CHAPTER III

RESEARCH METHOD

In this chapter, the researcher would like to explain the research method. It focuses on the method uses in conducting study. Some aspects discussed, are; research design, time and place of the study, population and sampling, data collection, and data analysis. The explanation of the each item would be discussed as follow;

A. Research Design

The method of research in this study is experimental research. Experimental research is a procedure for testing a hypothesis by setting up the situation in which the strength of the relationship between variables can be tasted. According to Nunan (1992:41), there were three kinds of experimental methods namely pre experiment, true experiment, and quasi experiment. Pre experiment is may have pre and post treatment test, but lack a control group. True experiment has both pre and post tests and experimental and control groups, and random the assignment of subjects. And quasi experimental has both pre and post tests and experimental and control groups, but no random assignment of subjects.

In this research, the researcher conducted the research by using quasi-experimental research design. Fraenkel, Wallen, and Hyun (1932) explain that quasi experimental design does not include the use of random assignment. J.W. Creswell (2009:158) also said that in quasi-experiments, the investigator uses control and experimental groups but does not randomly assign participants to group (e.g. they may be intact groups available to the researcher).

Finally, the researcher gives certain treatment to the students to find assessment of how is the effect of using vocabulary self-collection (VSS) in students' vocabulary mastery with quasi experimental research.

The process of teaching, the differences between experimental group and control group was only about the strategy used. The material and the time allocation of the two groups were the same. Both of groups took a pre-test and post-test, but only the experiment group received the treatment. Therefore the researcher administered a pre-test and post-test for the two groups, but there was only one group which was taught by Vocabulary Self-collection Strategy (VSS). The design of the experiment can be described as follows:

Group	Teaching Vocabulary	Treatment	Teaching Vocabulary
Experimental	Pre-test	Using VSS Strategy	Post-test
Control	Pre-test	Without VSS Strategy	Post-test

Based on the research design above, the researcher involved two groups to conduct this research. First, experimental group which will receiving the treatment by using Vocabulary Self-collection Strategy (VSS) and the second group which was taught without using Vocabulary Self-collection Strategy as the control group.

In order to measure the two group initial ability, a pre-test was carried out. The experimental group received the treatment that taught by using Vocabulary Self-collection Strategy (VSS), but the control group was taught using commercial strategy. The researcher administered post-test for both groups to measure the students' achievement after they received the treatment.

B. Time and Place of the Study

In this research, the resaearcher takes place for research at MA MA'ARIF UDANAWU is located in Raya Bakung street No.8, Udanawu, Blitar. The school has 45 classrooms. It consists of 15 classes for grade X, 15 classes for grade XI, and 15 classes for grade XII. The writer does the research at the first grade of MA MA'ARIF UDANAWU as the subject or place of the research.

The research was conducted in 5 meetings. The first meeting was conducted at Thursday, October 18th 2018 as a pre-test. The treatment was given in 3 meetings at Thursday, October 25th 2018, Thursday, November 1st 2018 and Thursday, November 8th 2018. Meanwhile, the post-test was given at Thursday, November 15th 2018.

C. Population and Sampling

Population is all cases, situations, or individuals who share one or more characteristics (Nunan, 1992:231). Meanwhile, Akinade & Owolabi (2009:72) defined population as the total set of observations from which a sample is drawn. So that, population was a total set of observations which a sample is drawn that share one or more characteristic.

In this research, the researcher took population from all students at first grade of MA MA'ARIF UDANAWU academic year 2018/2019 with total number of the population was 600 students.

Sample is a subset of individuals or cases from within a population (Nunan, 1992:232). In this research, the researcher used purposive sampling technique to take the sample. Purposive sampling also known as judgmental, selective or subjective sampling,

purposive sampling relies on the judgment of the researcher when it comes to selecting the units. As stated by Adler & Clark (2008:121) in purposive sampling, the researcher selects sampling units based on his or her judgment of what units will facilitate an investigation. The main goal of purposive sampling is to focus on particular characteristics of a population that are interest, which will best enable you to answer your research questions.

The researcher takes the sample from two classes that consist of 78 students. The sample exactly from X MIA 6 as treatment group that consist of 39 students and X MIA 5 as control group that consist of 39 students. The researcher used the purposive sampling due to the suggestion from the English teacher that both classes have the same number of students and both classes have equal of English ability. In here both the treatment group and the control group was one sex class that consist of female students.

D. Research Instrument

Research instrument is a device to get data needed for this research. The researcher uses test questions items that taken from teachers and students book. In here, the researcher uses vocabulary test to get the data or information. There are many form of vocabulary test such as multiple choice, completion and gap-fill. In this research, the researcher used multiple choices test. The reason to pick this test is because its most commonly used types of item in objective test. The questions consisted of 20 multiple choices item test.

This test is designed for students' pre-test and post-test activities. Pre-test was given before the treatment applied and the post-test was given after the treatment applied. So the researcher know whether there are differences before and after treatment or not.

