

CHAPTER III

RESEARCH METHODOLOGY

A. Research Method

The writer used experimental research for doing this research, especially quasi experimental design. Quasi experimental design is practical compromises between true experimental and the nature of human language behavior which wish to investigate. Experimental research is a research method that tests the hypothesis which has the form of cause and effect relation by manipulating which is not caused by other variable.

A quasi-experiment is an empirical study used to estimate the causal impact of an intervention on its target population. Quasi-experimental research shares similarities with the traditional experimental design or randomized controlled trial, but they specifically lack the element of random assignment to treatment or control. Instead, quasi-experimental designs typically allow the researcher to control the assignment to the treatment condition, but using some criterion other than random assignment. Quasi experimental will carry out in order to know the correlations between variables.

The writer will use two classes, the first class is as experimental, and the last one is as control class. A quasi experiment consists of control and experiment groups to which subject has been randomly assigned, and in which all subject are tested before and after the intervention or treatment

under investigation has been administered to the experiment group¹ in order the writer can see the point of there is or no the influence of using collaborative learning. To get the data, the writer will used pre-test and post-test towards the subject of research.

B.The Place and Time of Research

The writer conducts this research at Second Grade of Junior high School SMPN 1 Petir-Serang. The writer will use a new technique in teaching reading. The technique is “Strategy of PQ4R Teaching Reading. The writer conducts research in the school from maret-april when the learning teaching proces is going on.

C.Population and Sample

1. Population

According to David Nunan, “Population is all casessituation, or individuals who share one or more characteristic.² The population of this research is VIII grade of SMPN 1 Petir- Serang. It around 71 students. The total population is 2 class each generally consisting of 35 and 36 students. So the total numbers of population are about 71 students.

¹ David Nunan, *Research Methods in Language Learning*(Cambridge University Press, 1992), 230.

²David Nunan,*Research Method in language learning*, p. 231

2. Sample

Sample is a part or representative of population being researched. It is called sample research. Sample is subject of individual or cases from within a population.³ Normally, someone wishing to carry out such an investigation would select a sample from the population and test.⁴ In this research the writer take two class as sample research by clustering from the VIII grade, class VIII C and class VIII D the total sample are 71 students.

D. Research Instrument

Research instrument is a facility that used by researcher in collecting data. Researcher uses test and questionnaire to know the students reading comprehension and motivation. The second series of questionnaire it is a research instrument consisting of a information from respondents, Although they are often designed for statistical analysis of the responses, this is not always the case.

The target of questionnaire is looking for respondents (students) who needed by research. The purpose of using this technique is to get is written answer about the object of the research. In the order word, the reason of the author using technique is (1) to make easy or enjoy the student answering the question (2) to make the student concentrate in answering the question (3) to make easy in collecting and analyzing the data. Questionnaire consist of twenty questions used to get information from respondents about their opinion

³David Nunan, *Research Method in language learning*, p.231

⁴David Nunan, *Research Method in language learning*, p.232

and their distribution of questionnaire submitted to sample who had represented population.⁵

E. Technique of The Collecting Data

Further steps to complete this data, the writer uses some techniques to get authentic data as follow :

1. Observation

Observation is the methods and techniques of collecting data where the writer look at students from two classes in SMPN 1 Petir-Serang. The research conducted observation to observe the students' learning process in the class that aims to determine their knowledge, problems, their attitude or behavior and possible clues to solve them.

2. Test

The writer took an objective test as one of the instruments used. namely questions to measure the ability of students before and after the study. That is why, the authors take two classes between class and class experimental control reading pre-test and post-test. the author makes about the same in two different forms, namely the use of narrative text, for the matter of pre-test were given about which amounted to 6 on the essay and for a post-test will be given eight questions about the essay.

F. Technique of Analyzing Data

⁵Uyun, Khurotul (2010, "*The Correlation Between Students' Self-Concept And English Speaking Ability*" P.28

After the writer collecting the data, the writer processes the data, then analyzing the data. The data analysis that used is done quantitative research. It means that the writer collects the data, the writer must go to place of the research.

Before the writer analysis the data the students' reading comprehension, the writer describe the rating scales used in this research. It purposes to know the students' reading comprehension with each other, what the typical learner at each level can do. So it is easier for the researcher to decide the score. Here is the relating scale used by for comparative research test.

1. Determining mean distribution score of both variables, with using

$$MX = MX_1 - MX_2 \text{ and } MY = MY_1 - MY_2$$

2. Determining the percentage distribution score of both variables, with using

- a. Determine the percentage of the average score of variable X

$$\% = \frac{MX}{MX+MY} \times 100\%$$

- b. Determine the percentage of the average score of variables Y

$$\% = \frac{MY}{MX+MY} \times 100\%$$

3. The last analyzing is determine t-test by formula $t_0 = \frac{M_D}{SE_{MD}}$

t-test is formula to analysis between two variable with using t-test to know the using strategy PQ4R .

- a. Determine mean of difference (MD), by formula:

$$M_D = \frac{\sum D}{N}$$

b. Determine standard deviation

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

c. Determine standard error from mean of difference

$$SE_{MD} = \frac{SD_D}{\sqrt{N-1}}$$

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