

## CHAPTER III

### METHOD OF THE RESEARCH

In this chapter, the writer explains about design of the research, population and sample, instrument of the research, data collection, and data analysis.

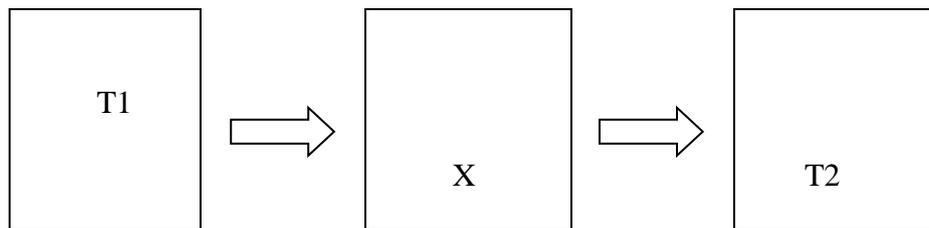
#### 1.1 Design of the Research

This research uses quantitative experimental research to find out the answer of the question in the chapter one. This research is done to know the significant difference between ability of reading recount text of the eighth grade students of MTs Nurul Huda Kaliwungu Kudus in the academic year 2013/2014 before and after being taught by using Two Stay Two Stray. The writer needs to collect data then do analysis of the data to know about it.

There are two variables that will be used in this research. The variable are as follows:

1. Independent variable in this research is Two Stay Two Stray.
2. Dependent variable in this research is ability of reading recount text of the eighth grade students of MTs Nurul Huda Kaliwungu Kudus in the academic year 2013/2014.

This experiment research design uses one group with pre-test and post-test. The writer gives pre-test to the subject in order to find out their ability in reading recount text before taught by using Two Stay Two Stray. And a post-test is a test that subject took after a certain technique or treatment was applied. According to Ali (1984:136), it will be shown in the diagram below:



Note:

T1: Pre-test

T2: Post-test

X: Treatment

In this research activity, pre-test is done before giving a treatment, and post-test is done after giving a treatment to the students.

## 1.2 Population and Sample

According to Arikunto (2002:108) "Population is the entire group of entire of person to which result of the study is intended to apply".

Ali (1984:54) says that sample is part of the whole object that is researched and assumed presenting toward the whole of object of population and it takes by using certain technique.

In this case, the population of this research was the whole eighth grade students of MTs Nurul Huda Kaliwungu Kudus who are divided into seven classes: A, B, C, D, E, F, and G. Each class consisted of 35 students. So the total of the eighth grade students of MTs Nurul Huda Kaliwungu Kudus in the academic year 2013/2014 was 245.

Next, sample which is used in a research have to represent for its population, the researcher determines to take the sample by using cluster random

sampling technique through lottery. The sample of this research was the eighth year students of MTs Nurul Huda Kaliwungu Kudus in the academic year 2013/2014 which was taken one class (VIII E) as experimental group.

### **1.3 Instrument of the Research**

Research instrument is one of the most important thing in research. To measure the English reading of Recount text, the writer used test as instrument of the research. Arikunto (2002:160) argues that research instrument is means of facility used by the researchers to collect the data for good result accurately, completely, systematically, and easy to be analyses.

Arikunto (2002:127) divides the instrument of the research into test and non-test. He says that test is a series of questionnaire exercise to measure skill, knowledge intelligence, ability and talent possessed by individual or group. On the other hand, non-test includes questionnaire, interview, observation, and documentation.

According Brown (2004:3), Test is a method of measuring a person ability, knowledge, or performance an a given domain. While Arikunto says that “ Test is a series of question or exercise use to measure skills, knowledge, intelligencies, abilities or talent possed by individual or group.”

To measure the ability of reading recount text of the eighth grade students of MTs NU Nurul Huda Kaliwungu Kudus in academic year 2013/2014 taught by using Two Stay Two Stray, the writer used test. In this research the writer used written test ( multiple choices) that consist of forty items. The items of pretest and posttest were similar. Because of there are forty items, so the test score were

obtained by multiplying the number of correct answer by 2.5. Therefore, the highest score will be 100 and the lower score will be 0. The data description of the students' test score will be classified into five criteria. According to Hamalik in Inayati (2011:46), the criteria are following:

Table 3.1 the criteria of measuring the test score is as follow:

Score	Criteria	Notes
85-100	A	Excellent
70-84	B	Good
55-69	C	Sufficient
40-54	D	Fair
0-39	E	Poor

