

CHAPTER III

RESEARCH METHOD

In this chapter the researcher describes the research method. It consists of research design, population and sample, research variable, research instrument, validity and reliability testing, normality and homogeneity testing, data collection method, data analysis and hypothesis testing.

A. Research Design

Research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue (Cresswell, 2008:3). In the design of this study the researcher used pre-experimental with quantitative approach. Pre-experimental is to know or to test the effectiveness of using Look and Say Method in teaching reading for the fourth grade students' of MI Baiturrahman Suwaluh.

This study is conducted in pre-experimental design using quantitative approach with one group pre-test and post-test design. This study uses pre-experimental because it does not have random assignment of subject to group or other strategy to control extraneous variable. That is why in this study the researcher just takes one group or class and uses pretest and posttest to see the result of the treatment.

According to Ary (2002:22), in quantitative research uses objective measurement and statistical analysis of numeric data to understand and explain phenomena. In quantitative research there are experimental and non-

experimental research designs. Experimental research involves a study of the effect of the systematic manipulation of one variable on another variable and non-experimental research; the researcher identifies variables and may look for relationship among them, but does not manipulate the variables (Ary, 2002:24).

The experimental research design is classified into pre-experimental design, true experimental and quasi experimental. Pre-experimental research does not have random assignment of subject to groups or other strategies to control extraneous variables. True-experimental research uses randomization and provides maximum control of extraneous variables. Whether quasi-experimental research lack randomization but employ other strategies to provide some control over extraneous variables (Ary *et al*, 2002:302).

In this study it can be called as pre-experimental design because it uses little or no control of extraneous variables. In the one group pretest-posttest design, one group is measured or observed not only after being exposed to a treatment of some short, but also before. Pre-experimental research involves administering pre-test to the independent variable, applying the experimental treatment to the subject, and administering the posttest. The result of the treatment is found by comparing the pre-test and posttest score.

This design of this study used pre-experimental research design (*one group pretest-posttest design*) that consists of pre-test, treatment and post-test. The pre-test and post-test are given to take the student's score before and after being taught by using "*Look and Say method*". Then both of the score were

computed by using t-test to find out if there is significant influence of teaching reading by using “*Look and Say method*”.

Table 3.1 the design of one group pre-test post-test

Pre-test	Independent variable	Post-test
Y1	X	Y2

Note:

Y1 : Pre-test

X : Treatment

Y2 : Post-test

The procedure of experimental research that use one group pre-test and post-test design:

1. Administering a pre-test with a purpose of measuring reading achievement of fourth grade student's of MI Baiturahman Suwaluh.
2. Applying the experimental treatment teaching reading by using “Look and Say Method” to the subject (fourth grade students at MI Baiturahman Suwaluh).
3. Administering a post-test with a purpose of measuring reading achievement of fourth grade students at MI Baiturahman Suwaluh.

B. Population, Sample and Sampling

1. Population

A population is defined as all members of any well-defined class of people, event or object. A population is whole element of the object as a data source with a certain characteristic in a research (Tanzeh, 2009:91). It means that population is all subject of the research.

The population of this study was the student of MI Baiturrahman Suwaluh that consists of 80 students. According to Ary (2002:163) population is all members of any well defined class of people, events of objects. A population is a set (or collection) of all elements possessing one or more attributes of interest stated by Arikunto (2006:108).

2. Sample

Doing selecting sample is very important step in conducting a research study. Sample is part of population of the object research (Arikunto, 2006:118). Sample is also as a way the researcher selects number of individuals as a sample which represents the population. According to Ary (2006:163) a sample is a person of population. It means that a good sample must be representative of the entire as possible, so that the generalization of the sample as true as population. Based on the statement above in this study, the researcher took the fourth grade as a sample which consists of nine students at MI Baiturrahman Suwaluh in academic year 2015/2016.

3. Sampling

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the large group from which they were selected, L.R Gay (p: 123). The purpose of sampling is to gain information about a population; rarely is a study conducted that includes the total population of interest as subject (Gay, 1992:123).

In this study, the researcher used purposive sampling technique. Purposive sampling technique is a type of non probability sampling where the researcher consciously select particular elements or subjects for addition in a study so as to make sure that the elements will have certain characteristics pertinent to the study. And in this study, the fourth grade students of MI Baiturahman Suwaluh were taken because among other classes the students of the fourth grade had average proficiency.

