

USING NUMBERED HEADS TOGETHER STRATEGY TO IMPROVE READING COMPREHENSION SKILLS FOR HIGH SCHOOL STUDENTS

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ARTICLE INFO		ABSTRACT
Received:	13/3/2023	The goal of this study is to use the Numbered Heads Together strategy to increase high school students' reading comprehension and determine whether cooperative learning with the Numbered Heads Together strategy can help students' reading comprehension. The data for this study came from a field study that used action research design at a high school in Thai Nguyen, Vietnam. This study was conducted using the action research methodology. Moreover, information was acquired via tests. The study discovered that the students' tests mean scores were different. The mean score of the tests using the Numbered Heads Together method was higher than that of the other tests that did not use this method. Therefore, cooperative learning using the NHT technique can improve the reading comprehension skills of school students. This research offers a new source of strategy to assist teachers in teaching students' reading skills, especially reading comprehension skills.
Revised:	23/5/2023	
Published:	23/5/2023	
KEYWORDS		
Numbered Heads Together technique		
Reading comprehension Skills		
Reading skills		
High school students		

SỬ DỤNG CHIẾN LƯỢC ĐÁNH SỐ HỌC SINH CÙNG NHAU ĐỂ CẢI THIỆN KỸ NĂNG ĐỌC HIỂU CHO HỌC SINH TRUNG HỌC PHỔ THÔNG

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THÔNG TIN BÀI BÁO		TÓM TẮT
Ngày nhận bài:	13/3/2023	Mục tiêu của nghiên cứu này là sử dụng chiến lược đánh số học sinh cùng nhau để nâng cao khả năng đọc hiểu của học sinh trung học phổ thông và để xác định xem việc học hợp tác với chiến lược đánh số học sinh cùng nhau có giúp ích cho việc đọc hiểu của học sinh hay không. Dữ liệu cho nghiên cứu này được lấy từ một nghiên cứu thực địa sử dụng thiết kế nghiên cứu hành động tại một trường trung học ở Thái Nguyên, Việt Nam. Đây là nghiên cứu được thực hiện bằng phương pháp nghiên cứu hành động, thông tin đã được thu thập thông qua các bài kiểm tra. Kết quả nghiên cứu cho thấy các bài kiểm tra của học sinh có điểm số khác nhau. Điểm trung bình của các bài kiểm tra sử dụng phương pháp đánh số học sinh cùng nhau cao hơn so với các bài kiểm tra không sử dụng phương pháp này. Vì vậy, học hợp tác sử dụng kỹ thuật đánh số học sinh cùng nhau có thể cải thiện kỹ năng đọc hiểu của học sinh trung học phổ thông. Nghiên cứu này đã cung cấp một nguồn chiến lược mới để hỗ trợ giáo viên dạy học sinh kỹ năng đọc, đặc biệt là kỹ năng đọc hiểu.
Ngày hoàn thiện:	23/5/2023	
Ngày đăng:	23/5/2023	
TỪ KHÓA		
Kỹ thuật đánh số học sinh cùng nhau		
Cải thiện kỹ năng đọc hiểu		
Kỹ năng		
Kỹ năng đọc		
Học sinh trung học phổ thông		

DOI: <https://doi.org/10.34238/tnu-jst.7511>

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1. Introduction

Reading skill is one of the four language skills that language learners need to master. The four interdependent skills are of importance in the success of one's language acquisition. Regarding reading skills, it is an integral part of learners to acquire this skill because they can receive information on vocabulary, and grammar as well as knowledge about life. Reading keeps their cognitive abilities developed. Thus, teaching reading plays an important role in teaching a foreign language in general and English in particular.

However, teaching reading is a challenging job. It takes much time and energy to make progress in this skill. For teachers, it is a difficult task to get students complete reading activities accurately and punctually. Students often have to struggle with reading tasks because of the lack of specific skills necessary for proficient reading especially in a limited time, which is popular in Vietnamese high schools.

