

Numbered Head Together Learning Model (NHT) In Improving Student Learning Outcomes in Social Sciences Subjects Class VII UPTD SMP Negeri 7 Pematang Siantar FY 2023/2024

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ABSTRACT

This study uses a quantitative approach. This type of research is *quasi-experimental research* carried out at SMP Negeri 7 Pematang Siantar. The research population was all class VII students at SMP Negeri 7 Pematang Siantar FY 2023/2024 with a total of 222 students and the subjects of this research were classes VII-6 and VII-7, totaling 64 people. In this research the instrument used was the test. The data collection technique uses tests, observation and documentation. Meanwhile, for technical data analysis used is the Normality Test, Homogeneity Test and Hypothesis testing *t (Independent Samples Test)* using SPSS Version 21. Based on the results of data analysis using *t hypothesis testing (Independent Samples Test)*, it was obtained that $t = 2.928$ and t_{table} (at the 5% significance level) = 1.699, meaning $t_{count} > t_{table}$. In accordance with the criteria, H_0 is accepted if $t_{is\ calculated} < t_{table}$ and H_0 is rejected if $t_{is\ calculated} > t_{table}$. So, it can be concluded that there is an influence of the *Numbered Head Together Learning Model* in Improving Social Studies Learning Outcomes on the subject of natural resources for class VII UPTD students at SMP Negeri 7 Pematang Siantar for the 2023/2024 academic year.

Keywords : Learning Model *Numberd Head Together* , Learning Outcomes .

INTRODUCTION

The learning process in school can take place well and effectively if there is two-way communication, namely between the communicator (teacher) and the communicant (student). Therefore, communication must be created so that the message that will be conveyed in the form of learning material can be received by students. Teachers are expected to be able to guide students' activities and creativity to achieve learning goals by using appropriate models.

In implementing learning, the educators' abilities needed are the ability to manage teaching materials and the ability to choose learning approaches or models, media and learning resources.

Based on observations of social studies subjects in class VII UPTD SMP Negeri 7 Pematang Siantar, it is known that in the social studies learning process, teaching activities still use lecture and discussion learning models. In this method, the teacher explains concepts and provides exercises to students. When teaching, teachers do not encourage students to interact actively. This makes many students sleepy almost all the time during the learning process. Being a teacher is not enough just to master the learning material, but you must have creativity in conducting learning, namely by being able to adapt the material to the learning model that will be taught so that learning can proceed according to the material being taught. Choosing the right learning model will have a quite effective impact on students in carrying out learning activities. Of the many types of cooperative learning and with the problems described above, the researcher will take one of the *Numbered Head Together* (NHT) cooperative learning models with the subject matter to be taught, namely Natural Resource Potential and Maritime Affairs. Learning with the *Numbered Head Together* (NHT) model can influence interactions between fellow students because students will work together with each other. This model is very interesting when applied to students, because they will learn actively to find out the parts assigned to them.

The Numbered Head Together (NHT) learning model refers to group learning of students. Each group is given a number and then a group is created and then the teacher will randomly call the numbers of the student participants. The purpose of this model is none other than to provide opportunities for students to share ideas and consider the most appropriate answers. Reasons for using the *Numbered Head Together* (NHT) model because this learning model has several advantages for increasing student activity in learning. The advantages of this learning model include that

students will be more active and the learning atmosphere will be more enjoyable. Because through this model, each student is required to always be ready to be appointed to present a problem that has been given by the teacher to their group. In this way, students' activeness in taking social studies subjects can increase. So when learning activity increases, it will have an impact on learning achievement.

Researchers see that learning outcomes are categorized as still not optimal, especially in social studies subjects. This is because in the process of delivering material the teacher still focuses on the lecture method of teaching which can be said to be monotonous, so that most students in class VII UPTD SMP Negeri 7 Pematang Siantar immediately obey, easily believe, and cannot defend their arguments in the teaching and learning process taking place in class so that impact on learning outcomes.

From these observations it was found that students' scores in social studies subjects were still low, as evidenced by the fact that there were still students who did not reach the Minimum Completeness Criteria (KKM) in one of the learning evaluation test results conducted by the teacher. Where p there is a total of class VII with 222 students, 108 students completed and 114 students did not complete .

From the data above it can be concluded that student learning outcomes are not optimal.

One of the causes of low student learning outcomes is the lack of adaptation of learning models to the learning material that educators will teach to students. This is because educators who are accustomed to lecture methods, questions and answers, discussions, and giving assignments encourage students to pay less attention to learning.

