

CHAPTER III

RESEARCH METHOD

Research method consists of research design, population and sample, reasearch instrument, data collection procedure, and data analysis procedure.

A. Research Design

The writer used Quasi experimental design. The design of this study is experimental design because the writer wanted to measure the effect of comic strips media in the teaching learning English vocabulary size. According to Arikunto, Experimental study is a study which aimed to know there is or not the effect of the variable studied.⁴⁶ Experimental design refers to the conceptual framework within which the experiment is conducted. The most important criteria that is the design be appropriate for testing the particular hypothesis of the study.⁴⁷

This research study used quantitative approach. According to Ary, “quantitative research is inquiry employing operational definitions to generate numeric data to answer predetermined hypotheses or questions”.⁴⁸ It is using quantitative approach because quantitative is the data that of all number using statistic data.

⁴⁶ Suharsimi Arikanto, *Manajemen Penelitian*, p. 272.

⁴⁷ Donald Ary, (et all), *Introduction to Research in Education Third Edition*, New York : 1985, p. 260.

⁴⁸ Donald Ary, (et all) *Introduction to Research in Education Eight*, United State : Wadsworth (Engange Learning, 2010) p. 648.

A typical experimental study usually uses comparison or control groups to investigate research questions. Many second language research studies involve a comparison between two or more groups. This is known as a between-groups design. This comparison can be made in one of two ways: two or more groups with different treatments; or two or more groups, one of which, the control group, receives no treatment.⁴⁹

Quasi-Experimental design are similar to randomized experimental designs that they involved manipulation of an independent variable but differ in those subjects in that they involve manipulation of an independent variable but differ in that subjects are not randomly assigned to treatment groups. Because the quasi-experimental design does not provide full control, it is extremely important that research be aware of the threats to both internal and external validity and considers those factors in their interpretation. Although true experiment are preferred, quasi-experimental design are considered worthwhile because they permit writers to reach reasonable conclusions even though full control is not possible.

The type of this study was Quasi-Experimental study by the nonrandomized control group; pretest-posttest design is one of the most widely used quasi-experimental design in educational research.⁵⁰

⁴⁹ Alison Mackey and susan M.Gass, *Second Language Research Methodology and Design*, London, 2005, p. 146.

⁵⁰ *Ibid.*, p. 146.

Table 3.1
Design of Pre-test and Post-test

Group	Pre-test	Treatment	Post-test
E	Y 1	X	Y 2
C	Y 1	-	Y 2

Where :

E : Experimental group

C : Control group

X : Treatment

Y1 : Pre – test

Y2 : Post - test

B. Population and Sample of the Study

1. Population

According to Arikunto, population is the whole of research subject, if someone wants to research all of the elements in research area his research is called population research on survey study.⁵¹

In this research, become population is eleventh-year students of SMAN 1 Hanau. The Population of the research is of all eleventh-year students of SMAN 1 Hanau.

⁵¹ Suharsimi Arikunto, *Procedure Penelitian: Suatu Pendekatan Praktek*. Jakarta: PT. Rineka Cipta, 2000, p. 108.

Table 3.2
Number of Populations

NO	CLASSES	NUMBER OF STUDENT
1.	XI IPS 1	15
2.	XI IPS 2	17
3.	XI IPA 1	15
4.	XI IPA 2	15
Total		62

2. Sample

Sample is a part of population. According to Ary, “ Sample is a group selected from population for observation in a study.⁵² For the sample, the writer takes two classes to be the sample, the first class is experiment group use Comic Strips media and the second class is control group non-use Comic Strips Media. Due to the fixed class, the writer cannot use simple random sampling to select the sample. According to Ary, it is very difficult, if not impossible to list all the members of a target population and select the sample from among them.⁵³ Therefore, the writer used cluster sampling. Because the unit chosen is not an individual but a group of individuals who are naturally together or grouped by the school.⁵⁴ Those are all the Students of XI IPS 1 and XI IPS 2.

⁵² Donald Ary, (et all) *Introduction To Research In Education Eight*, united state : Wadsworth (engage Learning, 2010), p. 649.

⁵³ *Ibid.*, p. 154.

⁵⁴ *Ibid.*, p. 154.

Table 3.3
Number of Sample

NO	Group	Class of Student	Number of Student
1.	E	XI IPS 1	15
2.	C	XI IPS 2	17
Total			32

E : Experiment Group

C : Control

C. Research Instrument

1. Research Instrument

To get the data, the writer used technique in this study. Here, the writer used a technique, namely: test.

a) Test

Instrumentation of this study taken from the test that given to the student before and after treatment as long as six times. Nation recommends two kinds of vocabulary test. Those are 14.000 word-family and 20.000 word-family vocabulary test.⁵⁵ In this study, the writer used 14.000 word-family vocabulary tests for Pre-test. This test consists of 140 questions which 10 question represent 1000 words. Each correct answer have been multiplied 100.

