CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

The researcher uses quantitative research, and pre-experimental approach with the design "one group pretest- posttest design". That is an experiment which is done in one group without control group.[39] By meeting three times in a week or six times in two weeks, this research is conducted because through treatment the students will be easier in remembering the subject material.

In one group design, it has advantage and disadvantage. The advantage of this design is so apparent in daily life, because it is not difficult for the researcher to form research groups and do randomisation. The disadvantage of this design is that it does not fulfill the first requirement to do experimental research, as there is no control with secondary variable, no randomisation, and no control group.

The result of the research has two validity, (1) validity that is close to the effect which appeared or called internal validity, and (2) validity that is close to the application of the experiment result, or called external validity.[40]

[39] Latipun, *Psikologi Eksperimen* (Malang: UPT. Penerbitan UMM, 2006), p.97
[40] Ibid, p. 76

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1. **Internal Validity**

Cook and Campbell state that there are many internal validity disturbance which need paying attention, those are:[41]

a. History is the special event which is happened between the first and the second measurement which influencing the research.
b. Maturity is the process which is felt by the subject at that time, as like hungry, thirsty, and ill.
c. Testing is the experience influence done preexperimental measurement with subject score in posttest.
d. Instrumentation is changing of the result measurement which caused by changing in measurement application equipment, and changing the observer.
e. Statistical regression happened if the groups chosen based to extrim score.
f. Selection is refraction which is happened because there is subject selection difference in control group.
g. Experimental mortality is lost of subject from one or some groups which is happened in the research process.

2. **External Validity**

External validity is the validity that close to experiment application result. According to Cook and Campbell, there are external validity disturbance, those are:

[41] Latipun, *Psikologi Eksperimen* (Malang: UPT.Penerbitan UMM, 2006) p.76

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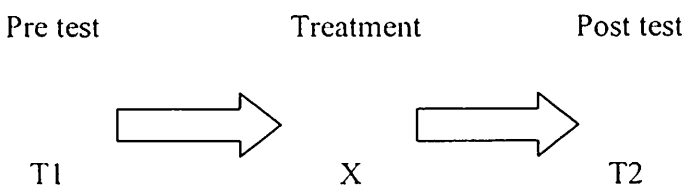
a. Selection interaction and treatment that close to the target population. So that way sampel selection is done from clear population.

b. Condition interaction and treatment that close to the condition place of subject research.

c. History and treatment. Experiment research usually done at the short time and for the special time which is chosen by the researcher.

This pre-experimental research used "one group pretest posttest design", experiment design which only used one subject group and did measurement before and after giving treatment for the subject. The design of pretest and posttest can be described below:[42]



List 1, pretest and posttest design

1. Giving T1 (pre test) to measure skillful in writing English vocabulary score for the students with different ability before using photos media.
2. Giving X (treatment) for students by using photos at period of time for research subject especially for students with different ability.
3. Giving T2 (post test) to measure skillful in writing English vocabulary score for students with different ability after using photos media.

[42] Irawan Soehartono, *Metode Penelitian Sosial* (Bandung: PT. Remaja Rosdakarya, 1999), p. 40

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4. Comparing T1 and T2 to determine how significant the differences are showed before and after using photos media.

B. Subject of Study

The research is done on students with different ability at year one until year two at SMPLB Negeri Gedangan, Sidoarjo. The sampling technique that used is purposive sampling. Purposive sampling is sample with a purpose in mind.[43] The researcher uses this technique because students who read and write influent are start from year one.

List 2, students with different ability year one until year two

SMPLB Negeri Gedangan, Sidoarjo

No	Students' Name	Year
1	Vivin	One
2	Lilik	Two
3	Anis	Two
4	Wulan	Two
5	Febri	Two
6	Eka	Two

[43] William M.K. Trochim, *The Research Methods Knowledge Base* (Ithaca, N.Y. : Cornell Custom Publishing, 1999), 56

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C. Research Procedure

1. Preparation Steps

Preparation step is the first step which is done before doing the research. Those are:

a. Making the research proposal.

