

### CHAPTER III

#### RESEARCH METHOD

In research method explains the design of the research, location and time of the research, population and sample, technique, and instrument of collection data and technique of analysis data.

#### 3.1 The Design of Research

The design of this research used quasi-experimental. In this design, a popular approach to quasi-experiments, the experimental group A and control group B are selected without random assignment. Both groups took a pretest and posttest. Only the experimental group receives the treatment by using tongue twister method, but the control group was not. This research applied including the pretest and posttest. After the treatment, the writer was given the posttest which was exactly the same as the present.

Based on Crecwell defines quasi experimental design can be diagramed as shown below:

| Class      | Pre-test | Treatment | Post-test |
|------------|----------|-----------|-----------|
| EXPERIMENT | $O_1$    | X         | $O_2$     |
| CONTROL    | $O_3$    | -         | $O_4$     |

WHERE :

- $O_1$  : Pretest of experimental group
- $O_2$  : Posttest of experimental group
- $O_3$  : Pretest of control group
- $O_4$  : Posttest of control group

X : Treatment.

--- : No Treatment<sup>21</sup>

### 3.2 Location and Time of Research

The location of this research was taken place in Senior High School MTs Albadar by focusing at eighth year students. This research needs one month to conduct.

### 3.3 Population and Sample

#### 3.3.1 Population

Scarvia in Sugiono stated that a population is a set or collection of all elements possessing one or more attributes of interest.<sup>22</sup> The population of this research was eighth grade students of MTs Albadar academic year 2019/2020.

Table 3.1 The total of the eighth grade Students of MTs Albadar

| No           | Class  | Sex  |        | Total |
|--------------|--------|------|--------|-------|
|              |        | Male | Female |       |
| 1            | VIII A | 23   | -      | 23    |
| 2            | VIII B | 16   | 7      | 23    |
| Total Number |        |      |        | 46    |

(Source of data : Staff Administration of MTs Albadar Academic Year 2019/2020)

#### 3.3.2 Sample

<sup>21</sup>Cresswell JW, *Research Design Qualitative, Quantitative, and Mixed Method Approaching*, (London EC1Y 1SP United Kingdom, 2014), P. 221.

<sup>22</sup> Sugiono, *Metode Penelitian Kuantitatif, Kualitatif, dan R & D* (Bandung: Alfabeta, 2010), p.115.

In this research, the researcher was chosen sample by using total sampling technique. The sample of study was taken from the eighth grade students of MTs Al-Badar. This grade was chosen because it is willing and available to be studied, thus it can represent all the population. Therefore, the researcher chose VIII A class as experiment class and VIII B as control class. Both of them have 46 students.

### **3.4 Instrument**

#### **3.3.1 Test**

In this research, the researcher gave test as an instrument to collect the data of the eighth grade students in reading comprehension. The students were given the test to find out the information by implementing Collaborative strategic reading in the classroom. The purpose of this test was to know the students' comprehension in reading. The type of this test was multiple choice tests consist of 15 items. The time interval between the pre-test and post-test were six meetings, a period long enough to minimize the effects of the pre-test on the result and the conclusion of the experiment.

### **3.5 Prosedure of Collecting Data**

In collecting data, the researcher used one kind of test as an instrument of collecting data. It was applied as the pretest and posttest. The procedure of collecting data was described as follows:

#### **1.5.1 Pre-test**

Before giving treatment, the researcher gave pre-test to get information about the students' reading comprehension. The allocation time of the pre-test was 60 minutes and monitored by the researcher.

#### **1.5.2 Post-test**

The post-test was given after the students getting treatment. It used to know significant different between the students' comprehension before and after using Collaborative Strategic Reading in learning. The allocation pre-test was 60 minutes and monitored by the researcher.

### 3.5.3 Treatment

The researcher gave the treatment to the students and some material that interesting to the students. Knowing the treatment of this research, the researcher conducted for six meetings and the students found some different theme of the text after two meetings. After giving the pre-test, the researcher gave the treatment for six meetings.

#### 3.5.3.1 Treatment of Experimental Class

The procedure of the treatment by applying Neurological Impress Method in reading comprehension as follows:

##### 3.5.3.1.1 First Meeting

1. The researcher explained the process which will take place.
2. The researcher introduced and explained about the collaborative strategic reading.
3. The researcher explained about the material (Descriptive text).
4. The researcher give preview before the student read the text was given about My Small House.
5. The researcher help the students learn click and clunk while reading each section of the passage.
6. The researcher helped students learn to gist the gist by identifying the most important idea in a section of text.