⁵⁵ Paul Nation, "Vocabulary Size Information and Specification", *Journal*, 2012, p. 1.

A good vocabulary test has the following features and Beglar's examination of the 140 item Vocabulary Size Test showed that it does have these features.

- 1) It can be used with learners with a very wide range of proficiency levels.
- 2) It measures what it is supposed to measure and does not measure other things. Beglar found that the test was very clearly measuring a single factor (presumably written receptive vocabulary knowledge) and other factors played a very minor role in performance on the test.
- 3) It behaves in ways that we would expect it to behave, distinguishing between learners of different proficiency levels, having a range of item difficulties related to the frequency level of the tested words, and clearly distinguishing several different levels of vocabulary knowledge so that learners' vocabulary growth over time could be measured.
- 4) It performs consistently and reliably, even though circumstances change. In Beglar's trialling of the test, these changes included comparing the performance of male subjects with female subjects, comparing 70 item versions of the test with the 140 item version, and comparing learners of various proficiency levels. Rasch reliability measures were around .96.
- 5) It is easy to score and interpret the scores.

- 6) The items in the test are clear and unambiguous.
- 7) It can be administered in efficient ways with learners sitting only five words per 1000 word level.⁵⁶

The 140 item test works very well because it covers a very wide range of frequency levels, it includes a large number of items (even half of this number would work well), the items have been very carefully designed and made, and the test is designed to measure just one kind of vocabulary knowledge.

The pre-test score indicated the students' vocabulary size before treatment. The test items which used in this research are based on Victoria University of Wellington, New Zealand which hosted in online vocabulary size test, my.vocabularysize.com.

Post-test score used 18 Comic strip which consist 200 Vocabularies. From the test, the writer known the result of students' test and this result given description where is more effective between teaching using Comic strips media and without Comic strips media. Like Gronlund statement "test is an instrument in systematic procedure for measuring a sample of behaviour".⁵⁷

The writer conducted the test and teaching learning process in the 8th meetings for the experiment group and 8th meetings for the control group.

⁵⁶ David Beglar, "A Rasch-based validation of the Vocabulary Size Test", *Language Testing 2010*, p. 101-118.

⁵⁷ Norman L. Gronlund, *Measurement and Evaluation in Teaching*, New York: Macmillan Publishing Company, p. 78.

Table 3.4
The Schedules of Teaching Learning Process and Test
in XI IPS 1 of SMAN 1 Hanau

No.	Day/ Date	Material
1.	Friday, November 1 st 2013	Pre Test
2.	Wednesday, November 6 th 2013	Treatment by comic strip media
3.	Friday, November 8 th 2013	Treatment by comic strip media
4.	Wednesday, November 13 th 2013	Treatment by comic strip media
5.	Friday, November 15 th 2013	Treatment by comic strip media
6.	Wednesday, November 20 th 2013	Treatment by comic strip media
7.	Friday, November 22 th 2013	Treatment by comic strip media
8.	Wednesday, November 27 th 2013	Post Test

Table 3.5
The Schedules of Teaching Learning Process and Test
in XI IPS 2 of SMAN 1 Hanau

No.	Day/ Date	Material
1.	Saturday, November 2 nd 2013	Pre Test
2.	Tuesday, November 5 th 2013	Treatment by non media
3.	Saturday, November 9 th 2013	Treatment by non media
4.	Tuesday, November 12 th 2013	Treatment by non media
5.	Saturday, November 16 th 2013	Treatment by non media
6.	Tuesday, November 19 th 2013	Treatment by non media
7.	Saturday, November 23 th 2013	Treatment by non media
8.	Tuesday, November 26 th 2013	Post Test

D. Data Collection Procedure

In this study, The writer used some procedures to collect the data. The procedures consists some steps as follows :

1. The writer gave pre-test to the experiment group (Y1) and control grup (Y1).
2. On the contrary, The writer taught vocabulary to the experiment group by using comic strip media and taught vocabulary to the control group by using non-comic strip media.

Table 3.6

The Description of Teaching Activities at Experiment Group and Control Group

Experiment group	Control group
<ul style="list-style-type: none"> • First meeting <p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher explains about comic strip. - The teacher and the students discus the material together. - The teacher explains about narrative text. - The teacher asks the students to look for the similarities between comic strips and 	<ul style="list-style-type: none"> • First meeting <p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher explains about narrative text. - The teacher and the students discus the material together. - The teacher asks the students to look for the vocabulary that always use in narrative text. <p><i>Elaboration</i></p>

