

CHAPTER III

RESEARCH METHOD

In this chapter the researcher describes the research methodology applied in the present. It consists of research design, setting, subject of the study, population and sample, research variable, instrumentation of the research, validity, reliability, normality and homogeneity testing.

A. Research Design

This research used quasi experimental as the research design. The quasi experimental design was used because this method does not require random sampling (Jackson, 2008:318). This research method provides the students with pre-test, treatment, and post-test to find out the effect of DRTA strategy on students' reading comprehension ability. Since there was no random sampling, the sample in this research is considered as nonequivalent sample which consisted of experimental and control group.

In this research, two classes were taken as the sample classes: those labeled as the experimental group and control group. The first group (8G) as the experimental group was given a pre-test (X1). Treated by using DRTA strategy (T), and then provided a post-test (X2). The second group (8H) as the control group was given a pre-test (Y1), treated by using conventional teaching (O) and a post test (Y2). Here is representation of the design:

Table 3.1 Quasi-Experimental Design

Group	Pre-test	Treatment	Post-test
Experimental	(VIII G) X1	T	(VIII G) X2
Control	(VIII H) Y1	O	(VIII H) Y2

X1 : Students' reading score of experimental group on pre-test

Y1 : Students' reading score of controlled group on pre-test

T : DRTA Strategy treatment

O : Non using DRTA Strategy

X2 : Students' reading score of experimental group on post-test

Y2 : Students' reading score of controlled group on post-test

The table shows that both classes are given a pre-test, but the difference is in giving the treatments. In the experimental group, DRTA strategy was given as a treatment to the students in the learning process. In contrast, for the control group, conventional teaching was implemented as the treatment in learning to read. After both treatments were applied to both groups, a post-test was administered in order to investigate the result of the treatment.

B. Setting of The Study

This research was conducted at eight grades of MTs Ma'arif Bakung Udanawu Blitar academic year 2017/2018. The located at jl. KH- Zaid No. 37 Bakung Udanawu, Blitar. Researcher chose MTs. Maarif Bakung Udanawu, because the school is one of the biggest and famous private islamic schools in Blitar regency. Beside that, the teacher had never used DRTA strategy to improve reading comprehension in English lesson.

C. Subject of the Study

1. Population

According to Sugiyono (2011:80) population is not only people, but also all of the quantity of object or subject that be learnt, but also involve the whole of characteristics of the subject or object. The population of this research was the all of the eight grade students at MTs Maarif Bakung Udanawu in academic year 2017/2018, which consist of eight classes (A, B, C, D, E, F, G, H). They are 306 students.

2. Sample

Samples are as part of population. The samples in this study are two classes as experiment group and as control group. Class VIII-G as the experimental group and class VIII-H as the control group.

D. Research Variables

Variables are everything that becomes the object of research observation (Kuntjotjo, 2009: 22). In this research there are two variables, namely independent variable and dependent variable. The variables to be studied in this research are:

- a. Independent variable (x) → The use DRTA strategy
- b. Dependent variable (y) → Students' reading comprehension ability.

E. Instrument of the Research

The research instrument used in this research is an objective test with four alternative answers. Each question only requires one answer. The scoring system is if the student answer correctly then the value is one, but the wrong

is given zero. The pretest and post test score data were used as analysis materials.

F. Data collection Method

In this research, the researcher used a test reading as an instrument to get the data. The researcher applied pre-test that consisted of 20 items of multiple choices, and also post-test consisted of 20 items of multiple choices.

The researcher administered both pre-test and post-test as follows:

1. Pre-Test

The researcher gave the pre-test to students of experimental class and control class to measure students reading comprehension ability before treatments process. The test was given to know the basic competence for students and to know the ability in their knowledge before they get treatments.

Pre-test was conducted before the treatment. The test for control class was conducted on April 12th 2018 and the experimental class was on April 13th 2018.

2. Post-test

The test was done to know the final score and to know the student difference ability before and after they get treatments.

Post test was conducted after the treatments process. For the experimental class was done on April 19th 2018 and the control class was done on April 21st 2018.