E. Validity and Reliability Testing

The best instrument had to fulfill two importance requirements, these were validity and reliability. Validity and reliability were used to test the legality of data. These were the explanations of validity and reliability:

1. Validity

Validity explains how well the collected data covers the actual area of investigation (Ghauri & Gronhaug, 2005). Meanwhile, according to Field (2005) validity basically means "measure what is intended to be measured". There are four types of validity namely; face validity, content validity, construct validity, and criterion validity.

Face validity is a subjective judgment on the operationalization of a construct. A test has face validity if its content simply looks relevant to the person taking test. It evaluates the appearance of the questionnaire in terms of feasibility, readability, consistency of style and formatting, and the clarity of the language used.

Content validity is defined as the degree to which items in an instrument reflect the content universe to which the instrument will be generalized. The judgmental approach to establish content validity involves literature reviews and then follow-ups with the evaluation by expert judges or panels. Here the steps to apply content validity: an exhaustive literature reviews to extract the related items, a content validity survey is generated, the survey should sent to the experts in the same field of research, the content validity ratio is then calculated for each item by employing Lawshe's method, items that are not significant at the critical level are eliminated.

Construct validity refers to how well you translated or transformed a concept, idea, or behavior. Construct validity has two components that were convergent and discriminant validity.

Criterion validity is the extent to which a measure is related to outcome. It measure how well one measure predict an outcome for another measure. A test has this type of validity if it is useful for predicting performance or behavior in another situation (past, present, or future).

2. Reliability

Reliability concerns the extent to which a measurement of a phenomenon provides stable and consist result (Carmines & Zeller, 1979). Reliability is also concerned with repeatability. Testing for reliability is important as it refers to the consistency across the parts of a measuring instrument (Huck, 2007).

F. Normality and Homogeneity

In here researcher discussed about the result of normality and homogeneity testing.

1. The Normality Testing

o testing is conducted to determine whether the data are normal distribution or not. The researcher used SPSS. 16 to know the result of the normality testing. The value of significance (α) = 0.050.

Basic decisions making in normality testing are as follows:

1. If the significance value > 0.050, then the data has normal distribution

2. If the significance value < 0.050, then the data does not have normal distribution.

The researcher conducted normality testing from gain experimental class and control class. The result can be seen bellow:

Table 3.1

Result of Normality Test Gain Score

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		38
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	13.15632200
Most Extreme Differences	Absolute	.136
	Positive	.122
	Negative	-.136
Test Statistic		.136
Asymp. Sig. (2-tailed)		.073[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the table above, the significant value in gain score from experimental group and control group was 0.073 which was higher than the significant 0,050. It means that the pre-test and post-test data experimental group and control group were normally distribution.

2. Homogeneity

Homogeneity testing is conducted to know whether the data has a homogeneous variance or not. To know the homogeneity, the researcher used Homogeneity of variances Test by using SPSS.16. The value of significance (α) = 0.050.

Basic decisions making in homogeneity testing are as follows:

1. If the significance value > 0.050, then the data distribution is homogeneous.

2. If the significance value < 0.050, then the data distribution is not homogeneous.

The researcher conducted Homogeneity testing from gain experimental class and control class. The calculation result of homogeneity testing from experimental and control class is as follows:

Table 3.2

Result of Homogeneity Test Gain Score

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
gain	Based on Mean	.308	1	67	.581
	Based on Median	.173	1	67	.679
	Based on Median and with adjusted df	.173	1	63.570	.679
	Based on trimmed mean	.420	1	67	.519

The data was homogeneous, if the significant value was higher than the significant 0,050. From the table above, the significant value from the gain on mean was 0.581. Because the result was higher than significant 0,050, the gain between the experimental and the control groups was homogeneous.

G. Data Collection

The researcher used test to collect the data. The data were collected from the pre-test and post-test. The pre-test was administered before the treatments and the post-test was administered after the treatments. In here the researcher teaches in two classes with two different methods.

Firstly, the researcher gave the pre-test for both classes at October 18th 2018, experiment class and control class. The students were given 45 minutes to do the pre-test. The researcher conducted the pre-test to measure the students' vocabulary mastery before getting a treatment. There were 39 students in each class who participated in the pre-test and they were given 45 minutes to answer 20 multiple choice items question about vocabulary.

The second step, the researcher teaches the students in X MIA 5 as the control class in three meetings at October 25th 2018, November 1st 2018 and November 8th 2018 with usual method that teacher used to teach.

And in the second class X MIA 6, that consist of experiment class the researcher teaches the students in three meetings at October 25th 2018, November 1st 2018 and November 8th 2018 with vocabulary self-collection strategy.

The last step, after the researcher teaches the both class experiment and control class with the different treatment, the researcher will distribute the post-test at November 15th 2018 from both experiment and control class. From the post-test scores the researcher could measure the significant different in students' vocabulary mastery between the experimental and the control class. There were 20 items with multiple choice test items in this test.

H. Data Analysis

       Processing data leads the researcher to prove wether the hypothesis stated can be confirmed or rejected completely. The data obtained in this investigation analyzed statistically. The statistical analysis used is the central tendency of variance. The researcher will first, find the mean score of the sample, and then find the deviation. And to know the significant differences researcher used SPSS 16.0 for window.