

# The Effectiveness of the Number Head Together (NHT) Type Cooperative Learning Model to Improve Arabic Language Learning Outcomes for Grade 7 Students of SMP Muhammadiyah 5 Yogyakarta

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**Abstract.** The learning model greatly affects student learning outcomes. Most of the 7th grade students of SMP Muhammadiyah 5 Yogyakarta, think that Arabic lessons are difficult to understand because the learning model used is boring. Therefore, the researcher took the NHT Type cooperative learning model as a solution that suits the situation of students in grade 7 of SMP Muhammadiyah 5 Yogyakarta. This study aims to determine the effectiveness of the NHT-type cooperative learning model in improving the learning outcomes of Arabic subjects. The research method used was quantitative using the True-Experimental *pseudo-experimental research method* with a *Posttest only control group design*. The researcher will use 4 classes, namely 7B, 7C, 7D and 7E totaling 107 students as the population and 50 samples. This study used two groups, namely the experimental group and the control group by providing treatment and *posttest* to each class. The sampling used by the researcher is *Probability sampling*, the researcher uses a data collection method The test used is a test of student learning outcomes after using the NHT or posttest type learning model. The results showed that the NHT type cooperative learning model was effective in improving the learning outcomes of Arabic language for grade 7 students of SMP Muhammadiyah 5 Yogyakarta. This is evidenced by the results of the analysis of the independent sample t test, it is known that the value of sig 2 tailed 0.000 is less than 0.05, then  $H_0$  is rejected and  $H_a$  is accepted or there is a significant difference in the average learning outcomes of students who use the NHT model and learning that does not use the NHT model.

**Keywords:** *Cooperative Learning Model, NHT, Learning Outcomes*

## INTRODUCTION

Education is a structured learning activity to realize intelligent generations who have

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various skills. This is stated in the preamble to the 1945 Constitution which mandates to "educate the life of the nation". Education is also an inherent part of human life because the purpose of education seeks to direct all human potential to the maximum in order to realize a complete personality in him (Alwi, 2022).

Learning is the process of acquiring knowledge through interaction between teachers, students, and teaching materials. Learning is always associated with the notion of learning because the result of learning is the process of learning. Learning is a process or effort made by each individual to get changes in behavior, both in the form of knowledge, skills, attitudes and positive values as an experience from various materials that have been learned. These two things will be a combination that can determine the success of student learning. To achieve a learning with good results for students, the learning process requires an appropriate method.

Students have varied learning styles, if the learning method provided by the teacher is not right, then student interest and motivation in learning will decrease. Based on this, the selection of learning methods has a very large influence and role on student learning success, because it becomes one strategy or way to increase student interest in learning and make it easier for them to understand the material.

Arabic subjects are aimed at fostering students' ability to speak Arabic, both receptive and productive. Based on the problems found in grade 7 of SMP Muhammadiyah 5 Yogyakarta, most students have a response that Arabic lessons are difficult to understand. This has an impact on students' low Arabic scores, the influencing factor is that teachers often use lecture methods in teaching so that student learning activities are lacking. With that, a learning model strategy is needed that can increase student activity, and can invite students to think critically but still have fun.

The cooperative learning model is one of the solutions to overcome the learning outcomes of students. Cooperative learning is learning carried out by a group of students who work together in solving problems and each student has responsibility for the success of their group, they will interact with each other so that it will foster the social spirit of students and participate in expressing opinions. The cooperative learning model studied is the NHT-type cooperative learning model (Ali, 2021).

The NHT type cooperative learning model is a learning approach that involves many students (groups) in studying the material or questions covered in a lesson and checking their understanding of the content of the lesson, the teacher's task in this method is to distribute students in several groups and each student in the group gets a number, the teacher gives an assignment and each group does it, The group discusses the correct answer and ensures that each group member can work on it or know the answer well (Murwanto, 2020). After that, the teacher calls one of the numbers and the number is called out of his group, reporting or explaining the results of their cooperation.

