CHAPTER III

RESEARCH METHOD

In this chapter, the researcher presents the research method including research design, population, sample, sampling, variable, data and data source, data analysis and hypothesis testing.

A. Research Design

In this research, the researcher conducted quantitatively through quasi-experimental research design to find out the effectiveness of Context clue technique toward students' reading ability. Ary et.al (2010:640) stated that quasi-experimental was in which the investigator could control the treatment and the measurement of the dependent variable but it could not control assignment of the subject to treatment. Quasi experimental research was a good design of the research because although it was not true experiments, it provided reasonable controlled over most source of invalidity and it was usually stronger then pre-experimental design (James & Sally, 2006:273).

In this experimental design, the researcher evaluated the experimental group before and after given a treatment. Meanwhile, the other class stood as control group and it was isolated from the treatment. In other words, control class was not given any treatment. Finally, the researcher compared the influence of the treatment toward an experimental class. The research design in this research could be seen in the diagram below:

Table 3.1

The Description of the Quasi-Experimental Design

Group	Pre-test	Treatment	Post-test
Experimental group	Y1	X	Y1
Control group	Y2	-	Y2

Y1= Pre-test before given treatment for experimental group

Y1=Post-test after given treatment for experimental group

Y2=Pre-test for control group

Y2=Post-test for control group

X = Treatment for experimental group; reading comprehension through context clue technique

B. Population and Sample

1. Population

Population was defined as overall object of research target (Kasiram, 2010:257). The population of this research was all of tenth grade at MA Syekh Subakir Nglegok, which consisted of two class, those are XA class and XB class. XA class consisted of 30 students and XB class consisted of 31 students. The total of population was 61students.

2. Sample

Ary et.al (2006:138) stated that sample was a portion of a population. Because of there were a lot of population. The researcher used purposive

sampling to take the samples. X-A class as an experimental group and X-B class as a control group. The researcher chose those classes because at tenth grade of MA Syekh Subakir had two classes only and the students' ability were almost same. Taking X-A class as treatment class was based on teacher's suggestion.

C. Variable of The Research

In this research, there were two kinds of variables that were independent variable and dependent variable. According to Chojimah (2016:5) independent variable was the one affecting another variable. In other words independent variable was a variable which influence the dependent variable. This variable selected and manipulated by the researcher. Therefore, the independent variable in this research was context clue technique. Meanwhile, dependent variable was the one affected by another variable Chojimah (2016:5). This variable observed and measured in order to know the effect of independent variable. Thus, the dependent variable in this research was the students' reading ability.

D. Data and Data Source

Bogdan & Biklen (1998:106) explained that the term data referred to the rough materials researchers collected from the world they were study; they were the particulars that form the basis of analysis. Whereas, data source was subject where the data acquired or collected. The data in this research was quantitative data with numeric form, because the data took from the students' score from the result of the students' pre-test and post-test as primary data. Before

the research was conducted, the researcher also conducted pre observation and interview with the students. Pre-observation was aimed to know the real condition and situation about the students in the class. While interview conducted to collect information about the students problem in reading teaching and learning.

In order to know whether there were significant differences between students those taught using context clue technique and those who are not, the researcher used test as primary data that collected directly from the sample. In conclusion, the primary data sources of this research were taken from students test during pre-test and post-test both from experimental group and control group.

E. Research Instrument

Method of collecting data referred to how the way the researcher collected the data. In this research, the researcher used test, interview and observation as instrument. The kind of test used to measure the students' reading ability by using context clue technique. The aimed of interview and pre-observation were to know real situation in the class. Thus, the researcher conducted pre-test and post-test. The descriptions are clarified as follows:

1. Pre-test

Pre-test was a test which conducted before given a treatment to the students. It was given to both experimental group and control group. Pre-test administrated to know the students' reading comprehension. It conducted at January, 13th 2018.

2. Treatment

After the students given pre-test, the experimental group was given treatment by using context clue technique to teach reading. Meanwhile, the control group was not given the treatment. It conducted at January, 20th – February, 10th 2018.

3. Post-test

After the treatment was given to the experiment class, the researcher conducted the post-test in order to know or to measure the students' reading ability after the treatment. Post-test administrated to know whether there was a significant difference before and after the treatment. It conducted at February, 10th 2018.

F. Validity And Reliability Testing

The try out item should be tested to measured validity and reliability before conducting pre-test and post-test (Brown, 1988). This research used the Pearson's product moment formula to test the instrument.