Student learning outcomes are very important because the results are an indicator of the level of success of class activities. One of the learning objectives is learning success. Learning success can be expressed by the grades given by the teacher from the number of subjects taken by students.

The low student learning outcomes are caused by adjustments to learning materials that are still not optimal in choosing the right learning model. This explanation shows that it is important to choose the right learning model that is appropriate to the material to be taught .

Considering the diversity of learning models and the importance of students' active role in the learning process, researchers took the research title "***The Influence of the Numbered Head Together Learning Model (NHT) In Improving Student Learning***

Outcomes in Social Sciences Subjects Class VII UPTD SMP Negeri 7 Pematang Siantar FY 2023/2024".

THEORETICAL FRAMEWORK

1. Learner Model

A learning model is a plan or pattern that is used as a guide in planning learning activities to achieve the expected competencies or learning outcomes. According to Dahlan (Jusmawati, et al 2021:24), a learning model is a plan or pattern used to develop a curriculum, assemble materials, and provide instructions to teachers in classroom teaching or other settings. Based on this opinion, it can be concluded that a learning model is a method or pattern that aims to convey messages to students that must be understood and comprehended, namely by creating a pattern or example with materials chosen by the educator according to the material presented and paying attention to the conditions in the classroom.

2. *Numbered Head Together* (NHT) Learning Model

The Numbered Head Together (NHT) learning model is a series of material delivery using groups as a forum for uniting students' perceptions/thoughts regarding questions asked or asked by the teacher, which will then be answered by students according to the teacher's request number from each group. According to Syofyan (2016 : 52-53) *Numbered Head Together* (NHT) is to involve all students in learning activities, all students make observations of the material, so the teacher here acts as an examiner or assessor of each student's understanding of the material that has been given. It can be concluded that the *Numbered Head Together* learning model (NHT) is a learning model using groups, with each group member being responsible for group tasks.

3. Learning outcomes

According to Kunandar (2013:62), learning outcomes are certain competencies or abilities, both cognitive, affective and psychomotor, that students achieve or master after following the teaching and learning process. This means that the learning outcomes obtained are a person's efforts after going through learning activities. Based on this opinion, it can be concluded that learning outcomes are a form of result obtained or received by students after students carry out teaching and learning

activities and the success achieved by someone includes cognitive, affective and psychomotor. psychomotor.

METHODS

Sugiyono stated that research methodology is a scientific means of collecting data/information for certain purposes. There are four terms that must be paid attention to: scientific techniques, data, objectives, and special objectives (Hardani, et al. 2020:242). Researchers use quantitative techniques with a *quasi-experimental type of research*. Quasi experimental is a design that contains control variables but does not fully use them to control external factors that influence how the research is conducted (Andi, 2018: 64).

Based on the researcher's title "The Influence of *the Numbered Head Together (NHT)* Learning Model in Improving Student Learning Outcomes in Class VII Social Sciences Subjects at UPTD SMP Negeri 7 Pematang Siantar for 5 months from May - October. The population in this study were all students of class VII SM P Negeri 1 Pematang Siantar 7 classes totaling 222 students. The sample in this research was class VII- 6 and VII-7 with a total of 64 students.

RESULTS & DISCUSSION

Result

Research Instrument Trial Results

Instrument Validity Test

Before analyzing the data, first analyze the question items carried out in class VIII. This research uses a multiple choice test tool with a total of 25 questions. Then it will be used as *pre-test* and *post-test questions* for the experimental class and control class. Based on the results of trials that have been carried out with.

Items that are declared valid are items that have a correlation value $(r) > 0.354$, while items that have a correlation value $(r) > 0.354$ are valid questionnaire items. This can be concluded that for the questions it is known that there are 20 items that have a correlation value $(r) > 0.354$ and as many as 5 questions $(r) < 0.354$, it is known that 20 questions have valid data and 5 are invalid. Therefore, the 5 invalid questions were not used for further research

Instrument Reliability Test

For the questionnaire reliability criteria, if $r_{count} > r_{table}$ with a significant level $(\alpha = 0.05)$ then the questionnaire is said to be reliable. However, if $r_{count} \leq r_{table}$ then the

questionnaire is considered to have no reliability. If the *Cronbach Alpha value* is > 0.60 it is said to be reliable, but if the *Cronbach Alpha value* is < 0.60 it is said to be unreliable.