Based on the results of the analysis, this method has never been used in 7 Muhammadiyah 5 Junior High Schools in Yogyakarta. Therefore, the researcher took the title "**The Effectiveness of the Numbered Head Together (NHT) Type Cooperative Learning Model to Improve Arabic Language Learning Outcomes of Grade 7 Students of SMP Muhammadiyah 5 Yogyakarta.**"

## LITERATUR REVIEW

As a literature review in this study, there are several scientific papers related to the research

that will be carried out as follows:

1. **Heading** : The Effect of the NHT Type Cooperative Learning Model on Critical Thinking Skills and Mathematics Learning Outcomes of Grade V Elementary School Cluster III Mengwi.

**Writer** : Dadri, Dantes, Gunamantha

**Purpose** : To determine the influence of the NHT-type cooperative learning model on the critical thinking ability and mathematics learning outcomes of students in Class V of SD Cluster III Mengwi.

**Method** : The design of this study is *Single Factor Independent Groups Design*, using the test method, and data analysis using MANOVA. There is a significant influence of the NHT-type cooperative learning model on critical thinking skills and Mathematics learning outcomes.

**Equation** : Discussing the NHT-type cooperative learning model as an effective measure of student learning outcomes

**Difference**: This study focuses on the influence of the NHT-type cooperative learning model on critical thinking skills in mathematics subjects at the elementary school level

2. **Heading** : Application of NHT-type cooperative learning model *Numbered Head Together* to Improve the Learning Outcomes of Speaking Skills for Grade III Students of SD Inpres Gantarang, Gowa Regency

**Writer** : Hani Suhendra

**Purpose** : To determine the improvement of learning through the NHT-type cooperative learning model (*Number Heads Together*) on the learning outcomes of speaking skills of grade III students of SD Inpres Gantarang, Gowa Regency

**Method** : The type of research is classroom action research using design *One Group Pretest Posttest Design*. The percentage in cycles 1 and 2 has increased by 60%, this result shows that students have better speaking skills learning outcomes than before.

**Equation** : Discussing the use of the NHT-type cooperative learning model *Numbered Head Together*.

**Difference**: In the discussion of this thesis, researchers focus more on discussing the application of the NHT model to improve the learning outcomes of speaking skills.

3. **Heading** : Application of NHT Type Cooperative Learning Model to Improve Learning Outcomes of Science Subjects SDN 2 Rama Kelandungan Academic Year 2018/2019

**Writer** : Lina Latifah

**Purpose** : To improve student learning outcomes in science subjects by using a learning model *Cooperative type Numbered Heads Together* (NHT) class V SDN SDN 2 Rama Kelandungan Academic Year 2018/2019

**Method** : This research is a type of classroom action research (PTK) with two cycles. The data collection model uses written tests, observation sheets, and documentation. Student learning outcomes increased with an average score of 80.75%, The NHT method was used as an alternative method to improve learning outcomes in science subjects at SDN 2 Rama Kelandungan.

**Equation** : The researcher discusses the use of cooperative learning models to improve learning outcomes

**Difference**: In the discussion of this study, it is more about the variables of learning outcomes of science subjects at the elementary school level.

4. **Heading** : Application of the NHT Model in Improving PAI Learning Outcomes at SMP Negeri 7 Banda Aceh

**Writer** : Putri Rizkiah

**Purpose** : To find out the activities of teachers, students in the application of the

NHT type learning model and find out the learning outcomes of students in PAI class VIII subjects at SMP Negeri 7 Banda Aceh

**Method** : This type of research is classroom action research (PTK) using 3 concepts, namely research, action, and class. The research instruments are in the form of observation sheets and test devices. In this thesis, it is explained that the NHT-type model can improve student learning achievement, with the results of the study increasing in the first cycle of the average student score of 62.50% and in the second cycle of 81.50%, it can be concluded that the student response to this learning model is very good.

**Equation** : The use of the NHT Model model in Improving Learning Outcomes at the Junior High School level

**Difference**: The bound variable used is the learning outcome of PAI subjects.

5. **Heading** : The Effect of the Numbered Heads Together Type Cooperative Learning Model on PKN Learning Outcomes

**Writer** : Eka Tusyana, Devi Luciana

**Purpose** : To find out whether or not there is an influence of the Numbered Heads Together Type Cooperative learning model on PKN learning outcomes

