

## CHAPTER III

### RESEARCH METHOD

#### A. Research Design

This research is aimed at investigating the effectiveness of Small Group Discussion Technique in Reading Comprehension (an experimental Study at SMAN 1 Sungai Loban, Tanah Bumbu). This research is a quasi-experimental design. The design in this research based on quantitative research was two groups pre-test and post-test. The researcher took two classes as an experimental class where the students were given pretest (T1) before the treatment and in the end, a posttest (T2) was conducted. The research design was presented below:

#### **T1 X T2**

T1: Pretest

T2: Posttest

X: Treatment (teaching reading comprehension)

In the first activity, the researcher administered pretest to the experimental class in order to find out the students' reading comprehension skill before they got treatment. In this case, the researcher conducted the treatment three times in teaching reading comprehension to the students. Posttest was administered to the experimental class in order to find out the result of the treatment.

## B. Population and Sample

SMAN I Sungai Loban Tanah Bumbu, especially students of MIA has 136 students. They are classified into four classes. MIA 1 consists of 34 students. MIA 2 consists of 34 students, MIA 3 consists of 35 students and MIA 4 consists of 33 students

**Table 4.1**

Classes	Number of student	Total
MIA 1	34	136
MIA 2	34	
MIA 3	35	
MIA 4	33	

This research applied purposive sampling technique. This technique determines the sample based on certain consideration. The class of MIA 2 and MIA 4 were selected for the research. Both classes were chosen as the sample because based on the information of the English teacher that the reading comprehension of this class was still low. The MIA 4 as an experimental class and XI MIA 2 as a control class. The experimental class was treated by using Small Group Discussion Technique and the control class was treated by Conventional Teaching Technique. The numbers of experimental class were 25 students, and the numbers of control class were 25 students. Thus, the total numbers of all samples were 50 students.

### **C. Variables**

Variable is a character of a group of people, their behavior, or the variant environment of one individual to others (Setiyadi, 2006:201). In order to assess the influence of the treatment in research, variables were defined as dependent and independent variables. Dependent variable is a variable that the researcher observed and measured to determine the effect of the independent variable. Independent variable was the major variable that would be investigated. This research consisted of the following variables:

- 1) Students' reading comprehension was considered as a dependent variable (X) since this variable was measured to determine the effect from the independent variable.
- 2) Small group discussion functioned as independent variable (Y) because this variable could influence or have effect to the dependent variable.

### **D. Research Instrument**

In this research, the researcher used multiple choice questions (MCQ) as a tool for testing to know student's ability in comprehending analytical exposition text. The text consist 20 items. The test is aim to measure student's reading ability in comprehending analytical exposition text.

## **E. Research Procedure**

There are three steps have done in conducted this research, they are:

### **1. Planning**

#### a. Determine The Subject of The Research

The subject of the research was the students at the eleventh grade at SMAN I Sungai Loban Tanah Bumbu, especially students of MIA

#### b. Designing The Instrument of The Research

The instrument was given to the students are multiple choice question

#### c. Try Out to The Test

Try out was conducted to identify how to accurate and effective the test before they are used the collect the data of the research and identify whether the test can be administered or not. It can be seen from the validity and reliability

### **2. Application**

After making the planning the researcher tried to apply the research. The steps were as follows:

#### a. In the first meeting, the researcher gave try out test

This test was multiple choices that consist of 20 items with five options a, b, c, d and e.

#### b. In the second meeting, the researcher gave items determine by validity and reliability analysis of try out test. After validity and reliability test the researcher used pre-test.

- c. In the last meeting, the rese archer gave post-test with test items after determine by validity and reliability

### 3. Reporting

The last step that should be done in the research procedure is reporting. It can be shown as follows:

- a. Analyze data that is received from pre-test and post-test
- b. Making report on the finding

## F. Validity and Reliability

### 1. Validity

Validity is measurement that is showing the validity level of the instrument (Arikunto 1998: 160). In other word, test validity defines as the extent to which instrument measures, valid is to know the result of the test is good. The test employed in this study was valid based on content and construct validity. Because, the test was taken from the syllabus. To find out the validity of instrument items, this study mostly used by researcher validity of instruments items (Sugiyono 2010:133). The validity is based on as follows:

1. If the score  $r_{hitung} > \text{score } r_{table}$  in score signification 5%, so the test items is not valid.
2. If the score  $r_{hitung} < \text{score } r_{table}$  in score signification 5%, so the test items is valid.

## 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. Besides the index of validity, the researcher also calculated the reliability. “When the test assumed the measure one characteristic or quality, the extent to which the test items are all measuring this same characteristic or quality can be determined by examining individual item scores rather than part or total scores” Tuckman (1978:163). Based on the statement above, the researcher decided that the compatible formula to calculate the reliability of the test for this study is by using Cronbach’s Alpha in SPSS 22 for windows.

The reliability is base on as follows:

1. If  $\alpha$  score  $> r_{table}$  in score signification 5% so, the test items are reliable.
2. If  $\alpha$  score  $< r_{table}$  in score signification 5% so, the test items are not reliable

## **G. Data Collection Procedure**

In collecting data, the researcher used the following test:

a. Pre-test

Pre-test to know the result of the students before treatment in the class. The researcher got pre-test in form consist 20 multiple choices questions for control and experiment.

b. Post-test

It is final test of the learning. The researcher gave the student same test. That is consisting 20 multiple choices questions. In test allotment of the test is for control class and experiment class. Especially experiment class, it is used to know the result after treatment. Therefore the researcher can know the influence by after treatment and before treatment

## H. Data Analysis Procedure

The data was collected from reading comprehension test and was analyzed quantitatively. The steps listed as follows:

1. Scoring the students' answer by using the following formula:

$$\bar{X} = \frac{\sum X}{N}$$

X: Mean score

$\sum X$ : The sum of all score

N: The number of students, (Gay, 1981: 298).

2. Normality Test

The normality test is used to measure whether the data in the experiment and control class are normality distributed or not. In this study the researcher used statistical computation by using SPSS for normality of test. The test of normality employed is Kolmogorov-Smirnov and Shapiro-Wilk

The hypothesis formula:

$H_0$  = The data have normal distribution.

$H_a$  = the data do not have normal distribution.

$H_0$  Is accepted if Sig >  $\alpha = 0,05$

$H_a$  Is accepted if Sig <  $\alpha = 0,05$



### 3. Homogeneity Test

It is necessary to be certain that the data are homogenous or not. The researcher used leavens SPSS.

$H_0$  = The variance of the data is homogenous

$H_a$  = The variance of the data is not homogeneus

$H_0$  Is accepted if sig >a=0, 05

$H_a$  Is accepted if Sig <a=0, 05

### 4. Hypothesis Test

Hypothesis will be counted with:

$$t_{test} = \frac{M_1 - M_2}{SE_{M_1 - M_2}}$$

$M_1$  = Mean of post-test

$M_2$  = Mean of pre-test

$SE_{M_1}$  = Deviation standard post-test

$SE_{M_2}$  = Deviation standard pre-test

## 5. The Hypothetical Test

In this research, the researcher used formulation Independent sample T-test. The researcher used SPSS of version 22.

The hypothesis formula:

*a.  $H_a$*  : There is significant difference between the students who are taught by using small group discussion technique than those who are taught by using conventional teaching technique (lecturing method)

*b.  $H_o$*  : There is no significant difference between the students who are taught by using small group discussion technique than those who are taught by conventional teaching technique (lecturing method)