

CHAPTER III RESEARCH METHOD

This chapter discusses the research method used which consists of research design, population of sample, data collecting technique, research procedures, research instrument, the criteria of good test, level of difficulty, discrimination power, scoring system and data analysis.

3.1 Research Design

This research was quantitative research by using one group pre-test and post-test design. The purpose of quantitative research is to support the previous theory. Research design is arranged to collect the data that will be used in the test (Setiyadi, 2006:5). In this research, pre test (T1) was given before the researcher teaches anecdotes text by using small group discussion technique, and post test (T2) was given after being taught anecdote text by using small group discussion technique. To analyze the data collected through this design, the researcher used SPSS program. This research chose one class as the control class and one class as the experimental class. There were pretest, three times, and posttest to the experiment class. The treatment gave in three times by using small group discussion technique to increase students' reading comprehension.

And the research design as follow:

T1 X T2

Note;

T1 : Pre-Test

X : Treatment by using small group discussion use anecdotes text

T2 : Post-Test

(Setiyadi, 2006:131)

The first activity, the researcher administered pretest to the experimental class in order to find out the students' reading comprehension achievement before they get the treatment. Then, the researcher conducted the treatments three times by using small group discussion technique to increase the students' reading comprehension achievement. After that, the researcher administered the posttest to experimental class to find the result of the treatments.

3.2 Population and Sample

Arikunto (1997) says that Population is all research subjects. While Setiyadi (2006) states that all individual which can be target in research are called population. So, the research was conducted at the third grade of SMPN 1 Karya Penggawa Krui in the academic year 2013/2014 as the population. There are four classes of the third grade students and each class consisted of 26-27 students. One class took as sample that have given treatment (teaching reading using small group discussion technique), and one class took as control class to administer try out. All of the third grade class wants to have the same possibility to be experimental class.

**Table 1: The Number of Students of the Third Grade of SMPN 1 Karya
Penggawa Krui Pesisir Barat**

No	Class	Gender		Total
		Male	Female	
1	IX A	9	17	26
2	IX B	13	13	26
3	IX C	12	14	26
4	IX D	12	15	27

So that, the class have been chosen randomly by using lottery. After the researcher random the class, IXA as the control class and IXB as the experimental class.

3.3 Data Collecting Technique

In this research, the researcher used the data which come from:

1. Try out test was done to know the quality of the test instrument of the research. The test was multiple choices that consist of 50 items. Try out test had given to the control class.
2. Pretest was done to know the students' ability before the treatment. The test was multiple choices that consist of 40 items and the students should answer the question in the answer sheet. The scoring based on the correct answer. The result of the test had written in the scoring column on the paper.

3. Treatment was done to apply small group discussion. In order to assess the teacher in applying the technique. For experimental class the researcher was taught anecdote text by using small group discussion technique.
4. Post test done to know the students' reading comprehension achievement after being taught anecdote text by using small group discussion technique. The system and the difficulty of post test have been the same as the pretest, because both of them used to measure the students' reading comprehension in anecdote text by using small group discussion in order to know the development of the students' reading comprehension after small group discussion technique was applied.

3.4 Research Procedure

The researcher used the following steps in order to collect the data:

a. Determining the population and sample of the research

To determining the population of this research, the researcher choose one class from four classes of the third grade of SMPN 1 Karya Penggawa Krui by using small group discussion technique.

b. Administering tryout test

Tryout test had given to the students in order to know the quality of the test as instrument of the research.

c. Analyzing the test

The result of tryout test analyzed to know which items were good to be use in pretest

d. Giving pretest

Pretest had given to find out the students' basic ability in comprehend the anecdote text before using small group discussion technique.

e. Conducting treatment

In this research, the treatments were conducted in three times. In treatments, the researcher explained about anecdote text and small group discussion to help students to comprehend anecdote text. After explain anecdote text and small group discussion, the researcher ask the students to divide them into some group work. Then, the researcher gave an anecdote text to each group.

f. Giving posttest

The posttest had given to know how far the students' increase after they receive the treatment. Multiple choices applied in the test.

g. Analyzing the test result

After giving the pretest and posttest, the researcher analyzed the data. The data was analyzed using one group pretest and post-test design. It had been used to know whether small group discussion suitable to increase students' reading comprehension significantly or not. The data was computed through SPSS Program.

h. Reporting the result

In reporting the result, the data arranged systematically based on the pretest and posttest to know whether there is significant increase the students comprehension achievement in comprehends anecdote text or not.

3.5 Research instruments

The research instrument was used as part of the data collecting process. The research instruments were as follow:

3.5.1 Try out of instrumentt

A try out test carried out before conducting pre-test and pos-test. This test was given to determine the quality of the test instrument of the research. Try out test had been given to control class. The researcher prepared 50 items of multiple choices test. The question had four alternative answers for each (A, B, C, and D).

3.5.2 Criteria of Good Test

A test or a measuring would become a good test if the test had four criteria of good test, namely validity, reliability, level of difficulty, and discrimination power

3.5.3 Validity

A test will be said be valid if the measures the object to be measured and suitable with the criteria (Hatch and Farhady, 1982:250). According to Setiadi (2006), he says that “validity is used to measure perception, language behavior, motivation, even the language ability”. A valid instrument has a high validity. On the other hand, the instrument which is lack of goodness has a low validity”. An instrument can be called valid if it can show the data of variable are researched correctly.

There were three types of validity be used in this research: namely construct validity, content validity, and face validity.

