

## CHAPTER III

### RESEARCH METHOD

#### A. Research Design

In this research, the researcher uses quantitative method. Quantitative method usually uses numerical data and statistical analysis. The researcher uses experiment research. Experiment research is a research which compares the result of one group to another group to find out the specific treatment influence.

In applying the experimental, the researcher chooses two classes as experiment and control class. Experiment class is a class where story mapping technique has applied in teaching and learning narrative text and control class is a class where the technique has applied as usual that frequently used by teacher in teaching and learning narrative text. The researcher wanted to compare the result of experiment and control class before and after doing some treatment.

The researcher conducted five meetings in each class both experiment and control class. First meeting was for giving pre-test, the second until the fourth meetings were for giving the treatments and the last meeting is for giving post-test.

#### B. Research Setting

The location of the research at MTsN 3 TAPIN, located in Jl. Bendungan Binuang, Tapin Regency, South Kalimantan. This research conducted on 30<sup>th</sup> October until 14<sup>th</sup> November 2017.

### C. Population and Sample

#### 1. Population

The population of this research are the ninth grade students of State Islamic Junior High School (MTsN) 3 TAPIN. There are four classes, IXa, IXb, IXc, and IXd. The total number of students were 141. In the following Table 3.1 will be describe about the number of students.

**Table 3.1. Total number of students**

| Class                             | Number of students |        | Total |
|-----------------------------------|--------------------|--------|-------|
|                                   | Male               | Female |       |
| IX. A                             | 7                  | 28     | 35    |
| IX. B                             | 15                 | 20     | 35    |
| IX. C                             | 9                  | 26     | 35    |
| IX. D                             | 17                 | 19     | 36    |
| <b>Total students all classes</b> |                    |        | 141   |

(Source : Administration staff of MTsN 3 TAPIN)

#### 2. Sample

Sample is a part of the population that has the same characteristics of the population. The sample can also be the population itself. According to Sugiyono (2012, p.118), “sampel adalah sebagian dari jumlah dan karakteristik yang dimiliki oleh populasi tersebut”. It means that sample is part of the number and characteristics of which are owned by the population.

The researcher used a purposive sampling technique, because the researcher chose the sample based on some suggestion from the

teacher and observation before. According to Sugiyono (2012, p.183), purposive sampling is a technique of determining the sample with a certain consideration.

The sample in this research were 70 students of class IXa and IXb. Each class consists of 35 students. Class IXa as control class and Class IXb as experiment class.

#### **D. Instruments of the Research**

In this research, to get valid data and objective information the researcher used some instruments as follows:

1. Test

Test that used in this research was objective test. Objective test is a test that has right or wrong answers and so can be scored objectively. Objective tests are popular because they are easy to prepare and take, quick to score, and provide a quantifiable and concrete result. Kinds of test items that used was multiple choice items, consisting of 25 questions gotten from several books of English for Junior High School and other sources (see appendix).

2. Interview

*Unstructured interview guide was used to collect data in this research. According to Wikipedia accessed on November 14<sup>th</sup> 2017, “unstructured interview is an interview in which questions are not prearrange. The form of the unstructured*

*interview varies widely, with some questions being prepared in advanced in relation to a topic that the researcher or interviewer wishes to cover”.*

*There are several list of questions for the teacher as interview guide (see appendix).*

### 3. Observation

The researcher observed the school condition and process teaching and learning in the class before doing the research to get preliminary data.

## **E. Data Collecton Procedures**

To get valid data and objective information, the researcher collected the data from all instruments as follows:

### 1. Test

The test used to see the result of students' improvement in their reading comprehension of narrative text. The test applied in experiment and control class to find out students' achievement. The score of the test used as comparison between experiment and control class. The researcher conducted the test two times for both classes. The first was pre-test and the second was post-test. After knowing and getting the data, the researcher annalyzed the data to see the effectiveness of story mapping on students' reading comprehension of narrative text.

a. Pre-test

Pre-test applied for experiment class and control class. It was conducted in the first meeting before the technique of story mapping given by the researcher. Pre-test consist of 25 multiple choice questions. There were several narrative text passages in the test and the students have to answer the questions based on the text.

b. Post-test

Post-test also applied for both classes. It was conducted after the treatments was given. The purpose of post-test was to measure the effectiveness of story mapping technique on students' reading comprehension of narrative text by looking at students' post-test score. Post-test also multiple choice questions which is consist of 25 numbers of question. The test in pre-test and post-test have the same difficulty level.

2. Interview

The researcher did unstructured interview with the English teacher, the purpose was to support the data by knowing the classroom situation, the students' characteristics, the problems in reading comprehension, and the teacher's thought about the story mapping technique to solve problems in reading narrative text.