C. Research Variable

A variable is everything that will become that object of research or the influencing factors that will be studied. Variable is everything to which the researcher expects to find the answer (Arikunto, 2006:118).

The variables examined in this experimental study are two classifications:

a) Independent variable

Independent variable is called causing variable (Arikunto, 2006:119). Independent variable is variable which is manipulated by a

researcher deliberately. In this research, the independent variable is teaching reading by using “Look and Say method”.

b) Dependent variable:

Dependent variable is effected variable (Arikunto, 2006:119).

Dependent variable is a variable that enrage in function relationship influence by independent variable. In this research, the dependent variable is student’s achievement in reading.

D. Research Instrument

Fraenkel (1996) stated that “instrument is the device the researcher uses to collect data. Research instrument is the tool of collecting data that should be valid and reliable. Research instrument can be valid if the instrument can measure what will be measured. And the instrument of this research is test.

Test is a series question, exercise or other means which are used to measure the skill, knowledge, intelligent, ability or talent that have by individual or group. Thus a test is a method to gain the data by giving some question to the respondent Arikunto (2006:127).

According to Hornby (1955:1233) test is a short examination of knowledge or ability. Consisting of questions that must be answered activities that must be carried out. According to Longman, a test is any procedure for measuring ability, knowledge, and performance.

In this study, the researcher used achievement test. Achievement test is test that is used to measure the process that students making after learn something Isnawati (2011:14). This test used to measure the students

achievement in reading before and after they taught by using “Look and Say method” in MI Baiturrahman Suwaluh.

Before conducting test, the researcher does some steps to developing the test. The steps are:

1. Reviewing the literature

In reviewing the literature, the researcher was reviewed the material based on the lesson plan (RPP), syllabus and book of Elementary School.

2. Drafting instrument

The researcher in drafting the instrument make the first draft test based on the reviewing the material that the researcher do before.

3. Validating instrument

After making draft test, then the researcher submit the test to the teacher or expert to get the expert validation if there is some correction.

4. Revising

In revising the researcher revised the uncorrect or inappropriate questions, wrong structure and grammatical error in the test after got the validating from the teacher or expert.

5. Trying out of instrument

After finished in revising the test, then the researcher trying out the test to the fourth grade students from difference school with have the same characteristics. Based on the result that the researcher got in trying out the test, the researcher can know the item quality of the test.

6. Reliability

The researcher knows the reliability of the test after trying out the test and using the statistical calculation of *Pearson Product-Moment* in IBM SPSS Statistic 22. If the result is not reliable so the researcher revises the test again until get reliable.

7. Final draft of instrument

This is the last step in developing the test after all of the steps were done, and the tests have validity and reliability. So, the test is ready to gain the data.

E. Validity and Reliability Testing

1) Validity

In the experimental study, a researcher must check the validity and reliability of the instrument that has been made to determine such instruments valid or not. Validity (in testing) is the degree to which a test measure what it is supposed to measure, or can be used successfully for the purpose for which it is intended (Richard, 1992:296).

According to Heaton (1989:159) the validity of a test as the extent to which it measure what is supposed to measure and nothing else. To measure whether the test has a good validity, the researcher analyzed the test from content validity, face validity and construct validity.

a. Content validity

A test is said to have content validity if its contents constitutes a representative sample of the language skills, structures, etc. In order to

judge whether or not the test has content validity, we need a specification of the skills or structure being tested. Comparison of test specification and test content is the basis for judgments for content validity. The researcher made the test based on course objectives on the syllabus and textbooks of fourth grade of MI Baiturrahman Suwaluh. Therefore, this test is valid in the term of content validity.

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

Table 3.2 Content Validity of the objective of syllabus

Standard competence	3 Memahami tulisan bahasa Inggris sangat sederhana dalam konteks kelas.
Basic competence	3.1 Memahami kalimat dan pesan tertulis sangat sederhana.
Indicator	1. Siswa dapat memahami isi/informasi dalam teks sederhana. 2. Siswa dapat menanggapi ujaran bahasa Inggris sangat sederhana dengan tepat.
Technique	Reading test
Instrument of test	Pretest Posttest