Reading constitutes an activity to understand and gain what the text contains. According to Bin Tahir [1], 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 used in printed and written forms. According to Harmer [2], 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 provides opportunities to study language: vocabulary, grammar, punctuation, and the way we construct sentences, paragraphs, and texts. However, the results of students' reading ability regarding English reading part are often unsatisfactory. The first reason for that reality should be mentioned is the method usually utilized by the teachers is conventional, like the Grammar Translation Method by Bin-Tahir [3]. This method is not completely bad; however, if the method is used unrelentingly in all English classroom activities, it might result in a fairly insufficient outcome. Using this method, the teachers often only look at the instruction in the textbook, ask a student or two in the class to read the text or the teachers read the text themselves, translating word by word or sentence by sentence before having students answer the questions that follow the text. The researcher admits to having done the same thing sometimes. Second, the teaching and learning activities are not lively. Since the teachers only look at the instruction in the textbook, there is no apparent variation in the activities. Students rarely work cooperatively as they are frequently more engaged either in competitive or individual work that induces them to give up when dealing with difficult tasks. Furthermore, the materials used for reading are merely taken from textbooks. Teachers hardly ever bring materials from newspapers, magazines, and the like to the class. As a result, students find reading instruction dreary. Third, students' vocabulary is limited. Bin Tahir [4] claimed that 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 the form of multiple choice. Apart from that, they tend to ask others about the word's meaning straightforwardly or look up immediately in the dictionary to get the meaning when they come across unknown new words. This shortcoming certainly hampers students in English reading texts. Considering the facts above, there is an urgent need to implement a strategy or technique that can help solve these problems. Tahir [5] said that there are many alternative strategies to engage students in reading activities. One of which is the cooperative learning strategy, they viewed cooperative learning as the 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' problems in reading ability. It is also expected that it can overcome boredom in the reading class activities because it is seen as a strategy that can involve both teacher and students to interact; the students can interact and provide guidance among themselves in the reading class.

Structured cooperative learning is one of the many teaching methods that give students the chance to work together on projects, and it is claimed that it can enhance both the learning experience and the results of that learning. This is corroborated by research findings by Zakaria and Ihsan [6], who found that the cooperative learning paradigm yields superior learning results than the traditional learning model (conventional). Cooperative learning needs participation and cooperation from the learning group according to the approach of Trisnawati [7]. A grouping system or small team of four to six individuals with varying academic backgrounds, gender, racial or ethnic backgrounds is used in cooperative. Isjoni [8] asserts that a cooperative learning paradigm can enhance student learning and lead to improved learning.

On the other hand, if they study good ability in reading, students will have a better chance to succeed in their studies. Harris [9] also notes that kids still struggle with several aspects of reading comprehension, such as issues recognizing the main concept, specific details, inference, references, and a lack of vocabulary. The use of Numbered Heads Together (NHT) can improve students' capacity to learn reading skills, according to several earlier research. One of Hadi's studies [10] demonstrated the effectiveness of the Numbered Heads Together technique in raising students' reading proficiency. The other study conducted by Japar [11] revealed that NHT was beneficial for the majority of students who scored below average in reading comprehension. Simply said, this method improved student achievement, motivation, and participation in reading comprehension. According to Rahmawati [12], the teacher indicated that she had used the method to increase students' comprehension when acquiring reading skill. She also admitted that using Numbered Heads Together to teach reading has improved the students' abilities.

Based on the background to the study explained above, the aims of this research are (1) to find out the effect of using Numbered Head Together technique on students' reading comprehension skills, thereby giving measures to improve these skills for high school students through the use of the strategy of Numbered Head Together; (2) to discover the students' attitudes when using Numbered Heads Together activities as a technique used to improve their reading comprehension.

2. Methodology

2.1. Research design

The author of this study concentrated on the effects of the NHT approach deployment on students' reading comprehension at Thai Nguyen High School for Gifted Students. This study used action research methodology. The researcher used test questions as an instrument to collect the data and a questionnaire to know if the student's reading comprehension are interested or not; the percentage of students' interest was compared with cycle I, cycle II and cycle III.

2.2. Population and sample

Arikunto [13] mentioned that a set (or collection) of all items that share one or more desirable features. Students in grade 11 at Thai Nguyen High School for Gifted Students made up the study's population. The Information Technology class was selected as the sample for this study from among all of the grade 11 students at that school. This sample is representative of the entire population. Instead of the Chemistry class, the Information Technology class was used as the sample for this study. This particular class was selected because it fulfilled the criteria for the samples required: the highest and lowest reading scores differ too much in the preliminary research; besides, the average reading score did not come close to the target score of 10.

