAIAN PEMAHAMAN MEMBACA
SISWA ANTARA SISWA YANG DIAJAR MELALUI TEKNIK
NUMBERED HEADS TOGETHER DAN SISWA YANG DIAJAR
MELALUI TEKNIK *PREDICTIVE READING***

Indah Ansani Putri , Ujang Suparman, Deddy Supriyadi

Email: anshannyputri@ymail.com

Institution: University of Lampung

Abstrak: Tujuan dari penelitian ini adalah untuk mengetahui apakah ada peningkatan hasil dalam pemahaman membaca siswa antara siswa yang diajarkan melalui teknik NHT dan siswa yang diajarkan melalui teknik PR. Penelitian ini dilaksanakan di SMAN 1 Seputih Raman, Lampung Tengah. Dua kelas dipilih sebagai sampel, kelas XI IPA 4 dan XI IPS 4. Desain *Pretest-posttest control group* digunakan pada penelitian ini. Hasil pada kedua kelas eksperimen menunjukkan bahwa ada peningkatan signifikan pada hasil pemahaman membaca siswa setelah diajarkan melalui teknik NHT dan PR ($p < 0.05$; $p = .000$). Analisis data menunjukkan bahwa rata-rata nilai siswa di kelas eksperimen I meningkat dari 61.48 menjadi 73.81. Sementara itu, rata-rata nilai siswa di kelas eksperimen II meningkat dari 58.50 menjadi 66.92. Oleh karena itu, dapat disimpulkan bahwa teknik NHT lebih efektif untuk membantu siswa dalam meningkatkan kemampuan membaca mereka daripada teknik PR. Sehingga, penelitian ini menyarankan kepada guru Bahasa Inggris harus menggunakan teknik khususnya NHT dalam pengajaran membaca sebagai salah satu teknik alternative.

Kata Kunci: *Pemahaman membaca, teknik Numbered Heads Together (NHT), teknik Predictive Reading (PR).*

I. INTRODUCTION

Reading is one of the important skills that are needed by the students in getting information based on what they have already read. It is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, and language community which is culturally and socially situated. Grellet (1981: 8) mentioned that reading as the process of understanding a written text, means extracting the required information from it as efficiently as possible. It also supported by Bernhardt (1991:6) in Suparman (2007:13) that quoted reading is considered as an intrapersonal problem-solving task that takes place within the brain knowledge structure. It meant that, people read and tried to understand and got a lot of information based on what they were reading.

According to Smith (1982:166) added reading is a matter of identifying letters in order to get the meaning from what is read, involving making connection among words and ideas presented in the text and the readers' own background knowledge. In addition, Rubin (1993: 196) assumed that the reading skills that are usually found in the interpretation are as follow: (1) determining word meaning from the context, (2) finding main idea, (3) reading between the lines or drawing inference, (4) drawing conclusion, (5) making generalization, (6) recognizing cause and effect reasoning, and (7) recognizing.

Based on English curriculum 2006 that is applied in senior high school in Indonesia, that is KTSP, the students are expected to comprehend the meaning of materials from various texts. It meant that to understand the materials, the students had to have the ability to look at and get the meaning of written text, that is called reading comprehension. Unfortunately, most of students still face some difficulties in comprehending texts. They had difficulties in understanding the characteristics of the text including finding detail information, identifying main idea, determining the parts of the text, vocabulary, finding references, and understanding the tenses. This might be caused by their low motivation of reading and their lack of vocabulary.

To handle this problem, an English teacher arranged the way to find appropriate technique that could be used to help students in order interest and active in teaching-learning activity. The researcher proposed NHT technique and PR technique. NHT technique was derived from the work of Kagan and introduced this model in 1992. NHT is one of the cooperative learning strategies that hold each student accountable for learning the material. According to Lie (2003: 6) stated that the students are grouped in small group and solve the problem cooperatively. It was expected that through this technique, students were able to solve the problem together and each of them had a chance to express their idea to find the best answer so the students seemed to be more active in learning. It was also supported by his study (2003: 58) that NHT will give a chance to students to express their idea and compare the best answer.

Moreover, Slavin (1999) said that when disabled and handicapped students work in mainstream and heterogeneous environments, they learn in a more productive and skillful manner. By using this technique, the students could work their tasks together to solve the problems. There was no domination student because each of them had each role in their team based on their each number. Each student answered their each work sheet. Next, they discussed their answer with their partner group to find the best answer before present it in front. This session could help student build their personal confident.

Meanwhile, According to Markstein, et al. (1982: 6) predictive reading technique is a reading technique by using illustrative material (photograph, map, and graph) and the title. In predictive reading, the students have discussed: What they think the subject is, What the picture tell them about the subject, and How they feel about the subject; taking care to examine in detail their past experience or knowledge of the subject. Based on Smith (1982: 68), the basis of learning is prediction. The students would predict the material when they did not understand the material well. From the statement above, it could be inferred that the students did prediction in every time they learned something. In this case, prediction could make the students more comprehend the material well through the pictures.