Table 3.3 Content Validity of Test item

Competence indicator	Test items	
	Pretest	Posttest
1. Siswa dapat memahami isi/informasi dalam teks sederhana.	Part A Number (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) Part C Number (1, 2, 3, 4, 5)	Part A Number (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) Part C Number (1, 2, 3, 4, 5)
2. Siswa dapat menanggapi ujaran bahasa Inggris sangat sederhana dengan tepat.	Part B Number (1, 2, 3, 4, 5)	Part B Number (1, 2, 3, 4, 5)

b. Face Validity

A test is said to have face validity if it looks as if it measures what it is supposed to measure. For example, a test which pretended to measure pronunciation ability but which did not require the test-takers to speak might be thought to lack face validity. This is true even if the test's construct and criterion related validity can be demonstrated. Face validity is hardly a scientific concept, yet it is very important. A test which does not have face validity may not be accepted by test takers, teachers, education authorities or employers. In this study, the researcher used face validity by consulting with the advisor and the teacher.

c. Construct Validity

A test is said to have construct validity if it can be demonstrate 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 ability. Brown (2004:25) mentioned that a construct is any theory, hypothesis, or model that attempts to explain observed phenomena in our universe of perception. In this research, the test had construct validity since it contained twenty questions consists of ten multiple choice, five arrange sentences and five short answer questions. Those questions are to measure students' skill in reading text.

2) Reliability

Reliability is the consistency of the instrument in producing the same score on different testing occasions or with different raters. Since the type of test belonged to authentic testing, the researcher ascertained that the test was reliable by doing inter-rater reliability. Inter-rater reliability refers to the degree of consistency of scores given by two or more scorers to the same set of oral or written texts (Sarosdy et al. 2006: 135). To prove that the test was reliable, the researcher conducted a try out for the test to the different subject before the researcher conducting the research to the sample of study.

To find out the reliability of the score obtained either from the pre-test or post-test, the researcher calculated two sets of score to get the correlation between them. The formula to find the correlation was *Pearson Product-Moment* in IBM SPSS Statistic 22. Table 3.4 shows the result of the try-out of pre-test gained from the two raters, and followed by Table 3.5 showing the statistical calculation of *Pearson Product-Moment* from IBM SPSS Statistic 22.

Table 3.4 The Try-out's Result of Pre-test

No	Name	Rater 1	Rater 2
1	NA	74	72
2	WNR	76	74
3	SDW	78	80
4	NBS	76	78

Table 3.5 The Statistical Correlation of *Pearson Product-Moment* from IBM**SPSS Statistic 22**

Correlations			
		Rater 1	Rater 2
Rater 1	Pearson Correlation	1	.894
	Sig. (2-tailed)		.106
	N	4	4
Rater 2	Pearson Correlation	.894	1
	Sig. (2-tailed)	.106	
	N	4	4

A perfect correlation, either positive or negative, is respectively denoted with +1 or -1. Thus, closer to 1, it is the strong correlation. If it is closer to +1, it has strong positive correlation. On the contrary, if it is closer to -1, it has strong negative correlation. Based on Table 3.5 above, it can be seen that the result of Pearson Correlation is 0.894. Thus, it indicates that the instrument had the strong positive correlation.

The researcher also conducted to check reliability of instrument in post test. Table 3.6 shows the result of post-test's try-out gained from two raters, followed by Table 3.7 showing the statistical calculation of *Pearson Product-Moment* from IBM SPSS Statistic 22.

Table 3.6 The Try-out's Result of Post-test

No	Name	Rater 1	Rater 2
1	NA	74	76
2	WNR	78	80
3	SDW	70	74
4	NBS	80	84

Table 3.7 The Statistical Correlation of *Pearson Product-Moment* from IBM SPSS Statistic 22

Correlations		
	Rater 1	Rater 2
Rater 1		
Pearson Correlation	1	,966
Sig. (2-tailed)		,034
N	4	4
Rater 2		
Pearson Correlation	,966	1
Sig. (2-tailed)	,034	
N	4	4

Based on Table 3.7 above, shows the result of Pearson Correlation is 0.966. It can be indicates that the instrument had strong positive correlation. Based on the result of statistical correlation either from pre-test and post-test indicating that the correlation was strong respectively positive, it could be concluded that the instrument in pre-test and post-test were reliable.

F. Normality Testing

Normality testing is needed to find out whether the data is in normal distribution or not. The normality of data is important because the data can be considered to represent the population when it is in normal distribution (Priyatno, 2012: 33). Therefore, the researcher intended to test the normality of the data by using SPSS 22.0 with One-Sample Kolmogorov-Smirnov method. The normality testing was done towards the pretest and posttest scores.