G. Validity and Reliability

1. Validity

Validity is an important key to effective research. If a piece of research is not valid then it is worthless. Validity of the test refers to the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms of the purpose of the assessment (Brown, 2004: 22). This means that question of a research instruments validity is always specific to the particular situation and particular purpose for which it is being used. In addition to being valid, a research instrument is considered to have a good content validity, face validity, and construct validity. The instruction of the test should not cause confused and misunderstood.

a. Content validity

Content validity is the congruity of the instrument between the curriculum objective and the objectives being assessed. In this research the instrument had have content validity because the instrument dsign based on the basic competence of curriculum 2013.

b. Construct Validity

A test is said to have construct validity if it can be demonstrated that it measures just the ability which is supposed to measure. The word construct refers to any underlying ability which is hypothesized in a theory of language learning. Brown (2004:25) mentioned that a construct is any theory, hypothesis or model that attempts to explain observed phenomena in our universe or perception.

To fulfill the validity of the instrument in the form of a test that is compiled based on the curriculum and consulted on the expert.

2. Reliability

Reliability show whether an instrument is reliable and can be used as a device to collect the data with the stability of test scores. A good test must be valid and reliable. The criteria of reliability's degree can be seen on Table below on as follows;

Table 3.3 Table of Instrument Reliability.

Credibility Index	Explanation
0.90 – 1.00	Very reliable
0.70 – 0.90	Reliable
0.40 – 0.70	Quite reliable
0.20 – 0.40	Rather reliable
0.00 – 0.20	Less reliable

In this research, the researcher tried to check the reliability by using Cronbach's Alpha in SPSS 16.0 for windows. Testing is done before treatment and post-test. Test is done outside the sample, but still in one population.

Table 3.4 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.782	.793	20

Based output on table 3.4, the result of reliability test for the question by using Cronbach's Alpha in SPSS 16.0. The score was at 0. 782, it can be concluded that the instrument of this research are reliable.

H. Normality and Homogeneity

1. Normality test

The purpose of normality test is to know the data distributed normally. Some of statistic technique especially parametric statistic requires that the data has to follow normal distribution form.

Normality test can be done by three types that are use parametric statistic test (frequence test) non-parametric statistic test (kolmogrov smirnow test) and use graph. The normality test which is used by the researcher is based on the kind of experiment which is done. If the research test which determine the specific qualifications about the population parameter which be a sample, the analysis that has to be used is paramitric statistic analysis method. Whereas, if the research without determine the specific qualification about the population parameter which be a sample, so the analysis use non parametric statistic analysis method.

Normality tests are usually used to determine to know whether a data set is well-modeled by a normal distribution or not, or to calculate how likely an

underlying random variable is to be normally distributed. P-value that would be provided by SPSS which is the principal goodness of fit test for normal and uniform data sets will be computed to test the normality.

Testing normality has purpose to know whether regression model of residue variable has normal distribution or not. The considerations of testing normality are:

1. The data has normal distribution, if the significance > 0.05
2. The data doesn't have normal distribution, if significance < 0.05

The researcher used SPSS 16.0 to test normality of this research. Here the testing of normality using SPSS program:

Table 3.5 Normality Testing

Variable	Sig	Criteria
Pre Control	0. 407	Normal
Pre Experiment	0. 506	Normal
Post control	0. 409	Normal
Post Experiment	0. 176	Normal

Based on the table above, it can be said that the significance of pre control variable is 0.407, pre experiment variable has number 0.506, post control variable is 0.409, and post experimental variable is 0.176 which is more than 0.05 so it can be concluded that research data has normal distribution.

3. Homogeneity test

Arikunto (2010:98) states that “Homogeneity is a measurement which can be used to determine data variation. There are so many ways which can be used to measure the homogeneity of a sample, such as by using explore analysis test and analysis test one way ANOVA. In this case the researcher used model of One-Way ANOVA analysis test. The kind of this test is used to determine the mean of two or more groups manifestly. The data analyzed by using SPSS 16.0. program to know whether the data homogeny or not.

Table 3.6 Test of Homogeneity of Variances

The result of english study

Levene Statistic	df1	df2	Sig.
3.044	1	76	.085

The interpretation of the result to find out whether the data were homogeny or not were based on the level significant 0.05. If the result is higher than significant level 0.05, then H_0 is not rejected. Meanwhile, if the result is lower than 0.05, then H_0 is rejected or in the other word that the data are not homogeny.

Based on the table 3.6, can be concluded that the result of English study has the same variant or homogeny. Because significant is 0, 085, it means that the significant is more than 0.05 ($0.085 > 0.05$) so, H_0 is rejected.