7. The researcher let the students learn to warm up by formulating question and answer about what they have learn.
8. The researcher use cooperative learning group roles.
9. Then, the researcher asked the students to learn the text in house to be discussed in the next meeting.

#### 3.5.3.1.2. Second Meeting

1. The researcher explained the process which will take place.
2. The researcher asked the students about the text from the first meeting for a minute to check whether they understand the text or not.
3. The researcher give preview before the student read the text was given about My family.
4. The researcher help the students learn click and clunk while reading each section of the passage.
5. The researcher helped students learn to gist the gest by identifying the most important idea in a section of text.
6. The researcher let the students learn to warm up by formulating question and answer about what they have learn.
7. The researcher use cooperative learning group roles.
8. Then, the researcher asked the students to learn the text in house to be discussed in the next meeting.

#### 3.5.3.1.3 Third Meeting

1. The researcher explained the process which will take place.
2. The researcher selected new book or passage that is appropriate for the students' reading level. The text was given about Trip to the Zoo.

3. The researcher give preview before the student read the text was given about my mother.
4. The researcher help the students learn click and clunk while reading each section of the passage.
5. The researcher helped students learn to gist the gist by identifying the most important idea in a section of text
6. The researcher let the students learn to warm up by formulating question and answer about what they have learn
7. The researcher use cooperative learning group roles
8. Then, the researcher asked the students to learn the text in house to be discussed in the next meeting

#### 3.5.3.1.4 Fourth Meeting

1. The researcher explained the process which will take place.
2. The researcher asked the students about the text from the last meeting for a minute to check whether they understand the text or not.
3. The researcher give preview before the student read the text was given about my classmate yuta.
4. The researcher help the students learn click and clunk while reading each section of the passage
5. The researcher helped students learn to gist the gist by identifying the most important idea in a section of text
6. The researcher let the students learn to warm up by formulating question and answer about what they have learn.
7. The researcher use cooperative learning group roles
8. Then, the researcher discussed the text with the students along the way.

#### 3.5.3.1.5 Fifth Meeting

1. The researcher explained the process which will take place.
2. The researcher asked the students about the text from the last meeting for a minute to check whether they understand the text or not.
3. The researcher give preview before the student read the text was given about wakatobi.
4. The researcher help the students learn click and clunk while reading each section of the passage
5. The researcher helped students learn to gist the gest by identifying the most important idea in a section of text.
6. The researcher let the students learn to warm up by formulating question and answer about what they have learn.
7. The researcher use cooperative learning group roles
8. Then, the researcher asked the students to learn the text in house to be discussed in the next meeting.

#### 3.5.3.1.6 Sixth Meeting

1. The researcher explained the process which will take place.
2. The researcher asked the students about the text from the last meeting for a minute to check whether they understand the text or not.
3. The researcher give preview before the student read the text was given about Lembah pelangi waterfall.
4. The researcher help the students learn click and clunk while reading each section of the passage
5. The researcher helped students learn to gist the gest by identifying the most important idea in a section of text.

6. The researcher let the students learn to warm up by formulating question and answer about what they have learn
7. The researcher use cooperative learning group roles
8. The researcher asked the students to reread the text and marking the difficult words. Along these activities the researcher would walk around in the classroom.
9. Then, the researcher discussed the text with the students along the way.

#### 3.5.3.2 Treatment of Control Class

##### 3.5.3.2.1 First Meeting

1. The researcher explained the process which will take place.
2. The researcher selected an interesting book or passage that is appropriate for the students' reading level. The text was given about My small house.
3. The researcher distributed the text from the first meeting.
4. The researcher asked the students to read the text carefully.
5. The researcher leaded the students to reread the text.
6. The researcher asked the student to translate the text.
7. Then, the researcher discussed the text with the students along the way

##### 3.5.3.2.2 Second Meeting

1. The researcher explained the process which will take place.
2. The researcher asked the students about the text from the first meeting.
3. The researcher leaded the students to read the text about my family.
4. The researcher guided the students to identify main ideas on each paragraph, grasp all information comprehensively and try to make some clues of the vocabularies.

5. The researcher asked the students to answer the question to measure their ability to comprehend the text.
6. Then, the researcher discussed the text with the students along the way.