**Method** : This type of research is quantitative research with a research method *Quasy Experiment* which involves two classes, namely the experimental class and the control class using the *small group discussion*. The research design is *the matching only pretest-postest control group design*. The data collection technique uses learning outcome tests and documentation. The analysis prerequisite test uses normality and homogeneity tests based on the use of the SPSS v.20 program *For Windows* The average value of learning outcomes using the NHT type cooperative model with an independent t test with a significant level of  $\alpha$ : 0.05 (5%) can be concluded that there is an influence of the NHT type learning model

**Equation** : Discusses the effect of using the NHT type learning model on grade 7 learning outcomes. **Difference** : The discussion in this thesis shows more about the learning outcomes of PKN subjects

## METHOD

### A. Types of Research

The type of approach used is a quantitative approach. Quantitative research is research using statistical data collection methods and numerical analysis to obtain objective and measurable information. The purpose of quantitative research is to test hypotheses, identify relationships between variables, and generalize research results to related populations. This research is often used in the fields of social sciences, economics, and various other disciplines by Conducting research based on numbers or large amounts of data is the main focus of quantitative research (Jannah, 2016). In other words, quantitative research is research that combines rational and empirical ways of thinking that then form hypotheses. The type of research used is using the pseudo-experimental research method *True-Experimental* with the *Postest only control group design*. Because the researcher used subjects randomly. The experimental method is a method used by researchers to find the influence of independent variables on dependent variables under controlled conditions. This study uses two groups, namely the experimental group and the control group by providing treatment and *postest* in each class. Formula *Postest only control group design* as follows:

R X O1

## R X O<sub>2</sub>

Information:

R	: Random
X	: Treatment givent
O <sub>1</sub>	: Result after treatment
O <sub>2</sub>	: Result without treatment

In this design there are two groups chosen randomly (R). The first group given treatment (X) is called the experimental group while the second group is not given treatment or uses the commonly used treatment called the control group.

### B. Data and Data Source

Deep Data source collection, researchers collect data sources in the form of data from values *postest*. Learning outcomes tests are tests in the form of *postest* which measures individual processes in a field such as learning outcomes processes that are intentionally built in the form of knowledge, understanding, skills, attitudes, and values. This tool is used by researchers to measure student learning outcomes related to Arabic language learning after applying NHT to the subjects studied.

### C. Place and Time of research

The research place is at SMP Muhammadiyah 5 Yogyakarta located on Jl. Patehan Lor No.25, Patehan, Kraton District, Yogyakarta City, Special Region of Yogyakarta 55133. The research time starts from October, precisely on Tuesday, November 10 - 23, 2023.

### D. Population and Sample

The population is the entire subject or object related to the study, the population used in this study is grade 7 students of SMP Muhammadiyah 5 Yogyakarta, while the sample is part of the population to be studied, and in this study to test the effectiveness of the NHT type cooperative learning model using *probability sampling* with techniques *Simple random sampling* which uses the method of a random number table. *Probability sampling* is a sampling technique that provides equal opportunities or opportunities for each element or member of the population to be selected as a sample.

In this section the researcher uses *Simple random sampling* Because the number of samples from each class is relatively small and there is homogeneity of class 7A compared to class 7B-7E, using this technique the data obtained has high accuracy. Based on this, it can be known that the sample used is 50 people. Out of a total population of 107 people.

### **E. Data Collection Techniques**

In this section, there are several ways or methods used in data collection such as questionnaires, surveys, and tests. In this study to collect the necessary data, the researcher uses the following data collection method:

#### 1. Observation

The observation made by the researcher was to visit the school and see the state of the students in the classroom when the learning process took place and then conclude the problems that existed in the school.

#### 2. Test

The test used is a test of student learning outcomes after using the NHT-type learning model or *posttest*.

#### 3. Documentation

The researcher provides the material then provides a question sheet and is collected into a document as data on the results of the research.

### **F. Research Instruments**

Research instruments are tools used by researchers in collecting data, in this study researchers use:

#### 1. Question Sheet

The question sheet used by the researcher is a question related to Usrotii material with 3 types of questions, 10 multiple-choice questions, 5 essay questions, and 5 matching questions.

#### 2. Documentation

In this study, the researcher collected question sheet documents that had been answered by students.