Therefore, based on the explanation above, this research was conducted in the second year students of SMAN 1 Seputih Raman, Lampung Tengah. The researcher concerned to find out whether there is any significant difference of students' reading comprehension achievement before and after being taught through NHT technique and PR technique.

II. RESEARCH METHOD

In conducting this research, The researcher used *pretest-posttest control group* design (Hatch and Farhady, 1982: 22). There were two classes of this experimental study; an experimental group which was given a special treatment by using NHT technique and control group using PR technique. Control group was needed for comparison purposes because it lets the writer interpret his findings more confidently. Both classes received pretest and posttest, and also was given three times treatment. The design can be illustrated as follows:

$$\mathbf{G1 (random) = T1 X1 T2}$$

$$\mathbf{G2 (random) = T1 X2 T2}$$

Where,

G1 : Experimental group

G2 : Control group

T1 : Pretest

T2 : Posttest

X1 : Treatment (using NHT technique)

X2 : Treatment (using predictive reading technique)

The population of this research was students at second year of SMAN 1 Seputih Raman. There were 8 classes of science class, each class consist of 25-29 students. The researcher took two classes as experimental group. The researcher selected class using simple random sampling. Those classes were selected randomly by using lottery to choose which one would be the experimental group and control group. There was no priority class. It was applied based on consideration that every class in the population had the same chance to be chosen

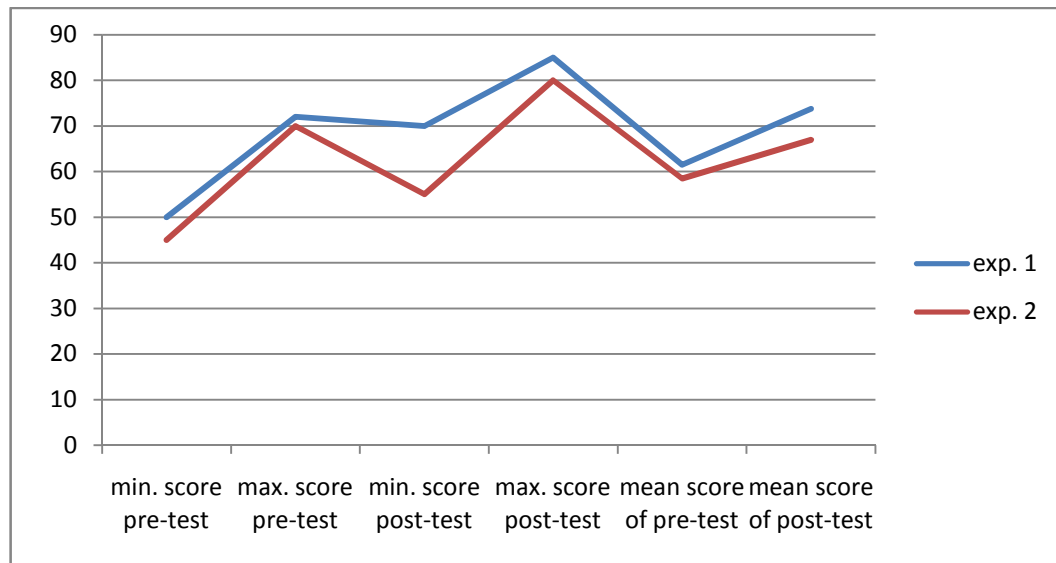
and had the same level. Besides that, the researcher considered that English is universal so there was no priority class to be sample of the research. Finally the class who used as experimental group was XI IPA 4, and control group was XI IPS 4.

The subjects were given treatment through NHT technique to the experimental class, while the control class was taught by using PR technique. The researcher gave the three-times treatment in 2x45 minutes for each treatment. The researcher administered try-out test for 50 items in 90 minutes using reading texts of multiple choices with four options (A, B, C, and D). The reading tests were tried out to the students whose level equal to the sample of the research in which the research was conducted in order to find out whether the test items were good or not in validity, reliability, level of difficulty, as well as the discrimination power. Pre-test was conducted to measure the students' reading comprehension before applying the treatments. Post test was given at the end of treatments in order to find out the development of both classes. Both pre test and post test were administered in 60 minutes with 25 items of multiple choices reading test. The result of pre test and post test were analyzed using t-test to compare the data of two mean scores (Hatch and Farhady, 1982: 108).

III. RESULTS AND DISCUSSIONS

The result of the research showed that there was a significant difference of students' reading comprehension achievement before and after being taught through NHT technique and PR technique. In the experimental group one, there was increase 333 point for the total point after being given the treatments through NHT technique. The mean of the pre test that was 61.48 increased to be 73.81 in the post test. Meanwhile, the mean score of pre test in experimental group two was 58.50 increased to be 66.92 in the post test.