#### 3.5.3.2.3 Third Meeting

1. The researcher explained the process which will take place.
2. The researcher selected an interesting book or passage that is appropriate for the students' reading level. The text was given about my mother.
3. The researcher distributed the text from the first meeting.
4. The researcher asked the students to read the text carefully.
5. The researcher led the students to reread the text.
6. The researcher asked the student to translate the text.
7. Then, the researcher discussed the text with the students along the way

#### 3.5.3.2.4 Fourth Meeting

1. The researcher explained the process which will take place.
2. The researcher asked the students to take the text from the first meeting.
3. The researcher led the students to read the text about my classmate yuta
4. The researcher guided the students to identify main ideas on each paragraph, grasp all information comprehensively and try to make some clues of the vocabularies.
5. The researcher asked the students to answer the question to measure their ability to comprehend the text.
6. Then, the researcher discussed the text with the students along the way.

#### 3.5.3.2.5 Fifth Meeting

1. The researcher explained the process which will take place.

2. The researcher selected an interesting book or passage that is appropriate for the students' reading level. The text was given about wakatobi.
3. The researcher distributed the text from the first meeting.
4. The researcher asked the students to read the text carefully.
5. The researcher leaded the students to reread the text.
6. The researcher asked the student to translate the text.
7. Then, the researcher discussed the text with the students along the way

#### 3.5.3.2.6 The Sixth Meeting

1. The researcher explained the process which will take place.
2. The researcher asked the students to take the text from the first meeting.
3. The researcher leaded the students to read the text about lembah pelanyi waterfall.
4. The researcher guided the students to identify main ideas on each paragraph, grasp all information comprehensively and try to make some clues of the vocabularies.
5. The researcher asked the students to answer the question to measure their ability to comprehend the text.
6. Then, the researcher discussed the text with the students along the way.

### 3.6 Technique of Analysis Data

The gathered data are used to find out the differences of students' achievement in experimental class and controlled class. The formulas as follow

#### 3.5.1 Scoring the students answer

To calculate the score the researcher used the formula as follow<sup>23</sup>:

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<sup>23</sup> Depdiknas, Langkah-langkah Penyusunan soal pedoman Penskoran dan cara penghitungan nilai akhir SMP/SMA/SMK, (Jakarta: depdikbud), p. 28

$$\text{Score} = \frac{\text{students correct answer}}{\text{the total number of items}} \times 100$$

3.5.2 classified the students' score both pretest and posttest use the following five level classification:

Table 3.2 The criteria of classifying students reading comprehension

| Number | Score     | Criteria  |
|--------|-----------|-----------|
| 1      | 86-100    | Excellent |
| 2      | 71-85     | Good      |
| 3      | 56-70     | Fair      |
| 4      | 41-55     | Poor      |
| 5      | $\leq 40$ | Very poor |

3.5.3 Calculating the percentage of the students score:

To calculate the rate percentage of the students score by using the following formula:

$$P = \frac{F}{N} \times 100$$

Where:

P = Percentage

F = Frequency

N = Total number of sampel

3.5.4 Finding out the mean score using the following formula:

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

Where:

$\bar{X}$  = Means score

$\sum X$  = The total number of the score

$N$  = Total number of subjects

3.5.5 Finding the difference of the mean score between the pre-test and post-test to calculate the t-test value. The formula is as follow

$$t = \frac{X_1 - X_2}{\sqrt{\left(\frac{SS_1 + SS_2}{n_1 + n_2 - 2}\right) \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$SS_1 = \sum X_1^2 - \frac{(\sum X_1)^2}{n_1}$$

$$SS_2 = \sum X_2^2 - \frac{(\sum X_2)^2}{n_2}$$

Where:

$T$  : Test of significance

$X_1$  : Mean score of experimental group

$X_2$  : Mean score of control group

$SS_1$  : The sum of squares of experimental group

$SS_2$  : The sum of squares of control group

$n_1$  : Total number of subject of experimental group

$n_2$  : Total number of subject of control group

$\sum X_1$  : The sum of all squares of experimental group

$\sum X_2$  : The sum of all squares of control group

$(\sum X_1)^1$  : The sum scores of experimental group

$(\sum X_1)^2$  : The sum scores of control group<sup>24</sup>

3.5.6 calculating the standard deviation of score by using the formula:

$$SD = \sqrt{\frac{SS}{N}}, \text{ Where } SS = \sum X^2 - \frac{(\sum x)^2}{N}$$

Where:

SD : The standard deviation

SS : The square root of the sum of square

$\sum X^2$  : The sum of square

$(\sum X)^2$  : Total square of the sum

N : Total number of subject

3.5.7 Determining Degrees of Freedom

$$df = N_x + N_y - 2$$

Where:

df : Degrees of freedom

$N_x$  : Number of students of control group

$N_y$  : Number of students of experimental group

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<sup>24</sup>L. R. Gay, *Educational Research Competencies for Analysis and Applications*, Second Edition (Columbus Ohio: Person Merrill Prentice Hall, 1981), p.297