1. Validity

Validity defined as the degree of which evidence and theory supported the interpretations of test score entailed proposed used of test (Ary et.al, 2006:225). In the other word, test validity used to developing and evaluating measuring instruments. An instrument or a test could be called valid if it at least consist of the content and construct validity. Content validity of test referred to the suitability of a test result with ability elements to be assessed. Whereas, construct validity was the validity of a test based on the conformity between an instruments

used with concept of theory that underlined it. Then, the test employed in this research was valid based on content validity and construct validity, because the test was taken from the syllabus of 10th grade of MA Syekh Subakir Nglegok.

Table 3.2
Content validity

No	Indicators	Number	Total
1	Topic, main idea, organization text, purpose	1, 5, 6, 8, 9, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 22, 25	17
2	Finding specific information from text	4, 13	2
3	Inferring the meaning of the text, identifying synonym and antonym	2, 3, 7, 15, 23, 24	6
Total			25

To find out the validity of instrument items, this research conducted Pearson Product Moment. The calculation process used SPSS 16.0. Therefore, the process of calculation with SPSS 16.0 The result of validity was as follows:

Table 3.3
Validity testing *SPSS 16.0*

No	Item number	rcount	rtable 5% (31)	Kriteria
1	item_1	0.824	0.355	Valid
2	item_2	0.776	0.355	Valid
3	item_3	0.866	0.355	Valid
4	item_4	0.720	0.355	Valid
5	item_5	0.646	0.355	Valid
6	item_6	0.780	0.355	Valid
7	item_7	0.470	0.355	Valid
8	item_8	0.646	0.355	Valid
9	item_9	0.737	0.355	Valid
10	item_10	0.552	0.355	Valid
11	item_11	0.646	0.355	Valid
12	item_12	0.646	0.355	Valid
13	item_13	0.866	0.355	Valid
14	item_14	0.577	0.355	Valid
15	item_15	0.847	0.355	Valid
16	item_16	0.845	0.355	Valid
17	item_17	0.709	0.355	Valid
18	item_18	0.761	0.355	Valid
19	item_19	0.781	0.355	Valid
20	item_20	0.677	0.355	Valid
21	item_21	0.629	0.355	Valid
22	item_22	0.776	0.355	Valid
23	item_23	0.681	0.355	Valid
24	item_24	0.824	0.355	Valid
25	item_25	0.845	0.355	Valid

The result of validity above showed that all scores rcount was bigger than score rtable (0.355) in 5%. Therefore, it concluded that scores in this test was valid, so it can be used as research instrument.

2. Reliability

Ary et.al (2010:236) stated that reliability of measuring instrument was the degree of consistency with which it measured whatever it was measured. Reliability show whether an instrument was 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. Besides the index of validity, the researcher also calculated the reliability. The researcher decided that compatible formula to calculate the reliability of the test for this research was used Cronbach's Alpha in SPSS 16.0.

The result of reliability test for the questions by using Cronbach's Alpha in SPSS 16.0 was at 0.965. It was bigger than score of rtable (0.355). Therefore it concluded that all tests were reliable and consistent in his research, so it could be used as research instrument.

G. Normality and Homogeneity Testing

1. Normality test

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

Normality test could be done by three types that were using parametric statistic test (frequence test), non-parametric statistic test (kolmogrov smirnow test) and usegraph. The normality test which used by the researcher was based on the kind of experiment which done. The research test which determined the specific qualification about the population parameter which was a sample, so the analysis that has to be used was parametric statistic analysis method. Whereas,

the research without determined the specific qualification about the population parameter which be a sample, so the analysis use non-parametric statistic analysis method.

Normality used to know whether a data set was well-modeled by normal distribution or not, or to calculated how likely an underlying random variable was to be normally distributed. P-value that will be provided by SPSS which the principal goodness of fit test for normal and uniform data set would be computed to test the normality.

Testing normality had purposed to know whether regression model of residue variable had normal distribution or not. The researcher used SPSS 16.0 to test normality of this research. Here was the result of testing normality used SPSS 16.0 program:

Table 3.4
Normality testing of pre-test experimental and control group

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		60
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	7.57284576
Most Extreme Differences	Absolute	.130
	Positive	.090
	Negative	-.130
Kolmogorov-Smirnov Z		1.005
Asymp. Sig. (2-tailed)		.264

a. Test distribution is Normal.

The table above showed that to know the normality of test, the researcher used non-parametric statistic test (kolmogrov smirnow test). The statistic result showed that the significant of pre-test control and experimental

group was 0.246. The result showed that the significant was more than 0.05, so it could concluded that the data was normal distribution.

Table 3.5
Normality testing of post-test experimental and control group

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		60
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	7.15825942
Most Extreme Differences	Absolute	.168
	Positive	.156
	Negative	-.168
Kolmogorov-Smirnov Z		1.298
Asymp. Sig. (2-tailed)		.069

a. Test distribution is Normal.

