

### CHAPTER III

#### METHODOLOGY OF THE RESEARCH

In method of the research presents the research design, variable ad operational definition, population and sample, instrument of the research, procedure of collecting data and technique of data analysis.

##### A. Research Design

In this research, the researcher used an experimental research. Experimental research design is used when a researcher wants to establish possible cause and effect between independent and dependent variable.<sup>1</sup>

There are at least three major experimental research designs: pre-experimental, true experimental and quasi experimental. The key distinction between these experimental research designs is the extent to with a design deals with the threats to the internal validity of study. For this study, the writer used Pre-experimental research with one group pretest-posttest design. There is only one group of participant who was the target of treatment. Participants are tested before and after the treatment. Pretest and posttest score was compared to evaluate whether there is a significant gain. The schematic reception of the design is present below:

$O_1 \text{ X } O_2$

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<sup>1</sup> Creswell, J.W, *Educational Research: planning, conducting, evaluating quantitative and qualitative research (3rded)*, 2008, New Jersey: Pearson.

Where :

$O_1$  : Pretest

X : Treatment

$O_2$  : Posttest<sup>2</sup>

## **B. Location and Duration of the research**

Researcher did research in SMKS MUHAMMADIYAH Parepare. The researcher used the pre-experimental research that has several times to collect and analyze data. The duration of this research is about one month.

## **C. Research Variables and Operational Definitions**

### **1. Variables**

There are two variables in this research. The first variable is independent variable (X) and the second variable is independent variable (Y).

- a. Independent Variable is the use of PORPE method as a teaching strategy in teaching English reading comprehension.
- b. Dependent Variable is the students' reading comprehension on the tenth grade students of SMKS MUHAMMADIYAH PAREPARE.

### **2. Operational definition of Research Variables**

In this section, the researcher was explained operational definition of variable that had been mention above in the variable of the research.

- a. PORPE (Predict, Organize, Rehearse, Practice, Evaluate) is one of method that can be used by the teacher in improving the students' reading comprehension.

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<sup>2</sup> Sugiyono, *Metode Penelitian Pendidikan* (Bandung: ALFABETA,2015).p.111.

- b. The students' reading comprehension is the result and successfulness as well as progress of students in reading at skill in reading at SMKS MUHAMMADIYAH Parepare

#### **D. Population and Sample of the Research**

##### **1. Population**

The population of this research is the second grade students of SMKS MUHAMMADIYAH PAREPARE. Based on the research observation there are two classes of the second grade students there. They are class. TKJ, TKV. This is the table of the number of the first grade students there:

**Table 1.4: The total of the second grade students of SMKS MUHAMMDIYAH Parepare.**

No	Class	Total
1	XI TKV	21
2	XI TKJ	3

*(Source : Administration of SMKS MUHAMMADIYAH Parepare)*

##### **2. Sample of the Research**

The sampling technique used in this research was purposive sampling technique that one class of the second grade students of SMKS MUHAMMADIYAH Parepare took as research XI TKV, because the number of students from class XI TKV is more in accordance with the criteria of this study so that later it can answer research problems. The total number of sample this research is 21 students.

#### **E. Instrument of the Research**

The instrument used in this research was reading test. The test was given to the students to measure the students' comprehension the writer chooses the test namely true false and multiple choice, the total item is 20 numbers. There are two test

of this research, they are pre-test and post-test. Pre-test was given before treatment to find out the students prior knowledge and post-test was given after treatment to get data on the impact of using PORPE Method in upgrading students reading comprehension.

#### **F. Procedure of Collecting Data**

The data was collected from the students. The procedures were sequenced chronologically in the following steps:

1. Pre- test

The researcher gave pre-test before a treatment. The test was to know the students' prior knowledge on reading comprehension. The student would have to answer 20 questions, which was consist 10 items of true false and 10 items of multiple choice tests. The researcher was collected and then analyzed student's assignment.

