

## **CHAPTER III**

### **METHODOLOGY**

#### **A. Research Methodology**

##### **1. Research Design**

This research is a Pre-experimental design. Pre-experimental design is a design that includes only one group or class that is given pre and post-test. This one-group pretest and posttest design was carried out on one group without a control or comparison group (Sugiyono, 2014: 109). Pre-Experimental is the researcher observing a main group and intervening throughout the study. In this design, there is no control group to be compared with the experimental group which is called the pre-experimental design (Cresswell, 2009). This type of research is an experiment with one group pre-test and post-test. The research tested the previous group's treatment and after-treatment.

At first, the researcher gave a pre-test to students before being given a treatment and a post-test to find out the result. The researcher used the results of the pre-test and post-test and compared them to find out whether there was an increase or not in the experiment.

**Table 3.1**  
**One Group Pre-Test and Post-Test Design**

<b>Pre- Test</b>	<b>Treatment</b>	<b>Post- Test</b>
X1	X	X2

##### **2. Population, Sampling, and Sample**

###### **a. Population**

According to Sugiyono (2014: 117), the population is the generalization area that consists of object or subject that has quality and certain characteristic that is carried out by researcher to learn and to draw a conclusion. The population in this research was seven classes

(7A,7B,7C,7D,7E,7F,7G) which totaled 224 students in grade seven at SMP Negeri 1 Mempawah Hulu.

**Table 3.2**  
**The Sevent grade students of SMP Negeri 1 Mempawah Hulu**

Class	Number of Students
<b>7A</b>	<b>32</b>
<b>7B</b>	<b>32</b>
<b>7C</b>	<b>32</b>
<b>7D</b>	<b>32</b>
<b>7E</b>	<b>32</b>
<b>7F</b>	<b>32</b>
<b>7G</b>	<b>32</b>
<b>TOTAL</b>	<b>224</b>

Based on the number of students being 224, the researcher took 32 students are the sample of this research, which 32 student are is from class 7B of SMP Negeri 1 Mempawah Hulu.

b. Sampling

In this study, researchers used cluster random sampling, according to Sugiyono (2012: 94) Cluster random sampling is a regional sampling technique used to determine samples if the object to be studied is very broad, for example, the population of a country, province or district. Researchers split a population into smaller groups known as clusters in order to conduct cluster sampling. To create a sample, they then choose at random from each of these clusters. Because cluster random selection is better appropriate for this study, which uses data from seven grade 7 classrooms, researchers have chosen class 7b as the sample.

c. Sample

Sugiyono (2014:118), states that the sample is part of the population that is investigated. In this research, the researcher chose the sample since the purpose of this research was to find the poster effect in Reading Comprehension. The sample from this research is class 7B at SMP Negeri 1 Mempawah Hulu, totaling 32 students.

3. Technique and Tool of Data Collection

a. Technique of data collection

Data collection is one of the processes of research, where data collection plays an important role in a study. This is the process of obtaining primary data in a study. Good research is built on adequate data and correct procedures. In this research, the researcher used a measurement technique. Comparing anything with standard units of measurement that have been modified for the object to be measured is the process of measurement, which is used to ascertain quantitative facts. According to Arikunto and Jabar (2004), measurement is the process of comparing an object's nature to certain units of measurement in order to make it quantifiable.

This is steps of the technique of collecting the data are as follows:

1) Making the Instrument

The researcher makes the instrument first before giving the test to students. The instrument is multiple choice with 20 questions of reading.

2) Expert judgment

After making the instrument, the researcher comes to expert judgment for the consultant about the reading test. The researcher met an English teacher of SMP Negeri 1 Mempawah Hulu. The English teacher checked about the instruments that were to be given to the student. Thus, the test can be given to students.

## 3) Conducting pre-test

The researcher conducted pre – test for class 7B before giving the treatment to the students. They had to finish 40 minutes.

## 4) Conducting treatment

To conducting treatment, the researcher gave the treatment by using poster in reading comprehension for descriptive text in class 7B.

## 5) Conducting post-test

The post – test was done after conducting the pre – test and the treatment. The material in this test same as like pre-test.

## b. Tool of data collection

In this research, researcher was be use test to measure participants reading comprehension for descriptive text before and after treatment. Test is a series of questions, experiences, or something else means used to measure skill, knowledge, intelligence, achievement or talent of a person or group (Arikunto, 2002:127). According to Zainal Arifin (2016: 118) a test is a technique used in order to carry out measurement activities, in which there are various questions, or a series of tasks that must be done or answered by students to measure aspects of student behavior. This test was used as a pre-test and post-test to measure participants' reading comprehension before and after treatment.

**Table 3.3**  
**Table of question categorization**

No	Question Number	Description	indicators
1	1	What is Dimeo eyes	vocabulary
2	2	Asking about where the pet from	Specific information
3	3	Content of the text	Main idea
4	4	Purpose of the text	Inference
5	5	How is giraffe eyes	Specific information

<b>6</b>	6	Antonym	Reference
<b>7</b>	7	Purpose of the text	Inference
<b>8</b>	8	What is owl food	vocabulary
<b>9</b>	9	Words pronoun	Reference
<b>10</b>	10	Reason owl eyes cannot rotate	Specific information
<b>11</b>	11	Meaning of words	Reference
<b>12</b>	12	A group of owl	Specific information
<b>13</b>	13	Content of the text	
<b>14</b>	14	The symbol of Paris	Specific information
<b>15</b>	15	When Kimmy give a kiss to the Writer	Specific infoemation
<b>16</b>	16	Reason the writer can't be angry at his cat	Inference
<b>17</b>	17	The second paragraph tell about	Main idea
<b>18</b>	18	Purpose of the text	Inference
<b>19</b>	19	Then dangeriouse touch eagle	Specific information
<b>20</b>	20	Word pronoun	Reference

#### 4. Technique of Data Analysis

This research is quantitative research, so it needs a data analysis. In this part, the researcher applies an appropriate technique to find out the effect of both variable of this research.

