CHAPTER III

RESEARCH METHOD

In this chapter the researcher is going to present about research methodology; it includes the methodology, population and sample, hypothesis, research design, research procedure, data collection techniques, and data analysis

A. The Methodology

The researcher uses quantitative research and pre-experimental approach with design "one group pretest-posttest design". According to the Latipun's book "Psikologi Eksperiment", there are three kinds of experiment design:[30]

1) Pre-experimental

2) Quasi experiment

3) True experiment

This study is conducted on one class and doesn't use control class. Therefore, pre-experimental design is used. Pre-experimental is an experiment conducted without controlling for variables that affect.[31] To find

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[30] Latipun. 2004. *Psikologi Eksperimen.* Malang: Penerbitan Universitas Muhammadiyah Malang. p.97

[31] Ibid. p.97

out the result, the researcher uses statistic for data analysis t-test. Parametric statistics is used to know the result of the hypothesis. The tests compare the average of two samples with the interval.[32]

B. Population and Sample

This study is conducted at SMP Bahrul Ulum, Surabaya. It takes place at No.11-13 jl. Putat Jaya Sekolahan Surabaya. The populations are students of the school. There are 150 students of the 7 class. There are 4 classes in the seventh grade and the researcher takes 7A class for the sample of research. The number of the students as the sample of the study is 35 students. The researcher takes this class because most students are not interested in English.[33]

C. Hypothesis

In this research, the hypotheses are stated:

- Ha : Microsoft PowerPoint as a teaching media can significantly improve the student's competence in mastering English vocabulary.

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[32] Sugiyono. 2010. *Statistika untuk Penelitian.* Penerbit Alfabeta: Bandung. p.121
[33] This statement is the result of preliminary study.

- Ho : Microsoft PowerPoint as a teaching media cannot significantly improve the student's competence in mastering English vocabulary.

D. Research Design

The researcher needs two ways to manage the design of the research. There are determining the problem and collecting the data. Before the researcher gets the complete the data, the researcher has to determine the problem and the researcher has to collect the data.

1. Determining The Problem

The researcher takes the preliminary study of Microsoft PowerPoint as a teaching media to improve the students' competence in mastering vocabulary at seventh grade students of SMP Bahrul Ulum, Surabaya.

2. Collecting the data:

The researcher uses some procedures to collect the data about the effect of Microsoft PowerPoint as teaching media to improve the

students' competence in mastering vocabulary at the seventh grade students of SMP Bahrul Ulum, Surabaya. The procedures applied are stated below:

a) The first step, the researcher goes to the head master of SMP Bahrul Ulum, Surabaya and the teacher of English subject to ask for the permission.

b) The second, the researcher gives pretest to measure students vocabulary mastery before using Microsoft PowerPoint as a teaching media

c) The third, the researcher gives treatment for students by using Microsoft PowerPoint as a teaching media

d) The fourth, the researcher gives posttest to measure students vocabulary mastery after using Microsoft PowerPoint as a teaching media

e) The fifth, the researcher compares the pretest and posttest score to determine the mean differences before and after using Microsoft PowerPoint as a teaching media

f) The sixth, the researcher uses "t- test" to test the hypothesis

g) The last, the researcher interprets the result and the researcher gives conclusion.

E. Research Procedure

1. Preparation step

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

1) Making the research proposal

Making proposal is the first step of doing the research.

2) Choosing the research setting

In this research, the researcher is chosen the research setting at SMP Bahrul Ulum, Surabaya.

3) Making research instrument

Research instrument is very important in the research. By using instrument, the research data will be easier to be collected based on the requirement. In this research, the instrument is written test.

2. The Research Implementation Step

1) Doing Pretest

The researcher gives pretest to know student's vocabulary mastery before the researcher gives treatment. Pretest is given for the students which has purpose to know the students' competence in mastering English vocabulary before the use of Microsoft PowerPoint as a teaching media.

The pretest consists of 20 questions which use three types of question. The first type of questions consists of 5 gaps filling, 5 completions, and 10 rearrangements. The topic of the test is profession because the material is chosen by the English teacher.