2. Post-test

After doing the treatment, the researcher gave posttest; this was the last meeting. The researcher was given posttest the measure the student's ability in reading comprehension after they are taught by using PORPE method. The students would have to answer 20 questions forms which was consist of 10 items of true false and 10 items of multiple choice tests. The researcher was collected and then analyzed student's assignment.

#### **G. Treatment**

Treatment was given after the pre-test. The researcher gave treatment in some steps or sessions as follows:

a. The first meeting

Motivate students about the importance of reading comprehension. Provide an explanation of the PORPE method and explain the learning steps of the PORPE method. Describes the learning steps in the PORPE method where:

1. Predict: students are asked to make prediction questions using 5w+1h such as when, where, what, how, etc.
2. Organize: ask students to summarize key ideas containing predictive questions through concept maps
3. Rehearse: students memorize the key ideas using a concept map
4. Practice: write answers to predictive questions in detail into text form by relying on memory
5. Evaluate: students evaluate the writing results by filling out a checklist of completeness, accuracy, and the suitability of the essay.

The research gave chance the students to give question that they did not understand about the material then, the research closed the meeting.

b. The second meeting

In this meeting, before begin the researcher gave motivation to the students' in order to know the important of English.

To apply this method in the learning process, researches adapting the five steps of Simpson as follows:

1. Learners were given a reading
2. Some learners were asked to read a language text reading English aloud.

3. After the learner read the text, the teacher invited the learner to ask there is a vocabulary that had no understood.
4. Then learners learnt the reading with performing stages in the PORPE Method.

In this meeting aims to find out whether students are progressing in reading comprehension or not. The researcher gave a text “Makassar City” to the students , the students read the text by using PORPE Method. The researcher asked the students to read and work on the text using the steps of the PORPE method, according to the explanation that had been given previously starting from: Predict, Organize, Practice, Rehearse, and Evaluate.

After that, students observe the reading text and ask questions about things that have not been understood. This method is done with the aim of making it easier for students to understand and remember the text they have read.

#### **H. Technique of Data Analysis**

To analysis data collecting of the text and find out students score, the researcher used following formula. Some formulas were applied in this research to process the data as follows: calculating students’ score:

- a. To calculate the students’ score, the researcher used the formula in the following:

$$NA = \frac{Skor\ Perolehan}{Skor\ Maksimal} \times 100$$

- b. Classifying the students score into ten classification as follows:

**Table 3.3 The Classification Students Level**

Score	Predicate	Categories
1 – 100		
80-100	A	Very good
66-79	B	Good
56-65	C	Enough
40-55	D	Less
30-39	E	Bad

- c. The formula of score percentage was presented as follows:

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

Where :

P = Percentage

F = Item of Frequency

N = Total number of respondent

- d. To calculate the mean score, the researcher applied formula as follows:

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

Where:

X = Mean Score

$\sum x$  = Totsl of raw Score

$N$  = Number of Student<sup>3</sup>

- e. The researcher was determined the standard derivation, the researcher applied the formula:

$$SD = \sqrt{\frac{SS}{N}} \quad \text{where} \quad SS = \sum X^2 - \frac{(\sum X)^2}{N}$$

Where:

SD = the standard derivation

SS = the square root of the sum of squares

$\sum X$  = the sum of square

$N$  = the total number of student<sup>4</sup>

- f. Calculating the value of t- test to find out the differences of mean score between the pre-test and post- test by using formula as follows:

$$t = \frac{D}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

Where:

$t$  = test of significant

$D$  = the means score of difference ( $X_1 - X_2$ )

$\sum D$  = the sum of the total score

<sup>3</sup> Arikunto. Suharsimi, *Penelitian Tindakan Kelas*, Jakarta: Bumi Aksara, 2013

<sup>4</sup> Gay M.A, *Educational Research Competencies for Analysis and Applications*, (United States of America: Perason Merril, 2006), p.321.



$\sum D^2$  = the square of the sum score of difference

$N$  = The total sample<sup>5</sup>



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<sup>5</sup> Gay, L.R. *Educational Research*, New York: Charles Meril Publishing. Co,A. Bell and Howell Company. 1987. p.331