1. Construct Validity

According to Hatch and Farhady (1981:252-253) construct validity is concerned whether or not the test performance can be described psychologically. The procedure is to determine experimentally what factors are related to test

performance. A measure must relate construct to the real world observation. so, construct validity is concern with whether the test is actually in line of the theory of what reading comprehension means or not. The content of the result test is presented in the following table:

Table 2. Specification of Data Collecting Instrument

No.	Skills of Reading	Item Number	Percentage of Item
1	Identifying a topic sentence	1, 3, 11, 20, 22, 33	12%
2	Interpreting problem	2, 15, 24, 28, 31, 40, 42, 46, 49,	18%
3	Analyzing multiple meaning-vocabulary	6, 17, 25, 27, 29, 30, 37, 41, 45,48	20%
4	Making inference	4, 5, 10, 12, 16, 18, 21, 23, 32, 35, 38, 47, 50	26%
5	Identifying the characters view	7, 8, 9, 13, 14, 19, 26, 34, 36, 39, 43, 49	24%
Total		50	100%

2. Content Validity

The second one is content validity. fulfilling this type of validity, the researcher should see the whole of indicator of the test and analyze the result of the test. Hatch and Farhady (1981:250) say that this kind of validity concern on adequacy of the sample, not simply on the appearance of the test.

3. Face validity

The last one is face validity. This validity also connects with how the measures can be received by the readers.

3.5.4 Reliability

Setiadi (2006) says if the data is true based on the facts, how many data will be taken the result will be same. Reliability shows the degree of mainstays about something. Reliability means the data can be believed so it can be relied on. knowing the reliability of test, the researcher used the following steps:

1. Giving try out test
2. Giving pre-test and post-test items to 30 students out of sample
3. Collecting the result and analyzing it.
4. Analyzing the difference between the pre-test and post-test result.

Reliability of the test in this research can be determined by using split half method in order to estimate the reliability of the test. Reliability is divided into two half group; the first half group and the second half group. The researcher used the following formula:

$$r_1 = \frac{\sum XY}{\sqrt{[\sum x^2 \sum Yx^2]}}$$

Notes:

- r_1 : The coefficient of reliability between first half group and the second half group
 x : total number of the first half group
 y : total number of second half group
 x^2 : square of x
 y^2 : square of y (Lado in Hughes, 1989)

And then to find out of reliability of the test, the researcher used “Spearman Brown Prophecy Formula” (Hatch and Farhady, 1982:286).

See the following formula:

$$r_k = \frac{2r_1}{1+r_1}$$

Notes:

r_k : The reliability of the test

r_1 : The reliability of half test

And the criteria of the reliability as follow:

0.80-1.00 = very high

0.60-0.79 = High

0.40-0.50 = Average

0.20-0.39 = low

0.00-0.19 = very Low

(Hatch and Farhady, 1982:246)

3.5.5. Level of difficulty

To know the level of difficulty of the test, the researcher used the following

formula:

$$LD = \frac{R}{N}$$

Notes:

LD :Level of Difficulty

R : Number of the students answer correctly

N : Total number of the students

Here the criteria of the level of difficulty

<0.30 : Difficult

0.30-0.70 : Average

>0.70 : easy

(Shohamy, 1985: 79)

3.5.6 Discrimination Power

Discrimination is the consideration between the high group of students who get

the items correct and the consideration of the low level students who get the items

correct.

Here is the formula used by the researcher:

$$DP = \frac{U-L}{1/2 N}$$

Notes:

- DP : Discrimination Power
 U : Number of upper group who answer correctly
 L : Number of lower group who answer correctly
 N : Total of the students

And here there are the criteria of the discrimination power:

- DP : 0.00-0.19 : Poor
 DP : 0.20-0.39 : Satisfactory
 DP : 0.40-0.69 : Good
 DP : 0.70-1.00 : Excellent
 DP : - (Negative) : Bad items (be omitted)

When the result is zero and the item has no discrimination power. The worst is when the result will be negative because the lower students can answer more many than upper students, if the result positive, it will have discrimination power because upper students can answer while poor students cannot answer.

3.6 Scoring System

In this research, the researcher used Arikunto's formula in scoring the result of the test. The highest score is 100 and will use 40 multiple choice in order to find the objective of the result in this test. To scoring the result of the test, the researcher use Henning's Formula (1987).

The formula is as follows:

$$PS = \frac{R}{N} \times 100$$

Note:

- PS : Percentage Score
 R : the total of right answer
 N : total item

3.7 Data Analysis

Knowing is there any significant increase of the students' reading comprehension achievement after they taught by using small group discussion technique use anecdotes text, the researcher computed the student's score using the following steps:

Firstly, the researcher scored the result of pre-test and post-test. After the scoring, she calculated the score of pre-test and post-test and tabulate the result of the test. Then, the last steps is showing the conclusion from the tabulate result of the pre-test and post-test order, the data was statistically analyzed using statistical computerization i.e. Statistical Package for Social Science (SPSS) version 17.0 for windows to test whether the increase of students gain is significant or not.

3.8 Hypothesis Test

After collecting the data, the researcher analyzed the data in order to find out whether there is significant increase of students' ability in reading comprehension by using small group discussion technique or not after the treatment.

There are two hypotheses; Zero hypotheses (H_0) and Progressive hypotheses (H_1).

H_0 : There is no significant increase of students' reading comprehension after taught anecdote text use small group discussion technique at the third grade students of SMPN 1 Karya Penggawa Krui.

H_1 : There is significant increase of students' reading comprehension after taught anecdote text using small group discussion technique at the third grade students of SMPN 1 Karya Penggawa Krui.