From the data obtained, it is known that the *Cronbach Alpha* obtained was $0.820 > 0.60$. From the results of calculating the reliability of the snowball throwing learning model, it can be concluded that the research instrument used is reliable.

Question Difficulty Level

In testing the level of difficulty of the questions, the researcher used SPSS version 23, which was done by comparing the mean value on the SPSS output with the question difficulty level index, namely: $0.00 - 0.29$ (Hard), $0.30 - 0.69$ (Medium), $0.70 - 1.00$ (Easy). Based on the test of the difficulty level of the questions carried out with the help of SPSS version 23, it can be seen that from the 20 questions there are 9 questions in the easy category, 14 questions in the medium category and 2 questions in the difficult category.

The Power of Different Questions

The item discrimination test in this study was used to determine the ability of the items to differentiate between students with high ability and students with low ability. The following are the different power criteria.

Based on the table above, knowing the results of calculating the differentiating power of questions using *Microsoft Excel 2007*, there are 9 bad questions, 1 very bad question, 9 fair questions, 4 good questions and 2 very good questions.

Data analysis technique

Descriptive Statistical Analysis

Table 1
Experimental Group Pretest-Posttest Descriptive Analysis Test Results

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experiment	32	60.00	10.00	70.00	44.2188	15.91861
Post-test Experiment	32	35.00	55.00	90.00	72.5000	11.21635
Valid N (listwise)	32					

(source: SPSS Version 21 data processing results)

Based on the table above, the minimum *pretest score* is 10.00 and the minimum *posttest* is 55.00. The maximum *pretest score* is 70.00 while the *posttest score* is 90.00. The best mean of *the pretest* was 44.21 and *the posttest mean* was 72.50. The average value of the treatment class increased by 28.29.

Table 2
Control Group *Pretest-Posttest* Descriptive Analysis Test Results

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-test Control	32	60.00	10.00	70.00	40.3125	17.68622
Control Post-test	32	50.00	40.00	90.00	63.2813	13.83132
ValidN (listwise)	32					

(source: SPSS Version 2 1 data processing results)

Based on the table above, the minimum *pretest score* is 10.00 and the minimum *posttest* is 40.00. The maximum *pretest score* is 70.00 while the *posttest score* is 90.00. The best mean of *the pretest* is 40.31 and *the post-test mean* is 63.28. The average value of the treatment class increased by 22.97.

Test Data Analysis Techniques

Normality test

Data Table 3

Normality Test Results

	Class	Kolmogorov-Smirnov ^a		
		Statistics	Df	Sig.
Results	Pre-test Experiment	,145	32	,083
	Post-test Experiment	.123	32	,200
	Pre-test Control	.141	32	.109
	Control Post-test	.113	32	,200

(source: SPSS Ver 21 data processing results)

Based on the table data above, it can be seen that the experimental class *pre-test* (NHT) value is 0.083 > 0.05, the experimental class *post-test* (NHT) value is 0.200 > 0.05, the control *pre-test* (Lecture) value is 0.109 > 0 .05 and the *post-test score* for the

control class (Lecture) was $0.200 > 0.05$. This shows that the data is normally distributed.

Homogeneity test

Table 4
Results of Homogeneity Test for Experimental Class and Control Class
Test of Homogeneity of Variance

		Levene Statistics	df1	df2	Sig.
Student learning outcomes	Based on Mean	1.264	1	62	.265
	Based on Median	1.331	1	62	.253
	Based on Median and with adjusted df	1.331	1	60.407	.253
	Based on trimmed mean	1.262	1	62	.266

(sumber: hasil pengolahan data SPSS Versi 21)

Based on table 4 above, it can be seen that the results of the homogeneity test were obtained with a significance value of > 0.265 . Based on the decision criteria, if the resulting significance value is > 0.05 then the data can be said to be homogeneous. With the significance value obtained, namely $0.265 > 0.05$, this research data is said to be homogeneous.

Hypothesis Testing

Table 5. T-Test Results
Group Statistics

	Class	N	Mean	Std. Deviation	Std. Error Mean
Student learning outcomes	Post_Experimen t	32	72,5000	11.21635	1.98279
	Post_Control	32	63.2813	13.83132	2.44506

(source: SPSS Version 21 data processing results)

The average of the two classes, namely the post-test score for the class that uses the NHT model, has an average score of 72.50 and the class that does not use the NHT model (Control) has an average score of 63.28, so the average test gap for both classes is

9.22. This means that the use of the *Numbered Head Together (X)* learning model has a positive influence on learning outcomes (Y).

