

CHAPTER III

RESEARCH METHOD

A. Kind of Research

In this research, the researcher used experimental study. An Experimental is “defined as a situation in which one observes the relationship between two variables by deliberately producing a change in one and looking to see whether this relation produces a change in the other (Anderson 1969)”¹. Best states that experimental research provides a systematic and logical method for answering the question, if this is done under carefully controlled conditions, what will happen?”². It refers to the activity of collecting the data from the subjects of the research. In doing so, the eight grade students of MTs NU Ungaran in the academic year 2010/2011 where chosen to be the subjects of the research.

Design of experimental research is using statistical research. Therefore, this study used two groups of subject in which of them are treated with different treatment. They are, experimental class which are taught using comic stories and control class that are taught using non-comic stories. Next, both of the groups are measured with the tests (pre-test and post-test), and the results are compared.

¹ Rodgers and Brown, *Doing Second Language Research* (Cambridge: Oxford press 2002), p. 211.

² Best, J. W, *Research in Education*, (New Jersey: Prentice Hall Inc. 1981), p. 57.

B. Setting of the Study

The researcher did research at MTs NU Ungaran. She conducted this research from 9th of March to 18th Mei.

Table 1

List of time of the study

Number	Activity	Month/Date			
		Mei			
		2 nd	4 th	16 th	18 th
1	Pre test	-			
2	Treatment 1		-		
3	Treatment 2			-	
4	Post test				-

1. Profile of MTs NU Ungaran

a. The Histories of MTs NU Ungaran

MTs NU Ungaran have build by Muslim religious leader on July 20th 1987. The purpose to build this institution is to build intelligence for human live and behavior assist.

The first head master of MTs NU ungaran is Mr. Rohmat Ansori, S. Ag. And the class room that has been used by the students is made from the woods that have been bought from Nyatnyono village. In other side. In the first year there are 31 students that have been listed in this school.

By the time, in the year 1990/1991 there are seven classes have been build. So, began from this year there are many alterations because of the fight from all of teacher and managements. So, MTs NU can exist to do the fight of mission.

b. Perspective and Mission of MTs NU Ungaran

The perspective of MTs NU Ungaran is:

“Obedient to the religion teaching, knowledgeable competent and have assist behavior”.

The mission of MTs NU Ungaran:

1. Teach the students with Muslim theory in the style of Ahlussunah waljamaah.
2. Increase the human effort source with science.

c. Condition of the Students of MTs NU Ungaran

The total number of students MTs NU Ungaran in the academic year 2010/2011 is 559. There are 303 for male students and 268 for female students.

And there are list of total number of students MTs NU Ungaran:

Table 2

List of Total Students of MTS NU Ungaran

No.	Class	Male	Female	Total
1.	VII	97	72	169
2.	VIII	83	88	171
3.	IX	111	108	219
	Total	291	268	559

C. Focus of the Research

This study focused on how are comic stories can improve vocabulary at the eighth-grade students of MTs NU Ungaran. Therefore, the researchers used results from the experimental class (the class that uses comic stories) and the control class (the class that do not use comic stories) to analyzes. And the results of the analysis would be showed by the data that have been analyzed.

D. Population, Sample and Sampling Technique

1. Population

Population is “the whole subject of research”.³Population in this research is the eight students of MTs NU Ungaran in the academic year 2010/2011. The eight year students of MTs Nu Ungaran divided into five classes. There are class VIII A, VIII B, VIII C, VIII D, and VIII E.

Table 3
List of population

Class	Male	Female	Total
VIII A	38	-	38
VIII B	33	-	33
VIII C	-	39	39
VIII D	-	35	35
VIII E	24	12	36
Total			181

2. Sample

Sample is taking of a part population using certain procedure. So, that can be expected to represent its population. In this connection, Arikunto states that sample is “a part of research population”.⁴ The researcher took sample in this research because the respondents are more than 100. The respondents are less than 100. It is better to take them all as sample.⁵

Sample in this research is VIII E is as experimental class and VIII D is as control class.

3. Sampling Technique

³ Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, p. 130.

⁴ Sutrisno Hadi, *Statistik* (Yogyakarta: Kencana, 2006),p. 50.

⁵ Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, p. 134.

In this research, the researcher used purposive sampling technique. This sample was done by photographing a subject not on the strata, random, or region but is based on the existence of a particular purpose. This technique usually used is for some reasons, such as limiting time, energy and finance.

The sampling in this study, researcher took a class VIII E as the experimental class and class VIII D as a control class because both of classes have the same number of students and have scheduled meetings more efficient to use research.

E. Technique of Data Collection

To make this research successful, the writer used some ways in collecting data, they are:

1. Test

Test is set of question used to measure the achievement or capability of individual class.⁶ In this experimental research, the researcher provided try out test, Pre- test, and Post- test. These tests used to measure the students' progress in comprehend vocabulary. Test will give to the try-out class, experimental class and control class.