The test used validity and reliability to get the accurate data. Validity means that the test should be standardized based on the curriculum, while reability shows the stability of the test scores when test is used. To get the validity of the test and to measure the content of each item, the writer made the test specification for the eighth grade students of MTs Nurul Huda Kudus in the academic year 2013/2014. The reability of the test was calculated by the formula as stated by Arikunto (2002:157) as follow:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} - \{N \sum Y^2 - (\sum Y)^2\}}}$$

Notes:

$r_{xy}$  : the correlation of X variable and Y variable

N : the number of respondents

$\Sigma X$  : the sum of X scores

$\Sigma Y$  : the sum of Y scores

$\Sigma XY$  : the sum of the results of X and Y scored for each students

$\Sigma X^2$  : the sum of X scores of X square

$\Sigma Y^2$  : the sum of Y scores of Y square

The result of the computation was calculated into Spearman Brown formula to estimate the reliability of the whole test. The formula can be expressed as follow:

$$r_{11} = \frac{2(r_{xy})}{1 + r_{xy}}$$

Notes:

$r_{11}$  : the obtained reliability of entire test

$r_{xy}$  : the obtained reliability of half test

In this research to know the reliability of the test, the writer took class VIII D and gave try out in class VIII D.

Based on Ali (1984:188) in judging the reliability of the test, the writer used the following criteria:

Table 3.2 the Criteria of Reliability Test

<b>Reliability</b>	<b>Notes</b>
0.00 – 0.20	Not reliable
0.21 – 0.40	Low reliable
0.41 – 0.60	Medium reliable
0.61 – 0.80	High reliable
0.81 – 1.00	Very high reliable

After computing the data of the research and based on the criteria of the reability, the writer knew the reliable of the test is 0.73, so it can be said that the test has high reliability.

#### **1.4 Data Collecting**

The researcher conducted several steps to collect the data needed before doing research. The researcher did some activity as follows:

1. Asking permission to the dean of Teacher Training and Education Faculty to do the research.
2. Asking permission from the headmaster of MTs Nurul Huda Kaliwungu Kudus to do the research by bringing the letter from faculty.
3. Preparing the material of teaching process
4. Choosing the classes as the experimental group
5. Giving pretest to the experimental group

6. Doing the treatment on the experimental group using Two Stay Two Stray in teaching reading recount text for four times.
7. Giving posttest to the experimental group
8. Collecting the result of posttest that has been done by the students as the data to be analyzed. Then comparing in the data of experimental group to know the result of the writer hypothesis.

### 1.5 Data Analysis

Based on the statement of the problem above, the data that should be analyzed are:

1. Score of pre-test that is used before using Two Stay Two Stray as a strategy of teaching reading recount text.
2. Score of post-test that is used after using Two Stay Two Stray as a strategy of teaching reading recount text.

After gather the data, the researcher uses the following steps:

1. Calculating the mean of pre-test score and post-test score. The formula of

Mean score is:

$$X = \frac{\sum fx}{N}$$

Notes :

X = Mean

f = Frequency

x = Middle Grade

N = Number of Sample

2. Calculating the Standard Deviation of pre-test and post-test score. The formula of Standard Deviation is:

$$SD = \sqrt{\frac{\sum fx'^2}{N} - \left[\frac{\sum fx'}{N}\right]^2}$$

Notes:

SD : standard deviation

i : interval

f : frequency

$x^1$  : middle score of interval class

N : number of sample

3. Calculating the t (obtained) by using the formula as follow:

$$t_o = \frac{\bar{D}}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

Notes:

$t_o$  : the t value for dependent (correlated) means

D : the difference between the paired score

$\bar{D}$  : the mean of difference

$\sum D^2$  : the sum of squared difference scores

N : the number of pairs

4. Testing the hypothesis that has been formulated using the following steps:
- Making assumption and meeting requirements
  - Stating the null hypothesis

**H<sub>0</sub> :  $\mu_1 = \mu_2$**

**(H<sub>a</sub>:  $\mu_1 \neq \mu_2$ )**

**H<sub>0</sub>**: there is no a significant difference between the ability of reading recount text of the eighth grade students of MTs Nurul Huda Kaliwungu Kudus in the academic year 2013/2014 before and after being taught by using Two Stay Two Stray.

**H<sub>a</sub>**: there is a significant difference between the ability of reading recount text of the eighth grade students of MTs Nurul Huda Kaliwungu Kudus in the academic year 2013/2014 before and after being taught by using Two Stay Two Stray.

- c. Selecting the sampling distribution and establishing the Critical Region
- d. Computing the test statistic

Making a decision and interpreting the result of the test.