### 3. Observation

The researcher observed the school condition and process teaching and learning in the class before did the research. The researcher used observation guide as follows:

**Table 3.2. Observation Sheet for Teaching and Learning Process**

| Observation Item |  | Yes | No | Comment |
|------------------|--|-----|----|---------|
| <b>A.</b>        | <b>Pre-activity</b>  |     |    |         |
|                  | 1. The teacher greets and asks the students' condition.                                    |     |    |         |
|                  | 2. The students respond to the teacher's greeting and tell about their condition.          |     |    |         |
|                  | 3. teacher check attendance of the students  |     |    |         |
|                  | 4. The teacher leads a prayer.   |     |    |         |
|                  | 5. The teacher reviews the previous topic.   |     |    |         |
|                  | 6. The teacher introducing the new topic to the students.                                  |     |    |         |
|                  | 7. The teacher tells the objective of the teaching and learning process.                   |     |    |         |
| <b>B.</b>        | <b>While-activity</b>  |     |    |         |
|                  | 1. The students are ready to learn the materials.  |     |    |         |
|                  | 2. The teacher builds the students' knowledge by asks some questions related to the topic. |     |    |         |
|                  | 3. The teacher checks the students' understanding.   |     |    |         |
|                  | 4. The teacher gives explanation and some examples of the material.                        |     |    |         |
|                  | 5. The teacher gives some reinforcement.   |     |    |         |

|           |  |  |  |  |
|-----------|--|--|--|--|
|           | 6. The teacher gives chances to the students to ask questions. |  |  |  |
|           | 7. The students deliver the questions to the teacher.          |  |  |  |
| <b>C.</b> | <b>Post-activity</b>   |  |  |  |
|           | 1. The teacher summarizes and reflects the lesson.             |  |  |  |
|           | 2. The teacher build students' motivation to study hard.       |  |  |  |
|           | 3. The teacher closes the lesson                               |  |  |  |
|           | 4. The teacher lead the prayer                                 |  |  |  |

#### F. Data Analysis

After gaining score of post-test from experiment and control class, the researcher categorized the score based on Anas Sudijono (2011, p.35) as follows:

**Table 3.3. Categories of Score Test (Pre-test and Post-test)**

| Score    | Categories |
|----------|------------|
| 80 – 100 | Very Good  |
| 66 - <80 | Good       |
| 56 - <66 | Fair       |
| 46 - <56 | Low        |
| 0<46     | Very Low   |

The next step was analyzed the data to know the effectiveness of story mapping technique in Reading Comprehension of narrative text, the researcher used the gained test as Nuraeni in Mahmudah (2014, p.59) stated by using the following formula:

$$g = \frac{\text{score post test} - \text{score pre test}}{\text{score maximal} - \text{score pre test}}$$

**Table 3.4. Categories Score of Test for Measuring Effectiveness**

| Score                 | Categories |
|-----------------------|------------|
| $g < 0,3$             | Low        |
| $0,3 \leq g \leq 0,7$ | Fair       |
| $g > 0,7$             | High       |

The researcher used test to find out the effectiveness of story mapping technique in teaching Reading Comprehension of narrative text by comparing the students' score on Reading Comprehension of narrative text using story mapping and the students' score on Reading Comprehension of narrative text without using story mapping.

The researcher then calculated the result of pre-test and post-test by using t-test formula as suggested by Anas Sudijono (2008, p.324) as follows:

The process of t-test is as follows:

1. Determining mean of variable X (Experimental Class), with

$$\text{formula: } M_x = \frac{\sum f_x}{N_x}$$

2. Determining mean of variable Y (Control Class), with formula:

$$M_y = \frac{\sum f_y}{N_y}$$

3. Determining standard deviation of variable X, with formula:

$$SD_x = \sqrt{\frac{\sum f x^2}{N_x}}$$

4. Determining standard deviation of variable Y, with formula:



$$SD_y = \sqrt{\frac{\sum fy^2}{N_y}}$$

5. Determining standard error of mean variable X, with formula:

$$SE_{mx} = \frac{SD_x}{\sqrt{N-1}}$$

6. Determining standard error of mean variable Y, with formula:

$$SE_{my} = \frac{SD_y}{\sqrt{N-1}}$$

7. Determining standard error of different mean variable X and mean of variable Y, with formula:

$$SE_{mx-my} = \sqrt{SE_{mx^2} + SE_{my^2}}$$

8. Determining  $t_0$ , with formula:

$$t_c = \frac{M_x - M_y}{SE_{mx-my}}$$

9. Determining t-table in significance level 5% with degrees of freedom (df), with formula:

$$df = (N_1 + N_2) - 2$$

Note:

$M_x$  = mean of students' post – test score of experimental class

$M_y$  = mean of students' post – test score of control class

$\sum fx$  = sum of students' post – test score of experimental class

$\sum fy$  = sum of students' post – test score of control class

$N_x$  = number of students experimental class

$N_y$  = number of students control class

$SD_x$  = standard deviation of experimental class

$SD_y$  = standard deviation of control class

$SE_{mx}$  = standard error of mean of experimental class

$SE_{my}$  = standard error of mean of control class

$SE_{mx-my}$  = standard error of difference between  $Mx$  and  $My$

$t_c$  = value of hypothesis testing

According to Murdan (2006, p.171), the result of “t” test would show whether there is significant increase on students’ score reading comprehension of narrative text in post-test after pre-test and do the treatment. The following is criteria to make decision:

- If  $t_{count}$  achieved is higher than  $t_{table}$  at significance level 5% it means there is significance influence between the mean of pre-test and post-test in experiment class and control class.
- If  $t_{count}$  achieved lower than the  $t_{table}$  at significance level 5% it means there is no significance influence between the mean of pre-test and post-test in experiment class and control class.