2.3. Data collection and analysis

At Thai Nguyen High School for Gifted Students, the research was designed as classroom action research with the goal of enhancing students' reading comprehension through cooperative learning techniques employing numbered heads together. The subjects of this research were the students for eleven grade (Information Technology class) at Thai Nguyen High School for Gifted

Students, consisting of 30 students. Action research is a method for examining problems and modifying educational practices.

Firstly, the researcher tested students in two classes (Information Technology class and Chemistry class). The goal was to select a sample that was representative of the entire population and to maximize the classroom action (the researcher prepared the instructional planning for the overall session such as designing the teaching lesson plan, adapting the syllabus for learning, deciding the topic for the first and second cycle, preparing the teaching aid such as reading text 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 next step is action, which was the execution of the earlier planning. It was what the researcher did in the classroom while implementing cooperative learning techniques to teach reading by using numbered heads together. The researcher divided each session into three phases: pre-activities, while-activities, and post-activities. Pre-activities were conducted before the teaching and learning activities. During this stage, the researcher welcomed the students, checked their present list, provided encouragement, and made an effort to give the overall perspective of the subject. The second phase was while activities, the researcher delivered the students the reading text and asked them to debate and complete the task in groups. In this stage, reading comprehension was taught by using numbered heads together strategies. The researcher classified this step into three categories. The first category was an investigation, in which she collected data from the students on the subject that would be covered. The researcher taught narrative literature in this area. Elaboration, which involved outlining the subject matter, was the second category. The final category was confirmation in which the researcher taught reading comprehension using the numbered heads together reading technique by giving the students the chance to read and study the material in their group. Post-activity was the last stage. After concluding her presentation, the researcher invited the students to answer a question based on a number she had chosen.

The third step, observation, was carried out while the researcher was instructing in order to see whether the method may enhance students' aptitude for or success in reading comprehension. Its primary goal is to determine whether there is any potential for student behavior, attitudes, and motives to learn and practice reading. These are undoubtedly reflected in their engagement in reading English as well as in their creative participation and activity. In this step, the researcher attempted to understand or ascertain what transpired when the action was performed in the classroom. The researcher next looked at the class activities to determine the issue, the students' interests, and any issues that came up during the learning process.

The final step in this action research is reflection, which has the goal of determining if the students comprehended the material that was presented using methodologies for teaching reading by numbered heads together strategies. The learning process was analyzed as a consequence of the research to see whether it was functioning properly or not. In addition, the researcher examined the No. 1 and No. 2 reading texts to determine whether or not their ratings improved. The outcome of the full cycle of reflection in cycle I was utilized as feedback and a basis for the action in cycle II and cycle III which were carried out in a way to improve. The first cycle's results were the starting point for reflection, and the researcher improved the first cycle's planning flaws by creating a new teaching lesson plan. The issue that was raised in the first cycle might be resolved by the teaching scenario developed. The second and third cycle process was not too dissimilar from the first.

To analyze if the student's reading comprehension improved or not following treatments based on their score, the researcher collected the results of the reading passages (both No. 1 and No. 2) from three meetings. The researcher categorizes the majority answers and the answers given by the students in order to examine the interview's findings. Then, the data was used based on classification of observation, interview, and scores results. If No. 1's score is greater than No. 2's, it is likely that adopting cooperative learning methodologies to teach reading with numbered heads

together could be effective. The researcher employed descriptive statistics to assess the quantitative data, drawing conclusions based on the average student performance. The average data obtained in numerical form is known as the mean. Hadi [14] explains that "mean is the total of scores divided by the total of person." The researcher calculated the mean using the following explanation:

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

Notes:

\bar{x} : Mean

$\sum X$: total students score

N: total of students

The outcomes of the qualitative data then relate to the answer to the problem. A total score was derived from the information on the students' interest for each cycle using the scale that was employed. Agree, less agree, disagree, and strongly disagree were the used gradations. Following that, it was changed to a percentage (%). To determine whether or not a student's reading comprehension piques their interest, the author compared the percentage of students' interest across cycles I, II, and III. Because the used interest instrument is the same, an interest comparison is possible.