2) Giving Treatment

The teacher posts the picture that is related to the topic and the teacher gives sound or clip art to make funny presentation by using Microsoft PowerPoint. Next, the teacher gives task about the topic to help the students to memorize the vocabulary.

3) Doing Posttest

Posttest is given for the students which has purpose to know the improvement of students' competence in mastering English

vocabulary after the use of Microsoft PowerPoint as a teaching media. Posttest is done after giving treatment.

The posttest consists of 20 questions which use three types of question. The first type of questions consists of 5 gaps filling, 5 completions, and 10 rearrangements. The topic of the test is profession because the material is chosen by the English teacher of the school.

3. **The Ending Step**

1) Analyzing the research result

The researcher analyzes the data by using t-test to calculate the research result and to test the hypothesis.

2) 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 this research is written in the report.

F. Data Collection Techniques

Observation, pretest-posttest and documentation are used to collect the data. Observation is used to get data about all of things are surround the class and activities that support using this technique. The researcher does the observation when the researcher takes the preliminary study at the school. The data from the observation helps the researcher to determine the sample of the research. The pretest-posttest is used to know the result of the vocabulary test. The result of the test is written into the table accord with the test in the table 1 and the result is accumulated into table 2 to know the total pretest-posttest result.

Table 1.1

Table of Students' Pretest-Posttest Result

TEST I

No	Student's Name	Test Number					Score
		1	2	3	4	5	

Scoring Rubrics;

Score 0: The wrong answer

Score 5: The correct answer

From the table above, the researcher gives 0 for the wrong answer, and 5 for the correct answer. The researcher also calculates the sum of the correct answer.

Table 1.2
Table of Students' Pretest-Posttest Result
TEST II

No	Student's Name	Test Number					Score
		1	2	3	4	5	

Scoring Rubrics;

Score 0: The wrong answer

Score 5: The correct answer

From the table above, the researcher gives 0 for the wrong answer, and 5 for the correct answer. The researcher also calculates the sum of the correct answer.

Table 1.3

Table of Students' Pretest-Posttest Result

TEST III

No	Student's Name	Test Number										Score
		1	2	3	4	5	6	7	8	9	10	

Scoring Rubrics;

Score 0: The wrong answer

Score 5: The correct answer

From the table above, the researcher gives 0 for the wrong answer, and 5 for the correct answer. The researcher also calculates the sum of the correct answer. Next, into the table 2.

Table 2

Score of Evaluation

Total Score

No	Student's Name	Score of Test			Total Score
		TEST I	TEST II	TEST III	

From the table above, the table 2 is used to apply the accumulate of total pretest-posttest result. The result is written into table 2. The researcher calculates the sum the correct answer and determines the total score.

G. Data Analysis

The researcher uses statistics to analyze the data. Parametric statistics is used to know the result of the hypothesis. The test is compared with the average of two samples with the interval.[34]It means two sample that have the same of population and sample in the different time.[35]

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[34] Ibid p.121
[35] Ibid p.117

In this research, the researcher wants to know the improvement of the different mean. So, the researcher uses t-test to test the hypothesis. According to Suharsimi Arikunto, the t-test formula can be used to analyze pre-experimental results using a pretest and posttest with one group design. The formula is used in the t-test formula is:[36]

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

Notes;

Md   = Mean from difference of pretest and posttest

xd   = Deviation of each subject (d-Md)

$\sum x^2 d$ = The squared deviations

N   = Subject of sample

d.b   = Determined by N-1

The researcher calculates the data by using t-test formula and the result is compared to the critical t which can be taken from a table of critical values with the following criteria:

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[36] Suharsimi Arikunto. 2010. *Prosedur Penelitian: Suatu Pendekatan Praktik*. Jakarta: PT Rineka Cipta. p.349

- If the observed t is higher than the critical t, it means Ho is rejected. (null hypothesis)

- If the observed t is less than the critical t, it means Ho is accepted. (null hypothesis)

Finally, the data is interpreted to design the conclusion.