

CHAPTER III

RESEARCH METHOD

This chapter discusses about the research methods used in this study. It covers the discussion of the research design, subject of research, variable of research, data collection method and instrument, data collection, data analysis, hypothesis testing.

A. Research Design

Research is the study of materials, sources and data in order to get conclusions (libweb.surrey.ac.uk). Arikunto (1997: 45) state that research design is a design used by the researcher as the guidance in carrying out a research. Research has uncovered many fine-grained, specific, unexpected attitudes and behaviors of teachers and principals that relate to student achievement (Davis and Thomas, 1989 : 2).

In this research, the writer uses the quantitative research to achieve the purpose. The writer used experimental research to conduct her study. Experimental research measures the effect of one manipulated and controlled (independent) variable to another (dependent) variable, like the effect of different methods of teaching to the students' achievement, the effect of an English training method to participants' English skills (Latief, Adnan: 2011 : 93). Experimental research is a research method that tests the hypothesis which has the form of cause

and effect relations by manipulating defendant variable during manipulating time, the writer has to control extraneous variable, perhaps the transitional that occurred really as an effect of manipulating which is not caused by other variables (Darmadi:2011). Experiments are carried out in order to explore the strength of relationship between variables. In experiment, the researcher's goal is to establish a cause and effect relationship between two phenomena. The researcher aims to establish that one variable, the independent variable, causes in another variable, that is the dependent variable.

This research is intended to investigate the effectiveness of using summarization technique in teaching reading comprehension of the second year student at MTsN Pucanglaban Tulungagung. There are two major classes of experimental designs, single-variable designs, which involve one independent variable, and factorial designs, which involve two or more independent variables. Single-variable designs are classified as pre-experimental, true experimental and quasi experimental (Gay, 1992:318). This study uses Pre-experimental design. Differences attributed to application of the experimental treatment are then evaluated by comparing the pretest and post-test scores (Donald Ary : 2010 : 327).

The effectiveness of the instructional treatment is measured by comparing the average score of the pretest and the posttest. So, in this study, the researcher choose quantitative research and use pre-experimental design. It use pre-test and pro-test to compare the score before and after using summarization technique in teaching reading comprehension.

B. Place and time of research

Place of the research is a place of the study process in which the research conducted. In this study, the researcher decided to choose MTsN Pucanglaban Tulungagung. Time of research was on June 2013.

C. Subject of Research

1. Population

Population is the object / subject that have some qualities and characteristics that are chosen to be learned and to be concluded by the researcher (Sugiyono, 2010:117). A population is all the subject research (Arikunto, 2006:130), states that a population is a set (or correction) of all elements processing one or more attribute of interest.

The population in this research is the second year students of MTsN Pucanglaban Tulungagung in the academic year 2012/ 2013.

2. Sampling or Sample

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected. The purpose of sampling is to gain information about a population; rarely is a study conducted that includes the total population of interest as subjects (Gay, 1992:123). In this study, the writer chooses the second grade students' of MTsN Pucanglaban Tulungagung. For the sample, the writer choose VIII-A class which consists of 34 students.

This number is considering to be representative (more or less 20% of the population) as Arikunto (2002:112) suggested that “if the population of the research are less than 100, it is better to take all the population and if more than 100, it is suggested to take 10-15 % of 20-25% or depend on researcher necessity”. This number of sample is representative enough as the subject of the research.

D. Variable of research

Variable is a key term in research. Every research involves variables to be measured. When the variables are not clear, it is difficult for the researcher to conduct the research (Latief, Adnan: 2011 : 10). According to Ary (2006:39) Variable is a construct or a characteristic that can take on different values or score. Suharsimi (2006:118) said that variable is object of research or that become point of research. Based on the title of the thesis, it has two variables; they have independent variable and dependent variable. Independent variable often called as stimulus, predictor, and antecedent. Independent variable is a variable which influences and give special effects in dependent variable. Dependent variable is a variable that emerge in function relationship influenced by independent variable. Independent variables and dependent variables are used in causal designs which measure the effect of independent variables to the dependent variables (Latief, Adnan:2011:11). Independent variable in this research is the use of summarization technique and dependent variable in this research is the student’s achievement in reading comprehension.