3. Findings and discussion

Based on preliminary research, this study discussed the identification of the field challenges and the solutions. The researcher gathered the data for this section through interviews, observations, and tests. The details of this study are explained in the following sections.

A questionnaire was given to the studied students in order to gather the additional information needed for the current class action study. The purpose of the questionnaire was to find out how the students felt about using numbered heads together during the teaching and learning process. There were eleven statements in total. The rating scale 4-1 was used to qualitatively rate the questionnaire responses. Table 1 illustrates problem aspects of the questionnaire:

Table 1. Problem aspects in teaching and learning process of reading skills in class of eleven grade (Information Technology class) at Thai Nguyen High School for Gifted Students

No.	Problems
1	The English teacher's lessons did not pique the students' interest.
2	The teacher was unable to provide engaging reading exercises.
3	The activities in the classroom become boring for the students.
4	The students lacked the vocabulary needed to understand the text.
5	During the teaching and study of English, the students exhibited passivity.
6	The teacher dominated during the teaching and learning process
7	The teacher did not use any entertaining media to keep students interested in the class.
8	The sources of reading materials were not interesting.
9	The majority of the materials came from textbooks.
10	The teacher only concentrated on translating.
11	Reading instruction lacked a variety of instructional methods.

After determining the results of the first and second tests, the mean was calculated. A data set's mean is its average. In this study, the researcher calculated the mean score to determine the total amount of data divided by the total amount of data. Table 2 compares the mean score results of the tests over 3 cycles:

Table 2. The mean score of three cycles (three meetings)

	Cycle 1	Cycle 2	Cycle 3	Mean score
Passage No.1	$\bar{x} = \frac{222}{30} = 7.4$	$\bar{x} = \frac{226}{30} = 7.5$	$\bar{x} = \frac{240}{30} = 8.0$	7.6
Passage No.2	$\bar{x} = \frac{166}{30} = 5.3$	$\bar{x} = \frac{170}{30} = 5.6$	$\bar{x} = \frac{166}{30} = 5.3$	5.4

Figure 1 shows the reading comprehension results before and after the test through each cycle:

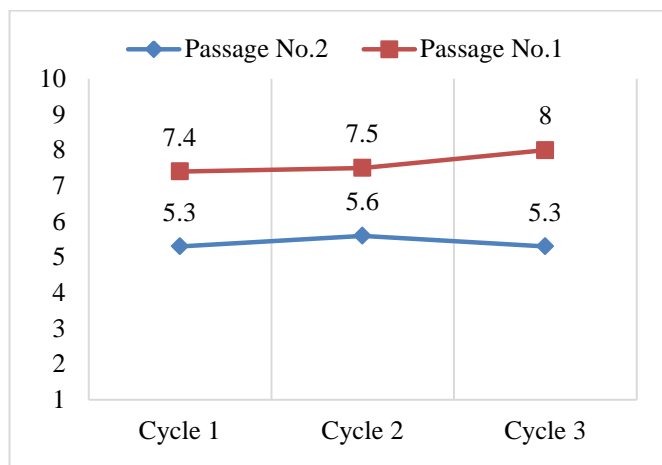


Figure1. The mean score of three cycles (three meetings)

The use of numbered heads together in Cycle 1 proved effectiveness in raising students' reading engagement and comprehension. The numbered heads together method gave students circumstances that could encourage participation in the teaching and learning of reading. They received training in mutual engagement with the teacher and students. They had the chance to educate the other students about their opinions and understanding of the subject matter. Moreover, engaging media usage and reading-related activities contributed to Cycle 1's success. Implementing the actions, however, still had some issues with the students' motivation, engagement, and reading comprehension skills.

As a result, the researcher worked to find solutions so that Cycle 2 and Cycle 3 could successfully boost students' reading comprehension skills. The researcher also found that encouraging students to read English passages and encouraging their engagement in the teaching and learning process by awarding dictionaries to the top group of students who had positive effects.

Cycle 2 activity allowed the students to consult their teammates when they were unsure of something, which helped them comprehend the narrative material. They might prevent uncertainty by cooperating with their pals because they could talk about it. Also, this action was meant to guarantee personal responsibility. When the researcher summoned them, the students, who in Cycle I always made some noise, did their best to be able to read and respond to the questions. According to the interview, the students like the exercise since it allowed them to collaborate to accomplish a common objective. When they carried out the activity, the researcher observed them.