The Graphic of the Effectiveness between NHT technique and PR technique



Based on the figure above, it could be seen that the students' pretest score in the experimental class was higher than those in the control class ($72 > 70$). And then, the students' posttest score in the experimental class was also higher than the students in the control class ($85 > 80$). Besides that, the mean score of pretest showed that the experimental class got higher than control class ($61 > 58$). And also, the mean score of posttest showed that the experimental class was higher than the control class ($73 > 66$). It could be inferred that the experimental class got the significance increase after taught through NHT technique. And it also showed that NHT technique was more effective to be used to teach reading comprehension than PR technique.

In additional, after conducted the post test, the researcher found out whether there was a significant difference of students' reading comprehension between those taught through NHT technique and those taught through PR technique. The two methods were concluded to have similar impacts in increasing students' reading comprehension achievement. See the questions below:

23. What did the crow do with the cockoo's eggs?
- She kicked and ate all the cockoo's eggs
 - She gave all cockoo's eggs to the traveler
 - She saved all the cockoo's eggs
 - She smashed all the cockoo's eggs

According to the question above, it found that more students in the experimental class who answered questions correctly than students in the control class. It might

be because the steps provided to students in the experimental class were more effective, such as *thinking together* and *answering*. Students were given time to think and shared deeply with their group to get the right answer. And in the *answering* session, one student presented his answer that was where they built up the confidence to express opinions, agree or disagree with their friends' answer. It was the time for them to find the best answer. This is line with the finding stated that As well as individual grades and evaluations there is strong evidence that group grades and team rewards are most successful for motivation (Slavin, 1995 in Kagan 2001). It meant that students could use their entire ability when their worked with their friend in group. Therefore, each of the students understood the text. As well as to a matter of vocabulary, the researcher found that more students in the experimental class was able to answer questions correctly. Look at the questions below:

- . 18. he synonym of the word *intimate* in the first paragraph is....
- | | |
|------------|-------------|
| a. Private | c. Serious |
| b. Close | d. Personal |

In this way, the researcher assumed that even though the students in the experimental class 2 also work as a group, but a step from the technique less effective. In PR technique learning, students were given clues by the teacher, in the form of pictures and some statements about the material being taught. In this case, the student did not fully understand the story in the text. They only understand the main of the story, but when given a text, they were difficult to interpret the vocabularies. Because of that, teachers should be more explain the material, and sometimes there was student who did not pay attention. In additional, the students could not be independent. They kept asking the teacher if they did not understand the text or vocabulary. It made PR technique was not as effective as NHT technique.

Comparing the NHT and PR technique of the research previously presented, it was found that the increase of the students' reading comprehension score in the experimental class and control class after treatments was significant which was based on hypothesis testing. It proved that H_0 of this research was rejected and H_1 of this research was accepted. It can be seen by comparing the increasing of the

students' reading comprehension score within both groups. The use of NHT could challenge the students. It could be seen from their enthusiasms and their participation in finding the main idea of text, specific information, inferences, references and vocabulary. They enjoyed working in group and the media attracted and help them much. On the other hand, PR could also challenge them but not as effective as NHT. In the experimental class, discussion happened during the class since the teacher monitored them. The four steps of NHT, made them understand the reading text deeper and it made teaching reading effective. In the control class, the students sometimes felt that they were burdened because they were not interested and motivated in the lesson.

Judging the previous assumption, the researcher concluded that the students who were taught through NHT technique gave higher result than those who were taught through PR technique, it was considered NHT was better than PR technique. Besides that, it was also because NHT was designed to teach students to be active and be independent in teaching learning activity. Although PR technique was also applied in group, but the result was not as effective as the NHT group. It was the groups which were taught through PR technique were not well structured. All member of the group played the same role. The effectiveness of the group only giving feed back to the each member. This present research also support the theory stating that the principles and techniques of cooperative learning make students work together more effective (Jacobs et al, 2002:1). In their NHT group, the students became more active and independent readers. Finally, NHT technique was more appropriate and possible to use to increase students' reading comprehension significantly.

IV. CONCLUSIONS AND SUGGESTION

Based on the results of data analysis and discussions, the researcher draws the conclusions that there was a significant difference of students' reading comprehension achievement between those who were taught through NHT technique and those who were taught through predictive reading technique at the second grade of SMAN 1 Seputih Raman. It can be identified from the mean

difference, that is, 6.89. It means that the experimental group one gained 6.89 point, higher than experimental group two in posttest. Besides that, the significant value of the posttest in both classes was 0.000 that was lower than 0.05 ($0.000 < 0.05$). In addition, NHT technique is better than PR technique because NHT technique seemed to give higher effect in students' score than PR technique, especially in reading comprehension.

Referring to the conclusion above, the researcher would like to purpose some suggestion as follows:

1. The English teacher is suggested to use NHT technique, especially in reading skill to make the students more comfortable in learning it and automatically can improve their reading ability. The teacher should be able to give some rules and control the teaching learning process well since the biggest problem for the teacher when using this technique may be the crowded classrooms and time consuming. In addition, the teacher should also give attention in the reading material.
2. The future researchers, who will conduct the similar research, should conduct it by considering the time allocation for the treatments. Because of the limitation of time, the target material may not be explained fully when the class is in crowded.

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