In this research, the researcher uses achievement test because it is made to measure the students' achievement after they learn the material. Therefore, the instrument of the test is objective test. Objective test divide into transformation, completion, combination, addition, rearrangement, matching, correct and incorrect (true/false) and multiple choices.⁷ The researcher used the instrument the form of multiple-choice tests. This type of test is chosen because technique of scoring is easy and it is more practical for students to answer.

⁶Arikunto, Suharsimi, *Prosedur Penelitian; Suatu Pendekatan Praktek*, P, 121.

⁷J.B Heaton, *Writing English Language Tests* (London: Longman, 1957), p. 12-13.

Test is done to know students achievement so that the researcher knows the students' improvement and students mastery learning can be achieved by students.

2. Observation

Observation is monitoring, supervision and registration about object of research systematically by using the whole of sense. According to Sustrisno Hadi (1986) that had been quoted by Sugiyono, observation is one complex process which is consist of biological and psychological process.⁸

According to Burhan Nur Giyantoro Observation is the activity that is done by the researcher to get data. There are two kinds of observation, there are:

- a. Non systematic observation' which is done by the researcher without using instrument.
- b. Systematic observation which is done by the researcher using instrument as the guide of the research.⁹

In this research, the researcher will use check list to get the data. The observation is use to know the activities during teaching and learning process, such as how teacher is explains the material, what is the students' respond and how is the student's work in doing test.

In this study, observation is only used to support the data about students' imagination on reflected on their engagement in learning processes.

⁸ Sugiyono, *Metode Penelitian kuantitatif kualitatif dan R &D*, (Bandung: Alfabeta, 2008), p. 145.

⁹ Burhan Nur Giyantoro, *Penelitian dalam Pengajaran Bahasa dan Sastra by Modification*, (Yogyakarta: BPFE Yogyakarta, 2001), p. 307-308.

Table 4
Checklist of Observation

No.	Aspect of Observation	low	average	high
1.	Students are enthusiastic in listening to teacher's explanation.			
2.	Students show curiosity by asking the question.			
3.	Students ask question to clarify understanding.			
4.	Students are enthusiastic to answer teacher's question.			
5.	Students are enthusiastic doing the test.			
6.	Students enjoy to learn English (Vocabulary)			

F. Technique of Data Analysis

1. Prerequisite test and Post test

After collecting the data, the researcher analyzes it by using statistical analysis. The researcher gives students of experimental class and control class some questions and then she result of the test. The researcher calculated mean, variance, and standard deviation.

a. Mean

Mean is computed by using the formula;

$$\bar{X} = \frac{\sum x}{n}$$

Where:

$$\bar{X} = \text{Mean}$$

$$\sum x = \text{Sum score}$$

$$n = \text{number of score}$$

b. Variance

The variance of a group of scores is computed by using the following formula:

$$S^2 = \frac{\sum x^2 - \frac{\sum x^2}{n}}{n-1}$$

Where:

$$S^2 = \text{Variance}$$

$$n = \text{Number of score}$$

$$X = \text{Individual score}$$

c. Standard Deviation

The standard deviation of a group of scores is computed by using the following formula:

$$S^2 = \sqrt{\frac{\sum x^2 - \frac{\sum x^2}{n}}{n-1}}$$

S^2 = Variance

n = Number of score

X = Individual score

To differentiate whether the students' result of improving vocabulary using comic and without using comic stories is significant or not, the researcher used the homogeneity test and t-test.

a. Homogeneity test

Is used to know whether experiment class and control class that are decided, from population that has relatively some variant or not.¹⁰ This test

The formula is:

$$F = \frac{V_b}{V_k}$$

Where :

V_b : bigger Varian

V_k : smaller Varian

The hypotheses in homogeneity test are:

H_0 : homogeny Variant = $\sigma_{12} = \sigma_{22}$

H_a : non homogeny Variant = $\sigma_{12} \neq \sigma_{22}$

If calculation result of f_{count} is lower than f_{table} by 5% degree of significance so H_0 is accepted, it means both class have same Variant.

b. Test of the Average

It is a step to decide direction, that because data analysis functioned to conclude the research result. To analyze the research

¹⁰Sudjana, *Metode Statistika.*, p, 250.

data is by using t – test formula. A t-test would be the measurement to compare the mean scores of the two groups.¹¹

Where :

$$H_0 = \mu_1 = \mu_2$$

$$H_a = \mu_1 > \mu_2$$

The formula is :

$$t = \frac{\overline{x_1 - x_2}}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

$\overline{x_1}$ = average of experimental class

$\overline{x_2}$ = average of control class

n_1 = number of experimental class

n_2 = number of control class

s_1^2 = standard deviation of experimental class

s_2^2 = standard deviation of control class

μ_1 = average data of experimental class

μ_2 = average data of control class

Hypothesis testing criteria : H_0 is accepted if $t_{\text{count}} < t_{\text{table}}$ decides dk
 = $(n_1 + n_2 - 2)$, a significance count = 5% and the probability $(1 - \alpha)$

¹¹Rodgers and Brown, *Doing Second Language Research*, p. 205.