E. Data Collection Method and Instrument

Data collection method means that the researcher needs to take the information to collect the data from any source (Sugiyono,2009:308).There are many instruments used to collect data such as observation, documentation, interview and test. Using instrument is one of the significant steps in conducting the research. Therefore the writer must choose some instrument in data gathering process. In this research the researcher hopes that, this study attempts to discover the effectiveness of using summarization technique on the reading comprehension. Concerning with the aim, here in collecting data the researcher uses documentation and test.

1. Test

Test is a sequence of questions or practice which used to measure skill, intelligence knowledge, ability or potency of someone or a group (Suharsimi: 2010:193). According to Arikunto (2006:150), a test is a set of stimuli presented to individual in order to elicit responses on the basis of which a numerical score can be assigned. Thus a test is a method to gain the data by giving some questions to the respondent.

Because the writer uses pre experimental design, there will be pre-test and post-test here. Pre-test will be given to the students before they get a treatment and post-test will be given after they get a treatment. The test produces numerical score that can be used identify or evaluate test taker. Then the writer compares both of the score.

The type of test is a simple reading comprehension they learnt or the material they got in the class. The test items are constructed by researcher and the items are used to develop reading comprehension mastery.

The forms of test are made in the following form:

- a. Answering the question 15 items. The students must answer the question based on the text that they learn. The total score is 75, so the score for each number is 5.
- b. Re-tell or re-write the text (summary) that consists of 1 item. The students must re-write with their own language. The score is 25.

A good instrument posses four quality, they are validity, reliability, normality and homogeneity.

a. Validity

The result instrument must be having reliability and validity. There are four types of validity, they are face validity, content validity, construct validity, criterion-related validity, empirical validity (Isnawati:2011:28). The researcher cheek the validity of the content validity that is from content and structures' question of the test.

The researcher emphasizes on the content validity in this research. Content validity is a kind of validity which depend on a careful analisis of the language being tested and of the particular test. A test is said to have content validity if its contents constitutes a representative sample of the language skills, structures, etc. being tested (Isnawati:2011:27).

The validity of an assessment measure or tool indicates the extent to which it is an adequate measure of the curriculum and objectives it represent. There are several types of validity, but the most important type for classroom teachers to understand is *content validity*. Content validity is attained when there is a close match between the content of the assessment and that of the curriculum and instruction. When students are assessed on the material that they have been studying in the classroom, the assessment measure can be said to have content validity. In this test, the researcher asked students to answer the question based on the text and make summary based on their own language in learning reading.

The content validity in this research can be showed as below:

Table 3.1. Content validity

No	Competence indicators	Test item	Percentage
1	Students are able to answer the question based on the text	1-15	93.75%
2	Students are able to re-write or make summary based on the text with their own language	1	6.25%
	Total	16	100%

The construct validity of test is test which is capable of measuring certain specific characteristics in accordance with a theory of language behavior and learning (Heaton, 1975:159). Based on the theory above, in the test, the researcher asked the students to answer the question and make summary and this fulfill the construct of vocabulary test and therefore valid in term of construct validity.

b. Reliability

Reliability is the characteristic of very good test for it to be valid. A test must be reliable as a measuring instrument. Reliability of an assessment measure refers to the degree of consistency of the assessment in producing the same result with the same student in different testing settings or at different points in time or when being evaluated by different teachers or raters. As with validity, the higher the stakes for the assessment results, the more essential it is for a high level of reliability to be established in the assessment process and measures (Carles, 2003:329).

The researcher analyzed the correlation of two scores by using pearson correlation which is called product moment pearson. For analyzing the correlation, the researcher used spss 16.0.

From the correlation analyzing, the researcher got the correlation of two scores. The value of correlation is 0.987. It means that the correlation of score 1 and score 2 is very strong, because the value is between 0.80 – 1.000. From the above evidence, it was found that this test is very reliable.

c. Homogeneity

Homogeneity testing is intended to make sure that the collected manipulation data in analysis is truly taken from a population which is too different each other. Especially in a correlative study which is predictive, the model which is used must be appropriate with the composition and its distribution.