### **G. Data Analysis Techniques**

Data analysis techniques are techniques or methods used to process data into information that will be concluded from a research. The technique used is in the form of data *postest*. Evaluation or assessment of student learning outcomes uses several stages as follows:

#### 1. *Descriptive Statistical Analysis*

The data analysis technique used in this study is the descriptive statistical calculation technique. Descriptive statistics is a field of statistics that studies how to collect, compile, and present data for a study and then summarize the data so that it is easy to read and can provide more complete information. According to Dr. Molli Wahyuni (1967) said that descriptive statistics is the process of transforming research data in a form that is easier to understand and interpret. Meanwhile, according to Prof. Dr. Sugiyono (2019), descriptive statistics are statistics that are used to analyze data by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the general public or generalization. So, in descriptive data analysis, only the sample data is described. In this study, data analysis

uses SPSS.

## 2. **Prerequisite Test**

Data prerequisite test is a process to measure or obtain data validly. The validity of a study is a requirement to obtain research results. Validity is describing the ability of an instrument to measure what is to be measured (*Quantitative Research Methodology Book.Pdf*, n.d.). In this study, researchers only describe the results of instrument validation that have been submitted by linguists and education experts.

## 3. **Data Normality Test**

As explained (Widana & Muliani, 2020) regarding the data normality test, they assume that the data normality test is used to test the data whether the empirical data that has been obtained is in accordance with the normal distribution or not. Some statisticians explain that if the amount of data is more than 30 ( $n > 30$ ) then the data is assumed to be normal data, but that does not mean that data less than 30 ( $n < 30$ ) is not normally distributed. Therefore, researchers use parametric statistical analysis (inferencial) with *Kolmogorov-Smirnov analysis techniques* because the amount of data to be analyzed is more than 30. The basis for decision making in the normality test is that if the significance value is greater than  $> 0.05$  then the data is normally distributed, otherwise if the significance value is less than  $< 0.05$  then the data is not normally distributed.

## 4. **Data homogeneity test**

In statistical data analysis, the data homogeneity test becomes a prerequisite test to prove whether two or more groups of sample data come from populations with the same variance or not. The purpose of the data homogeneity test is as a parametric statistical test such as t test, regression test and anova test. The homogeneity test formula is as follows:

$$F = \frac{S^2}{S^1}$$

*Information:*

S2 : The greatest variance

S1 : Smallest variance

The results of the homogeneity test data from the research sample showed that the distribution of homogeneous data, with the following decision making:

- If the significance value  $< 0.05$ , the data is not homogeneous
- If the significance value  $> 0.05$ , then the data is homogeneous.

## 5. **Independent t-test**

The independent t test is used to find out whether there is an average difference between two unpaired samples (the subjects are different with different treatments) and the main requirement in this test is that the data must be

normally distributed and homogeneous (not absolute). Therefore, the independent t test in this study is to determine the effect of the effectiveness of the NHT type cooperative learning model on learning outcomes. The hypothesis test carried out is a t test with the following formula for independent t test of different variances:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$
$$DF = \frac{\left(\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}\right)^2}{\left[\left(\frac{s_1^2}{n_1}\right)^2 / (n_1 - 1)\right] + \left[\left(\frac{s_2^2}{n_2}\right)^2 / (n_2 - 1)\right]}$$

*Information:*

- $\bar{x}_1$  = average group 1
- $\bar{x}_2$  = average group 2
- $n_1$  = total group 1
- $n_2$  = total group 2
- $s_1$  = standard deviation group 1
- $s_2$  = standard deviation group 2

## 6. Hypothesis

Based on the theoretical study in this study, the researcher proposed a hypothesis, namely:

- a. There is a difference between the cognitive learning outcomes of students in Arabic subjects using NHT-type learning models compared to students using conventional methods (lectures).
- b.  $H_0$  :  $\mu_1 = \mu_2$   
 $H_1$  :  $\mu_1 \neq \mu_2$

## RESULT AND DISCUSSION

### A. Research Results

SMP Muhammadiyah 5 Yogyakarta is located on Jl. Patehan Lor No.25, Patehan, Kraton District, Yogyakarta City, Special Region of Yogyakarta. The physical condition of the school can be said to be good, this can be seen from the rooms, buildings, and cleanliness of the school environment which is very well maintained. Since the ongoing research in schools, researchers found several problems related to the learning process in the classroom, especially in grade 7 Arabic subjects.