The t-test calculations in this research were carried out using the *SPSS Statistics IMB 21 program with the Analyze-Compare Means-Independent T-Test* formula .

Table 6. Hypothesis Test Results for Experimental Class and Control Class

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Hasil Belajar Siswa	1.264	.265	2.928	62	.005	9.21875	3.14798	2.92604	15.51146
			2.928	59	.005	9.21875	3.14798	2.92069	15.51681

(source: SPSS Version 21 data processing results)

Table 6 shows that the significance of the t table is 0.05 and the total sample size of 64 students is 1.669. After carrying out the Independent Sample T-Test, the t count was 2.928. So it can be seen that the calculated t value. > t table (2.928 > 1.669) means the alternative hypothesis is accepted. By testing the hypothesis it can be concluded that there is a significant influence between the *Numbered Head Together* and Lecture learning models on the influence of student learning outcomes in social studies subjects at SMP Negeri 7 Pematang Siantar.

DISCUSSION

Student success in the teaching and learning process can be seen from the results of the assessment of their learning outcomes. Success can also be seen from changes in learning outcomes, so that the results achieved occur after undergoing the teaching and learning process. If the changes achieved by students increase, the student can be said to be successful in learning.

Based on the results of research conducted in classes that use learning models *Numbered Head Teacher* and in classes that do not use the lecture method, students are very enthusiastic. Every student works well, the atmosphere is happy in learning activities. Apart from experience, students also solve problems related to their experience. In classes that don't use model *Numbered Head Teacher*, students receive the usual learning method using the lecture method and the same material assignments are given.

Before receiving treatment or action, both groups received a pretest to test the equality of variances so that the groups showed that the two groups were homogeneous. This means that the data is normally distributed and has no other variances. This shows that before being given treatment, both groups had initial abilities, such as the group that used the *Numbered Head Teacher model* could be given treatment and the group that did not use *the Numbered Head Teacher model* used the *lecture* method and both classes received a posttest.

The research was carried out at SMP Negeri 7 Pematang Siantar, covering two classes, namely the experimental class and the control class. Before receiving treatment, a pretest was given in both classes to determine students' basic abilities. The experimental class has a mean value of 44.21 and the control class has a mean value of 40.31.

After knowing the initial abilities of students in two classes, students will have different learning content. Students in the experimental class were taught using numbered lessons, while students in the control class used the lecture method. After being given different treatment in the experimental class and control class, students were given a final test after studying the material to determine student learning outcomes. The average score after the test for the experimental class was 72.50 while the control class was 63.28.

After carrying out a normality test on the results of *the pre-test* and *post-test* for the experimental class and control class, the data was obtained with a normal distribution. After knowing that the data is normally distributed, the next step is to check uniformity. We know that the sig value is 0.265. Then the experimental class and control class have the same variance because $0.265 > 0.05$. Therefore, there is no difference between the two, the data is assumed to be normal and have the same variance.

By testing the hypothesis using an independent sample t-test, the data tested are the results of the post-test for both classes. Using a significance level of 5% or = 0.05, the tcount is 2.928. So it can be seen that the value of tcount. > ttable (2.928 > 1.669) means the alternative hypothesis is accepted. Based on Ha's acceptance from here, it can be concluded that the learning outcomes taught using *Numbered Head Together learning* are effective and good for use in learning.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of research and hypothesis testing carried out by researchers, it can be concluded that: there is an influence on the learning outcomes of students taught using the *Numbered head Together learning model* and those who do not use the *Numbered head Together learning model*, where the learning outcomes of students taught using the *Numbered head Together learning model* are better than the learning outcomes of students who do not use the *Numbered head Together learning model*. This can be seen in the final learning result of the experimental class which used the *Numbered head Together model* which was 72.50 and the learning completion level of the control class which did not use the learning model was 63.28.

FURTHER STUDY

Based on the conclusions above, the suggestions that researchers can give are as follows:

1. For social studies teachers, they can determine the right learning model for teaching so that learning is more interesting, not boring, and students are more enthusiastic about learning. One way is by using the *Numbered Head Together (NHT) learning model*.
2. For students, to increase activeness and courage in learning when teachers use learning models.
3. For researchers, it is hoped that this research will increase insight into the *Numbered Head Together learning model* used in teaching practice.