Also, the researcher could control every student while using NHT. Since the researcher rearranged their sitting, the students who were disruptive during Cycles I and II were able to work with the group. These pupils were able to focus more intently on their own group after switching seats. They put an end to their classroom teasing and began to concentrate on the lecture. Because the implementation of NHT is a more cooperative learning activity that demands individual contribution in the group before individual, it is important to maximize the role of the individual in the group. In order to increase student participation in the English teaching and learning process, the researcher also gave prizes to the top groups. These incentives had a successful impact on motivating the students to give it their all. They became more involved in asking and responding to inquiries. There were more engaged students once this step was completed. They competed for the prize for the best group. The student who showed excellent cooperation and academic accomplishment throughout the lesson also received a reward. The students' interest in learning Reading Comprehension by Numbered Head Together:

At the conclusion of the cycle, a questionnaire was given to the studied students (which is shown in the previous part). The results of the questionnaire's scoring revealed that the subjects' attitudes and motivations had changed as a result of applying NHT tactics to improve their reading comprehension.

The first and second inquiries focused on English as a whole. In response to the initial questions regarding students' attitudes toward English classes, it was found that 63% of students in cycle I liked English classes, 64% did so in cycle II, and 79% did so in cycle III. The importance of English was then the subject of a second question. In cycle I, 74% of students answered that reading comprehension is important, 77% and 85% respectively in cycles II and III. In response to the third question about reading comprehension, 74% of the students said they enjoyed it in cycle I; 77% said they liked it in cycle II; and 85% of students said that they loved it in cycle III. The fourth through tenth inquiries related to the usage of NHT strategy. The fifth question asked respondents to rate their satisfaction with how well they understood the reading using NHT. In cycle I, this rating was 73%; however, in cycle II, it dropped to 72%, and in cycle III, it rose to 79%. The sixth query inquired as to the extent to which NHT could aid in their comprehension of the English material. In cycle I, the students correctly answer 79%, in cycle II, 74%, and in cycle III, 79%. They can be motivated by the seven questions raised concerning NHT-based learning. In cycles I and II, the results were identical (70% felt they could inspire), while in cycles III, respondents said 78% of the time they were motivated to study. About their involvement in learning via NHT, they were asked in the eighth question. In cycle I, student participation in instruction and learning was at 70%; in cycle II, it was at 73%; and in cycle III, it was at 78%. The teacher's prior instruction in teaching reading comprehension was the subject of the ninth question. There were 81% in cycle I, 78% in cycle II, and 75% in cycle III. The final question sought their opinions on whether NHT should be used effectively to teach reading. For making reading easier for them, they gave cycle I 79%, cycle II 77%, and cycle III 79%.

In conclusion, the student's likeness in the English topic from cycle I to cycle III was improved by seeing the students' responses provided in the questionnaire. Next, students increased their satisfaction with learning English using the NHT technique with each cycle, especially with reading comprehension.

4. Conclusion

The classroom action research at Thai Nguyen High School for Gifted Students in improving students' reading comprehension through cooperative learning strategies using numbered heads together in the eleventh grade (Information Technology class) can be summarized as follows based on the research findings as written above. Firstly, by working together, the eleventh-grade students at Thai Nguyen High School for Gifted Students could increase their reading comprehension skills.

By comparing the results of the No. 1 to No. 2 tests from cycles I, II, and III, the progress in teaching methodology could be clearly recognized. The average of No.1 tests among the 30 students was 7.6. Compared to that, the mean score improved of No.2 tests (the tests were not applied NHT) was 5.4. In more detail, the students' mean scores rose from 7.4 to 7.5 after completing the second round of treatments. Then, the third cycle after that jumped dramatically to 8. As a result, it is possible to draw the conclusion that NHT could enhance the reading comprehension of the eleven-grade students at Thai Nguyen High School for Gifted Students.

The questionnaire that the researcher administered to the study's participants revealed that the students' learning behaviors were improved. The adoption of NHT boosted the subject understudies' desire in learning English, notably reading comprehension. That was supported by requiring responses from the subjects on the questionnaire item.

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