Based on monitoring in the classroom during the Arabic lesson, the teacher uses



the lecture method. This results in students becoming bored in learning because of the lack of student involvement in learning. Not only bored, many of them do not pay attention to the teacher when explaining the material. In the world of education and learning, the interaction between teachers and students is very important because it will affect the learning outcomes of these students.

For grade 7 students, Arabic lessons become a difficult subject to understand, so that learning outcomes are low based on the results of conversations with Arabic teachers and in essence each subject has its own level of difficulty, teachers must be good at choosing a learning model that suits the needs of their students so that the material delivered can be understood well and not boring.

There are 4 components that teachers must have to improve learning success, namely: Pedagogic, personality, professional, and social. If these components are met, the next step is to determine the learning model. The learning model must be adjusted to the conditions of students in class, until now Arabic teachers in grade 7 still use the lecture method which only explains the material and then tells to take notes and answer questions. As for the students who want to ask questions, the teacher does not immediately give answers but asks students to try to think for themselves until they get answers.

From this, it can be concluded that the Arabic learning model used in grade 7 is less effective, judging from the students' scores that are much below average. Seeing from these various shortcomings and problems, it is necessary to improve the learning model so that student learning outcomes increase.

In this study, researchers tried to apply the NHT type cooperative learning model, the method has never been applied by Arabic teachers in schools. Researchers will use class 7B-7E to be used as a population and random sample of 50 i.e. 25 from the experimental class and 25 from the control class, class 7A is not used because of the special class ICT. The Experimental class consists of classes 7D and 7E, and the control class consists of classes 7B and 7C. The experimental class is a class that uses the NHT type cooperative learning model treatment, while the control class is a class that does not get treatment or uses the original method, namely the lecture method.

From the results of the study, the researcher used several stages during the implementation action, including the following:

### **1. Validation of Research Instruments**

Before testing students, the researcher validated the instrument of *the post test*, the instrument was validated by education experts and linguists. On November 10, 2023, this *post test* question instrument was declared **valid** (suitable for use) by linguists, and on November 16, 2023, the *post test question instrument* was also declared **valid** (suitable for use). The next stage is to carry out treatment using the NHT-type cooperative learning model on students in grades 7D and 7E practiced by the researcher because the Arabic language teacher did not understand this model, while classes 7B and 7C continued to use the lecture method practiced by the Arabic teacher, The random sample taken for the experimental class was 25 from classes 7D and 7E and 25 from the control class from classes 7B and 7C.

### **2. First Meeting**

**a. Planning**

The planning action stage at the first meeting, which will be held on November 13, 2023 for class 7E, November 14 for class 7B, November 15 for class 7D, and November 16 for class 7C.

- 1) Create a Learning Implementation Plan (RPP) that will be used by researchers as a guide during learning.
- 2) Prepare learning materials

**b. Implementation**

The 1st meeting will be held on November 13, 2023 for class 7E, November 14 for class 7B, November 15 for class 7D, and November 16 for class 7C. In accordance with the RPP that has been made by researchers, this first meeting of researchers and Arabic teachers conducted learning practices using lecture methods and NHT type cooperative learning models.

At the stage of implementation of meeting 1, the data obtained can be concluded that the state of the students in the experimental class, namely classes 7D and 7E, is very excited, while the control class, namely classes 7B and 7C, does not respond when the teacher explains and looks bored so they are busy themselves.

**3. Second Meeting**

**a. Planning**

The planning action phase of the 2nd meeting, which will be held on November 20, 2023 for class 7E, November 21, 2023 for class 7B, November 22, 2023 for class 7D, and November 23, 2023 for class 7C. The activities carried out by researchers are:

- 1) Create a Learning Implementation Plan (RPP) that will be used by researchers as a guide during learning.
- 2) Prepare post test *question sheets* for students, the results of *the post test* exam will measure changes in this study.

**b. Implementation**

This 2nd meeting will be held on November 20, 2023 for class 7E, November 21, 2023 for class 7B, November 22, 2023 for class 7D, and November 23, 2023 for class 7C. Researchers asked students to do a *prepared posttest* question sheet.

The results of the 2nd meeting of the data obtained can be concluded that students of grades 7D and 7E are focused and earnest in doing the questions, while classes 7B and 7C seem to have difficulty in answering many who are confused about the answers to the questions. This situation can prove that there is a difference between the experimental class and the control class in answering the questions.