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REFERENCES

- Ambarsari, Febby Putri. 2021. *The Effect of Using Lecture Methods and Discussion Methods on the Learning Outcomes of Islamic Religious Education for Class VII Students at SMP Negeri 1 Punggur*. Thesis. Lampung: IAIN Metro Lampung.
<https://repository.metrouniv.ac.id/id/eprint/4294/1/spresi%20febby%20-%20Febbyputri%20Ambarsari.pdf>
- Barza, Nerti Yustika. 2021. *The Influence of the Numbered Head Together Learning Model on Student Learning Outcomes in the Concept of the Circulatory System for Class XI SMAN 2 Maros*. Thesis. Makasar. FKIP Muhammadiyah University of Makassar. https://digilibadmin.unismuh.ac.id/upload/14128-Full_Text.pdf
- Darwin, Muhammad et al. 2021. *Quantitative Approach Research Methods*. Bandung: Indonesian Science Media.
- Hardani et al. 2020. *Qualitative & Quantitative Research Methods*. Yogyakarta: Yogyakarta Group Science Library
- Istarani. 2015. *58 Innovative Learning Models*. Medan: Media Persada
- Jusmawati, Satriawati, Irman, Abdul, Nurdin. 2021. *Learning Models in Elementary Schools*. Yogyakarta: Blue Ocean.
- Khasanah, Anisa Nur., Endang Tri Wahyuni., Andari Puji Astuti. 2018. *Efforts to Increase Student Learning Achievement Using the NHT (Numbered Head Together) Learning Model*. *Unimus Journal*. <https://journal.unimus.ac.id/index.php/psn12012010/article/view/3042>
- Kunandar. 2013. *Authentic Assessment (Assessment of Student Learning Outcomes Based on the 2013 Curriculum). A Practical Approach Accompanied By Example*. Jakarta: Rajawali Press

- Kurniawan, Asep. 2018. *Educational Research Methodology* . Bandung: Rosdakrya Youth.
- Mardiah, Neni. 2020. *The Influence of the NHT (Numbered Head Together) Learning Model on Student Learning Outcomes in Mathematics Subjects at State Elementary School 056000 Kampung Baru, Stabat District, Langkat Regency, FY 2019/2020* . Thesis. Medan: North Sumatra State Islamic University.
<http://repository.uinsu.ac.id/10849/1/ACC%20DESCRIPTION%20TRUE%202-1-converted.pdf>
- Nasution, Nurlian., Nizwardi Jalinus and Syahril. 2019. *Blended Learning Model Book* . Riau: Unilak Press.
- Pendy, Agnes., Hilaria Melania Mbagho. 2021. Numbered Head Together (NHT) Learning Model on the Main Material of Relations and Functions. *Basicedu Journal*. Vol.5 (1): p. 165 177. <https://jbasic.org/index.php/basicedu/articles/view/542>
- Rahmat, & Dimas, Hasantri (2015). The Influence of Learning Motivation and Parental Attention on Learning Outcomes for Students at SMK Kawula Indonesia. *Thesis, Jakarta State University* .
- Slameto. (2010). *Learning and the factors that influence it* . Jakarta: PT. Rineka Cipta
- Sugiyono. (2017). *Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta.
- Susanto, Florentinus. 2021. Meta Analysis of the Effect of the Numbered Head Together Learning Model on Mathematics Learning Outcomes for Fifth Grade Elementary School Students. *Journal of Elementary School Teacher Education*. Vol.2 (1): p.53-61. <https://ummaspul.e-journal.id/MGR/article/download/1723/565rnal.id/MGR/article/download/1723/565>
- Sundari Hana. 2015. *Models of Learning and Acquisition of a Second Foreign Language*. *Poet's Journal* 1 (2): 106-117.
- Octavia, Shilphy A. 2020. *Learning Models* . Sleman: Deepublish.
- Wajdi, Muhammad. 2021. The Influence of *the Numbered Head Together (NHT) Learning Model on Student Learning Outcomes on the Concept of the Circulatory System*

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for Class XI SMAN 2 Parepare. *Journal of Learning Research and Innovation*. Vol.1 (2) pp.1-11. [https://etdci.org/journal/jrip/article/view/ 24](https://etdci.org/journal/jrip/article/view/24)

Yulisari, Novella., Nur Rohman., Anita Dewi Utami. 2020. The Influence of the NHT Type Cooperative Learning Model on Economics Learning Achievement in Class X. *Edutama Education Journal*. <http://repository.ikipgribojonegoro.ac.id/954/1/Jurnal%20Novella%2016210036.pdf>