##### a. Descriptive Analysis

The descriptive analysis is used to describe the variable of the research. There are mean, mode, median, standard deviation, the lowest score, and the highest score are also used to analysis the data.

##### 1) Score individual

The individual score is the result of scoring work (giving number) obtained by each individual student by adding up the points for each item the test has answered correctly. Taken from cohen et at (2007:423)To calculate the students' individual score, from a test

result, the number of students' correct answer is multiplied by 100 and then divided by the total number of test items. With formula :

$$\text{Assessment level percentage} = \frac{\text{number of correct item}}{\text{total number of scoring item}} \times 100$$

(Sumber : Ngalim Purwanto, 2002:102)

By using the test, researcher collected some data about the results of the test. In calculating reading comprehension test results descriptive text, the test scores are based on the scoring criteria proposed by Arikunto (2009:245). They are as follows:

**Table 3.4**

**Table of Classification of the Students' Reading Ability**

<b>Value</b>	<b>Grade</b>	<b>Category</b>
80 - 100	A	Excellent
66 - 79	B	Good
56 - 65	C	Sufficient
40 - 55	D	Fairly Sufficient
< 39	E	Poor

In this study, researchers collected student data by means of use test. In conducting this study, researchers used the results of test from class 7B as a sample of the study. The results of this test will show the effect of using posters in reading comprehension for descriptive text.

## 2) Mean

Mean is one measure of the central symptom. The mean can be said to represent a data set. Determining the mean can be done by adding up all data values, then dividing by the amount of data. Sugiyono (2014:49) states that mean is the average score obtained by the subject of the study. The formula which is used to determine the mean is as follow:

$$\bar{x} = \frac{\sum x}{n}$$

( Sumber,Ngalim Purwanto, 2012: 101)

Where:

$\bar{x}$  = mean

$\sum x$  = total of score observed

n = total number of students

### 3) Mode

Mode is the data that occurs most often. The mode is a measure of concentration to express the most frequently occurring phenomenon. The data set obtained allows it to have a mode value that is not single or may not have it. According to Sugiyono (2014:47), mode is the technique to explain the data based on the value which is popular or which often being found.

### 4) Median

Median (Me) or quartile is the middle value of a set of data after being sorted from the smallest data to the largest data, and vice versa. If a data has a median, then the median is single. Sugiyono (2014:48) states that median is one explanation of the techniques based on the middle value of the data which have been organized from the lowest to the highest or from the highest to the lowest.

### 5) Standard Deviation

According to Sugiyono (2010:56) states that standard deviation is the way of showing of the spread of scores. It measures the degree of the score group is deviated from the mean, which simply describes the gap between the highest and the lowest marks and ignores of the score.

### 6) Range

Range in statistics is the range or difference between the largest value and the smallest value of a data set or sample. Range is a way to talk about the spread of distribution of scores.

### **b. Normality**

Normality was used to determine whether the data is distributed normal or not. Sugiyono (2017:239) claims that the normality test is employed in research, whether or not the data is regularly distributed is determined by the normality of the variables under study. This is crucial because, in the event that each variable's data deviates from normal, then parametric statistics cannot be used in hypothesis testing. The researcher has done a testing the normality of the data both pre-test and post-test.

### **c. Hypothesis**

The researcher will employ hypotheses to answer question number one. The hypotheses will be tested using the critical value of the t-distribution table test. The crucial value is in the t-table because the degree of freedom (df) is  $N - 1$  and the level of significance is 5% or 0,05 using a two-tailed test (Hatch and Lazaraton 1991: 595). The following criteria will use:

- 1) If the t-test ( $t_o$ ) exceeds the t-table ( $t_t$ ) by a significant margin of 0.05,  $H_a$  (alternative hypotheses) will be accepted. It signifies that the post-test mean score is higher than the pre-test mean score. there is the effectiveness of using poster in reading comprehension for descriptive text.
- 2) If the t-test ( $t_o$ ) is not significant at 0.05, the null hypothesis ( $H_o$ ) will be rejected. there is no effectiveness of using poster in reading comprehension for descriptive text

### **d. Effect size**

After evaluating the hypotheses, the researcher was moved on to the next step in addressing question number two of this study, How significant is the effectiveness of using poster in reading comprehension for descriptive text. Cohen, Manion, and Morrison (2007: 293) define effect size as the degree to which a phenomenon exists or the degree to which a null hypothesis is not supported.

$$ES = \frac{x_2 - x_1}{sd}$$

Taken from Cohen, Manion and Morrison (2007: 521)

Where:

ES = Effect size

X<sub>2</sub> = Mean of post-test

X<sub>1</sub> = Mean of pre-test

SD = Standard deviation

This formula is simple to calculate manually, and the result reveals the magnitude of the treatment's effect size. Furthermore, to understand the result derived from this computation, the author resorts to Cohen, Manion, and Morrison's (2007:521) interpretation, which is detailed in the table below:

**Table 3.5**  
**Effect Size Level**

<b>Value</b>	<b>Level</b>
0-0.20	Weak Effect
0.21-0.50	Modest Effect
0.51-1.00	Moderate Effect
>1.00	Strong Effect

Taken from Cohen, Manion and Morrison (2007:521)

If the value of the effect size between 0-0.20 means it category in weak effect. If the value between 0.21-0.50 means it category in modest effect, if the value between 0.51-1.00 means it category in moderate effect and if the value more then >1.00 means it category in strong effect.