Making proposal is the first step of doing the research.

b. Choosing the research setting

In this research, the researcher has chosen the research setting in SMPLB Negeri Gedangan, Sidoarjo.

c. Making research instrument

Research instrument is very important in the research. By using instrument, the research data will be easy to get based on requirement. In this research, the instrument is test by using photos in writing English vocabulary.

d. Getting the research permission letter

In getting research permission letter, there are steps, those are:

1) Asking permission letter to the faculty
2) After the permission later being signed by the dean of faculty, then it is given to the research place.

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2. The Research Implementation Steps

a. Doing Pretest

Giving pretest is to know mastering English vocabulary before giving treatment. Test that used is about the material writing English vocabulary especially noun with the topic "in the school".

b. Giving Treatment

Giving treatment in mastering English vocabulary by writing English vocabulary especially noun by using photos which means they can improve mastering English vocabulary through photos.

The implementation of treatment, those are:

1) Giving treatment is conducted four times; every meeting has 1 x 60 minutes.
2) The first meeting, studying the first treatment material that has 5 materials about noun "in the school" by writing and drilling students by using photos.
3) The second meeting, studying the second treatment material that has 5 materials about noun "in the school" by writing and drilling students by using photos.
4) The third meeting, studying the third treatment material that has 5 materials which studied about the first treatment by rearranging and drilling students by using photos.

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5) The fourth meeting, studying the fourth treatment material that has 5 materials which studied about the second treatment by rearranging and drilling students by using photos.

The activity which is done in giving treatment is:

1) Introduction

   Making teaching situation conditional with apperception, that is repeating the material about using photos as the material activity which will be done by students.

2) Lead in

   Students observe the explanation about the material activity, then giving the chances for the students to do question test.

3) Closing

   Students asked to collect the test result, and then students can take a rest.

c. Doing Posttest

Posttest is given for the students which has purpose to know the difference of the subject research in mastering English vocabulary by using photos. Posttest will be done after giving treatment.

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3. The Ending Steps

a. Analyzing the research result.

When the data is gotten by the researcher, then the researcher analyzes the data by using a formula to calculate the research result and formula that the researcher used is sign test. The researcher uses SPSS to make the calculation easier.

b. Writing the report of the research result.

After the researcher gets and analyzes the data, the researcher writes the report of the research result. All about the result in the research is written in the report and this are conclude of research schedule, research description, and the data analysis.

D. Research Instrument

For collecting data purpose, the researcher uses test technique (the writer collect the test score from the students with different ability). This test is about to measure the improving of using photos in mastering English vocabulary for students with different ability. The test is about rearranging English vocabulary in using photos before and after giving treatment. The researcher also uses checklist evaluation; this is used to match the answer from the test.

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E. Data Collection Techniques

For collecting data will be taken through test and study document. Test is used to measure the ability and the intelligence of the individual or group. This test is used to get data about the effect of using photos for students with different ability in mastering English vocabulary. Document is things which are written. Study document is used to analyze the result of the test. This is used to analyze the test of English vocabulary for students with different ability.

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Check List Evaluation of Writing English Vocabulary

No	Students' Name	Test Number									
		1	2	3	4	5	6	7	8	9	10
1	Vivin										
2	Lilik										
3	Anis										
4	Wulan										
5	Febri										
6	Eka										

List 3, check list evaluation of writing English vocabulary

Note;

Score 0 : The wrong answer

Score 1 : The correct answer

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F. Data Analysis

The writer uses statistical data analysis. The data analysis technique is sign test. This sign test is used to test the hypothesis of two pair samples if the data is ordinal.[44] This test is about to calculate improving of using photos in mastering English vocabulary for students with different ability.

Formula:

$$Z = \frac{n1 - n2}{\sqrt{n1 - n2}}$$

n1 = sum of negative data

n2 = sum of positive data

To make easy all the calculation so it will be helped by SPSS 16.0 for windows computer program. So that it does not need compare between the research result and statistic table because it can be known Z score at the end of statistic technique from computer.

[44] Sofyan Yamin, Heri Kurniawan. *SPSS Complete* (Jakarta: Salemba Infotek, 2009), p.249

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