The table above showed that to know the normality of test, the researcher used non-parametric statistic test (kolmogrov smirnow test). The statistic result showed that the significant of pre-test control and experimental group was 0.069. The result showed that the significant was more than 0.05, so it could concluded that the data was normal distribution.

2. Homogeneity test

Arikunto (2010:98) stated "Homogeneity was a measurement which could be used to determine data variation. There were so many ways which could 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 used to determine the mean of two or more groups manifestly.

In this research, the researcher used the ANOVA test. The data were analyzed by using SPSS program to know whether the data homogeny or not. The interpretation of result to find out whether the data were homogeny or not were based on the level significant 0.05.

Table 3.6

Homogeneity test

Test of Homogeneity of Variances

SCORE

Levene Statistic	df1	df2	Sig.
.064	1	58	.801

ANOVA

SCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	86.400	1	86.400	1.491	.227
Within Groups	3360.000	58	57.931		
Total	3446.400	59			

Based on the result of testing homogeneity, it was known the significant of group based on the changeable on students reading ability material between taught with context clue technique and without context clue technique was 0.801 which is more than 0.05. So, it could be concluded that the data group by based on the changeable on students reading ability between taught with context clue technique and taught without context clue technique has the same variant.

H. Data Collecting Method

When collecting data in a research, many methods were used by each researcher. There are two kinds of data. Those were primary data and secondary data.

Anderson (2005:171) stated as follows:

> Most primary data came from artifacts, historical documents observation or directly from people; whereas secondary data normally came from other people's accounts. In this research, the researcher used primary data to collecting the data from the sample. Data from people includes that collected through interviews, various group method discussion techniques, questionnaires, attitude scales, tests and other such measures.

In this research, the researcher used test to collect the data. To find out the data, the researcher applied pre-test that consisted of 25 items of multiple choice. The pre-test was given to know the basic competence for the students and their earlier knowledge before got treatment. The pre-test was consisted of 25 multiple choices about recount text and narrative text. Time allocation of the test was 45 minutes. The pre-test was held on January 13th in experimental class (X-A) and control class (X-B).

After gained the pre-test, the researcher gave the treatment by taught by used context clue technique in experimental class and without used context clue technique in control class. In the last, the researcher gained the post-test. It was given after the researcher gave the treatment or after teaching using context clue technique. The test was given to know the students difference achievement before and after got treatment. The post-test consisted of 25 multiple choices about recount and narrative text. Time allocation of the test was 45 minutes. The

post-test was held on February 10th in experimental class (X-A) and control class (X-B).

I. Data Analysis

After collected the data from the students' score, the researcher reviewed the data. Data analysis was how the researcher interpreted, calculated, verified and classified the data systematically. The data were obtained by using achievement test and then be analyzed quantitatively. The data from the experimental group compared with the data from the control group in order to measured the significant difference on the students' reading ability which taught by using context clue technique. The researcher analyzed the data by using formula of t-test and the explanation could be seen in the following computation. In this case, the researcher used SPSS (Statistic product and Statistic Solution) to analyze the data statically. According to Sudijono (1987:278) the formula of t-test was as follow:

$$t_o = \frac{M_1 - M_2}{SE_{M1-M2}}$$

Notes:

M1= Mean of Variable X (experimental class)

M2= Mean of variable Y (controlled class)

SE = Standard Error

J. Hypothesis Testing

Hypothesis testing phase was necessarily initiated with the statement of both null and alternative hypothesis. Both types of the hypothesis were realized both mathematically and verbally. Null hypothesis, encoded by (*Ho)* was the one stating that there was no significant difference between the mean of population and the one taken sample. By contrast, alternative hypothesis, encoded by *(Ha)* was the one stating that there was a significant between the mean of a sample and the one of the population (Chojimah, 2016).

Deciding the result of hypothesis, there were statistical research hypotheses as follows:

Ho :{$\mu 1 = \mu 2$}

Ha :{$\mu 1 \neq \mu 2$}

Notes:

Ho = Null hypothesis

Ha = Alternative hypothesis

$\mu 1$= students' reading ability those taught using context clue technique.

$\mu 2$= students' reading ability those taught without using context clue technique.

The result of t-test that the researcher assumed by using SPSS 16.0 showed that to was 0.000. It means there was a significant difference of students' reading ability between students those taught by using context clue technique and students those taught without using context clue technique.

It was supported by previous research that conducted by some researches, such as Qonita's research. The result of her research showed that

context clue was effective to teach vocabulary. The next, Sasmita's research, the result of t-test was a significant difference of both groups. Then Sholiha's research showed that context clue was effective to teach reading. Malik also conducted research by used context clue. Based on the result of her research, she concluded that there is a significant difference of the students before and after taught by using context clue.