The hypotheses for testing normality are:

- a. Ho: Data is in normal distribution
- b. Ha: Data is not in normal distribution

The hypotheses for normality testing say that the data is in normal distribution if Ho is accepted and on the contrary, the data is not in normal distribution if Ha is accepted. The Ho is rejected when the significance value is lower than 0.05 ($\alpha = 5\%$), while Ho is accepted when the significance value is higher than 0.05 ($\alpha = 5\%$). The result analysis for normality testing can be seen as follows.

- a. Testing data for pretest score by using SPSS 22.

Table 3.8 Normality Test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		9
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	7.06334200
Most Extreme Differences	Absolute	.166
	Positive	.154
	Negative	-.166
Test Statistic		.166
Asymp. Sig. (2-tailed)		.200

- a. Test distribution is Normal.
- b. Calculated from data.

Based on the output of One-Sample Kolmogorov-Smirnov Test in SPSS 22.0 at table 3.8 above, it is known that the significance value is 0,200. As stated previously, the hypotheses for normality testing say that the data is in normal

distribution if H_0 is accepted and on the contrary, the data is not in normal distribution if H_a is accepted. In this case, the H_0 is rejected when the significance value is lower than 0.05 ($\alpha = 5\%$), while H_0 is accepted when the significance value is higher than 0.05 ($\alpha = 5\%$). Based on the data above, the significance value of the data is 0.200 and it is higher than 0.05 ($0.200 > 0.05$). It means that H_0 is accepted and H_a is rejected. It can be interpreted that the data is in normal distribution. From the interpretations above, it can be concluded that the instruments in this research are in normal distribution.

G. Data Collecting Method

The data collecting method is the method to obtain the data in the research. The aim of the data collecting in conducting scientific research was to get material that needed by the researcher. In this study, the data were collected through pre-test and post-test. The researcher took six meetings it started from February 09, 2016 until February 29, 2016. Before the researcher gave treatment, in the first meeting the researcher conducted pre-test. The researcher gave pre-test to know the students' reading ability before the researcher give treatment. And the researcher give post-test to the students' after the researcher finished gave treatment. After the data were collected, the results of pre-test and post-test the researcher then compare them. The technique of collecting data was clarified as follow:

1. Pre-test

Pre-test provides a measure on some attribute or characteristic that someone assesses for participant in an experiment before they receive a treatment (Wiersama, 1911: 106).

Pre-test was given to the students in the first meeting before treatment. It was conducted to know the students score in reading. Purpose of the test is given to know how far the students ability in reading comprehension. Pre-test comprised 20 items, form of the test are ten multiple choices, five arrange sentences and five short answer questions.

2. Post-test

Post test provides a measure on some attribute or characteristic that someone assesses for participant after a treatment (Wiersama, 1911: 106). After gaining score in pre-test and conducting treatment, the researcher administered post-test to know how effective the treatment and to measure their ability after treatment process. Post-test was conducted to know the final score and to know the students' difference competence before and after they get treatment.

A post test was given in order to know the scores of the students after they were taught by using Look and Say method. Time allocation is 50 minutes and conducted on February 29, 2016. This test was used to measure the students' achievement after they were given treatment.

H. Data Analysis

Suharsini and arikunto (1996: 148) state that quantitative data is the technique to analysis and count the data. It means that the technique of quantitative data analysis is the process of data is shape by number.

To investigate the effectiveness of using Look and Say method in this research, the data were analyzed from students' score in pre-test and post-test. The data which were gained from those two occasions, then, were analyzed by using Paired Samples Test in IBM SPSS Statistics 22. If the result of t_{table} was bigger than $t_{obtained}$ at the level of significance 0.05, the null hypothesis could not be rejected indicating that Look and Say method was not effective to increase students' reading skill. By contrast, if $t_{obtained}$ was bigger than t_{table} at the level of significance 0.05, the null hypothesis could be rejected indicating that Look and Say method was effective to increase students' reading skill.

I. Hypothesis testing

To know the effectiveness of using Look and Say method in this research, the researcher is analyzing the data of students' reading test (pre-test and post-test) and score of their reading test by using statistic calculation. If the result of t_{table} is bigger than $t_{obtained}$ at the level of significance 0.05, the null hypothesis cannot be rejected indicating that Look and Say method is not effective in improve students' reading achievement. By contrast, if $t_{obtained}$ is bigger than t_{table} at level of significance 0.05, null hypothesis can be rejected

indicating that Look and Say method is effective in increase students' reading achievement.