VAR00001					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	410.567	6	68.428	1.368	.269
Within Groups	1150.400	23	50.017		
Total	1560.967	29			

The test is called homogen if the significant score more than 0.050. Based on the table above, the test is homogeneity because $0.269 > 0.050$.

d. Normality

Normality distribution test is a test to measure whether our data has a normal distribution, so it can use in a parametric statistic. Here the researcher uses *Kolmogorov-Smirnov* test.

		VAR00001	VAR00002
N		30	30
Normal Parameters ^a	Mean	84.37	90.43

	Std. Deviation	7.337	3.360
Most Extreme Differences	Absolute	.124	.179
	Positive	.124	.154
	Negative	-.093	-.179
Kolmogorov-Smirnov Z		.680	.983
Asymp. Sig. (2-tailed)		.744	.289

a. Test distribution is Normal.

Based on the table above, the result which is shown the score of Z are 0.744 and 0.289, it means that the data is normal because the score is bigger than 0.050 ($p > 0.05$).

F. Data Collection

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes (niu.edu/rcrportal/datamanagement/dctopic). Data means all information that directly gathered from the subject. The data are the items obtained through the test pertaining with the students' ability on English vocabulary.

In collecting data, the writer in pre-test used 16 questions consist of 15 essay question based on the text and 1 summarization. In post-test, the writer also used 16 questions consist of 15 essay question based on the text and 1 summarization. The test is applied to find out the result of the use summarization technique in teaching English reading comprehension.

The data are based on the result of test on reading comprehension. In collecting the data there are some steps which is done by the researcher after get the permission :

First: the researcher comes to the classroom to introduce herself and tell that she'll teach English subject for some meetings. It can be done in 10 minutes. Then the researcher teach the reading comprehension based on the material that day as usual method which used by their English teacher. The researcher asked the students to read the text which is given by the researcher. After that, the researcher asked the students to translate the text one by one. One student got one sentence and translate it into Indonesian after they read the English text. All of that activity are conducted for 30 minutes. Next, the researcher asked the students to do assignment (pre-test).

Second: Before the researcher continues to teach the next material, the teacher reviews the last material first for 10 minutes. The researcher delivers the new material. She introduces using summarization technique in reading comprehension. Firstly the researcher gives a text to read by students and then they learn to translate the word and find the main idea in each paragraph in the text.

Thirdly: After they have known about that, the researcher gives the post test to know students' reading comprehension. The second test is different from the first test but it has the same level of difficulty.

The last: After the class has been exposed to the treatment for some period of time and has been given pre test and post test, the researcher classifies and

analyzes the data and then determines whether there is any significant effect of teaching using summarization technique on the students reading comprehension achievement.

G. Data Analysis

Quantitative data analyzes is also called as statistical analysis. It means that the result of the data served up in numerical form. Here the researcher uses t-test formula to analyze the data in order to know the students' test result which are conducted before and after using summarization technique in reading comprehension. The description of t-test is as follows (Butler:1985:91):

$$t = \frac{\sum d}{\sqrt{\frac{N(\sum d^2) - (\sum d)^2}{(N-1)}}$$

d = the differences between the score 1 and 2

$\sum d$ = the sum of differences score

d^2 = the squared differences between score 1 and 2

$\sum d^2$ = the sum of the squared differences score

N = the number of pairs

H. Hypothesis Testing

The t-test of this study is given under the 5 % level of significance . If the result of computed t-test is less or same as the value of t- table, Ho (null hypothesis) is accepted (Butler:1985). The result of the research read as “There is no significant influence of using summarization technique in teaching reading comprehension of the second years of MTsN Pucanglaban Tulungagung”.

In contrast, if the result of t-test is more than the value of t table, Ho (null hypothesis) is rejected. Consequently, the result of this study is “There is significant influence of using summarization technique in teaching reading comprehension of the second years of MTsN Pucanglaban Tulungagung”.