## B. Discussion

### 1. Learning Outcomes of NHT type Cooperative Model

Based on the results of research after applying the NHT type cooperative learning model, many changes and improvements have occurred in students such as being active in group discussions, daring to answer questions, being able to interact and exchange opinions with each other regarding the questions given to each group. Learning while discussing and answering questions based on lottery numbers given by the teacher makes students serious in understanding the material, and a sense of responsibility arises.

In addition, the NHT type cooperative learning model can also train students in improving four skills in Arabic and changing the classroom to be more fun.

### 2. Data Analysis Results

#### a. Descriptive Analysis

Descriptive statistical measurements need to be done to see a general picture such as the average value (Mean), highest (Max), lowest (Min), and standard deviation of each class. Regarding the results of descriptive statistical tests of research can be seen in the table below:

**Table 1**  
**Descriptive Statistical Test Results**  
 Statistics

		<u>Post Eks</u> <u>perimen</u>	<u>Post Kon</u> <u>trol</u>
N	Valid	25	25
	Missing	0	0
Mean		75.76	59.48
Std. Error of Mean		2.772	2.586
Median		77.00	63.00
Mode		75	46 <sup>a</sup>
Std. Deviation		13.860	12.930
Variance		192.107	167.177
Range		53	39
Minimum		47	40
Maximum		100	79
Sum		1894	1487

a. Multiple modes exist. The smallest value is shown

Based on the results of the Descriptive Statistical Test above, we can describe the distribution of data obtained by researchers is:

1. The Experimental Class has a minimum *post test* score of 47 while the maximum is 100 and the average experimental class score is 75.76. The

standard deviation of its student grade data is 13,860.

2. The Control Class had a minimum *post test score* of 40 while the maximum was 79 and the average score of the control class was 59.48. The standard deviation of the student score data is 12,930.

**b. Data Normality Test**

The normality test was carried out on two data, namely the post test data of the experimental group and the control group. In this study, the normality test was obtained using *the Kolmogorof-smirnov test*. The normality test is used to find out whether the data is normally distributed or not, provided that the data is normally distributed if it meets the criteria for a significance value of  $> 0.05$ . For more clarity, the results of the normality test of the experimental group and the control group can be seen in the following table:

**Table 2**

**Data Normality Test**

		Tests of Normality					
		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
Kelas		Statistic	df	Sig.	Statistic	df	Sig.
Hasil	Post_Eksperimen	.169	25	.062	.957	25	.354
	Post_Kontrol	.153	25	.136	.911	25	.032

a. Lilliefors Significance Correction

Based on the table above, for all data of the experimental group and the control group and *the post test*, it shows that the significance value of *Kolmogorof-smirnov*  $> 0.05$ . So, the conclusion of this distribution is to declare normal with the significance value of the experimental group which is 0.062 and the control group which is 0.136. Because the research data is normally distributed, the research can be continued using parametric statistics, including:

1. Test Paired sample t test
2. Homogeneity Test
3. Independent Test

This study did not use a t test sample test because the samples used were not paired.

**c. Homogeneity Test**

Before conducting an independent sample t test in two research groups, there is a condition that will be carried out, namely looking for homogeneity values. In this study, the homogeneity value was obtained by using *the homogeneity of variance test*. In this sample, it is declared homogeneous if the significance value Based on *Mean*  $> 0.05$ . If the data is not homogeneous (conditions are not met), then the next test can be carried out with the *Mann Whitney test*. The results of the homogeneity test of the two groups of research samples can be seen from the following table:

**Table 3**

## Homogeneity Test

### Test of Homogeneity of Variance

		Levene			
		Statistic	df1	df2	Sig.
<u>Hasil Belajar</u>	Based on Mean	.311	1	48	.580
	Based on Median	.226	1	48	.637
	Based on Median and with adjusted df	.226	1	44.188	.637
	Based on trimmed mean	.315	1	48	.577

Based on the table above, the significance value of *Based on Mean*  $> 0.05$  can be obtained so that it can be concluded that the variance of the post test data of the Experiment group and the post test of the Control group is the same or homogeneous, thus one of the conditions (not absolute) of the *independent sample t test* has been met.

#### **d. Independent Sample t test**

The *independent t test* was carried out to find out if there was an average difference between two unpaired samples. The requirements to conduct this test are normal and homogeneous (non-absolute) distributed data, in addition to answering whether there is a difference between the average values of the experimental group using the NHT model and the control group using the lecture model. This test was carried out on *post test data* of the experimental group and the control group. From this statement, it can be concluded that the *independent t test* was carried out to see if there was a difference in the *results of the post test* of students from the experimental group and the control group. The results of the calculation of the hypothesis test can be seen in the following table:

**Table 4**  
**Independent test sample t test**

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed )	Mean Differ ence	Std. Error Differ ence	95% Confidence Interval of the Difference Lower Upper	
Hasil Belajar	Equal variances assumed	.311	.580	4.294	48	.000	16.280	3.791	8.658	23.902
	Equal variances not assumed			4.294	47.770	.000	16.280	3.791	8.657	23.903

Based on the table above, a significant value is obtained. (2-tailed) of  $0.000 < 0.05$ , it can be concluded that there is a difference in average student learning outcomes between the NHT learning model and the lecture model.

To find out more clearly the *average posttest* of the experimental group and control group can be seen in the following statistical table:

**Group Statistics**

Kelas		N	Mean	Std. Deviation	Std. Error Mean
Hasil Belajar	Post Eksperimen	25	75.76	13.860	2.772
	Post Kontrol	25	59.48	12.930	2.586

Based on the table above, it can be seen that the average *post test score* of experimental group students is 75.76, while the average *post test score* of control group students is 59.48.

## CONCLUSION AND RECOMMENDATION

### A. Conclusion

Based on the results of the research obtained, it can be concluded, among others, as follows:

1. The learning carried out by teachers during the application of the NHT model has increased where at the first meeting the spirit and atmosphere of the class became active, especially in classes 7D and 7E which are experimental classes. This is evidenced by the *students' post test* scores above the average with the mean in the experimental class which is 75.76, while the control class is 59.48.
2. As long as teachers use the NHT model in Arabic language learning, students' learning outcomes increase compared to those who use the lecture

method, and the learning model is effectively used. It is evident from the data analysis test such as the results of descriptive statistical analysis of the median value of 77.00 for the experimental class and 63.00 for the control class, the data normality test of the experimental and control classes shows that the significance value of *Kolmogorof-smirnov*  $> 0.05$ , this distribution is normal with the significance value of the experimental group which is 0.062 and the control group which is 0.136. Furthermore, the homogeneity test, which is a parametric statistical test with data analysis obtained at the value of sig Based on mean 0.580 greater than 0.05, it can be concluded that the variance of the data of the experimental class and the control class is homogeneous because the results of the data are greater than 0.05. So one of the (not absolute) requirements of the independent sample t test has been met.

Furthermore, namely the independent sample t test, it can be found that the value of sig 2 tailed 0.000 is less than 0.05, then  $H_0$  is rejected  $H_a$  accepted, it can be concluded that there is a significant difference in the average learning outcomes of students between learning using the NHT model and learning that does not use the NHT model, namely the lecture method. From the results of the overall analysis, it can be concluded that the NHT Model is effective in improving the learning outcomes of 7th grade students of SMP Muhammadiyah 5 Yogyakarta.

## B. Recommendation

### 1. *For Teachers*

It can improve professionalism in managing learning so that it can realize the quality of the student learning process and outcomes, in addition to that new information will be obtained about the effectiveness of the NHT model in Arabic language learning and develop the creativity of teachers as facilitators in the teaching process so that the quality of learning can be improved.

### 2. *For Students*

- a. Increase your activeness and earnestness in learning so that you can understand the material well.
- b. Efficient time in the learning process, by using the best possible time when teachers deliver material so as not to be left behind.
- c. Don't give up and change your mindset, it will be difficult to learn Arabic, because your mindset will greatly affect the actions you take
- d. Increase your curiosity and don't be afraid to ask. Because people who don't want to ask will get lost on the road.
- e. Love Arabic subjects

### 3. *For the next researcher*

If you want to use the NHT model in learning, adjust it first to the needs of students and do as much as possible so that the output produced is optimal. In

addition, it can develop a more creative learning model so that students learn in a fun and easy-to-understand way.

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