<p>narrative text.</p> <p>Elaboration</p> <ul style="list-style-type: none"> - The teacher familiarizes the students to analyze similarities comic strip and narrative text. - The teacher asks the students to make the narrative text based on the comic strip. <p>Confirmation</p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material. 	<ul style="list-style-type: none"> - The teacher asks the students to translate the meaning of vocabulary. - The teacher asks the students to remake the narrative text based on that vocabulary. <p>Confirmation</p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material.
<p>• Second meeting</p> <p>Exploration</p> <ul style="list-style-type: none"> - The teacher gives some comic strip. - The teacher asks the students to read the comic strip. - The teacher explains one of 	<p>• Second meeting</p> <p>Exploration</p> <ul style="list-style-type: none"> - The teacher gives a narrative text. - The teacher asks the students to read the narrative text. - The teacher explains the

<p>the comic strip</p> <ul style="list-style-type: none"> - The teacher asks the students to look for some vocabulary in the comic strip. <p><i>Elaboration</i></p> <p>Teacher in elaboration activities:</p> <ul style="list-style-type: none"> - The teacher asks the student to identify the meaning of the word in the comic strip. - The teacher asks the student to identify complications in the comic strip. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material. 	<p>narrative text.</p> <ul style="list-style-type: none"> - The teacher asks the students to look for some vocabulary in the narrative text. <p><i>Elaboration</i></p> <ul style="list-style-type: none"> - The teacher asks the student to identify the meaning of the word in the narrative text. - The teacher asks the student to identify complications in the narrative text. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material.
<p>• Third meeting</p> <p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher gives some comic 	<p>• Third meeting</p> <p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher gives some

<p>strip.</p> <ul style="list-style-type: none"> - The teacher and the students discuss the material together. <p>Elaboration</p> <ul style="list-style-type: none"> - The teacher gives a comic strip with the blank word. - The teacher asks the students to make comic strip based their own comic strip. <p>Confirmation</p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material. 	<p>comic strip.</p> <ul style="list-style-type: none"> - The teacher and the students discuss the material together. <p>Elaboration</p> <ul style="list-style-type: none"> - The teacher gives another narrative text. - The teacher asks the students to remake narrative text based their own narrative text. <p>Confirmation</p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material.
<p>• Fourth meeting</p> <p>Exploration</p> <ul style="list-style-type: none"> - The teacher gives some comic strip. 	<p>• Fourth meeting</p> <p>Exploration</p> <ul style="list-style-type: none"> - The teacher gives a narrative text.

<ul style="list-style-type: none"> - The teacher asks the students to read the comic strip. - The teacher explains one of the comic strip. - The teacher asks the students to look for some vocabulary in the comic strip. <p><i>Elaboration</i></p> <ul style="list-style-type: none"> - The teacher asks the student to Identifying the event in the comic strip is read. - The teacher asks the student to give their opinion about the story in the comic strip. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material. 	<ul style="list-style-type: none"> - The teacher asks the students to read the narrative text. - The teacher explains the narrative text. - The teacher asks the students to look for some vocabulary in the narrative text. <p><i>Elaboration</i></p> <ul style="list-style-type: none"> - The teacher asks the student to Identifying the event in the narrative text is read. - The teacher asks the student to give their opinion about the story in the narrative text. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material.
<ul style="list-style-type: none"> • Fifth meeting 	<ul style="list-style-type: none"> • Fifth meeting

<p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher explains about comic strip. - The teacher and the students discuss the material together. <p><i>Elaboration</i></p> <ul style="list-style-type: none"> - The teacher asks identify complications in a comic strip. - The teacher gives another comic strip that have cuted. - The teacher asks the students to rearrange the comic strip. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material. 	<p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher explains about narrative text. - The teacher and the students discuss the material together. <p><i>Elaboration</i></p> <ul style="list-style-type: none"> - The teacher asks identify complications in a narrative text. - The teacher gives another comic strip that have cuted. - The teacher asks the students to rearrange the narrative text. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material.
<ul style="list-style-type: none"> • Sixth meeting 	<ul style="list-style-type: none"> • Sixth meeting

<p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher gives some comic strip. - The teacher asks the students to read the comic strip. - The teacher explains one of the comic strip. - The teacher asks the students to look for some vocabulary in the comic strip. <p><i>Elaboration</i></p> <ul style="list-style-type: none"> - The teacher asks the student to identify complications in a comic strip. - The teacher asks the student to give their opinion about the story in the comic strip. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to follow in the material. 	<p><i>Exploration</i></p> <ul style="list-style-type: none"> - The teacher gives a narrative text. - The teacher asks the students to read the narrative text. - The teacher explains the narrative text. - The teacher asks the students to look for some vocabulary in the narrative text. <p><i>Elaboration</i></p> <ul style="list-style-type: none"> - The teacher asks the student to identify complications in a narrative story. - The teacher asks the student to give their opinion about the story in the narrative text. <p><i>Confirmation</i></p> <ul style="list-style-type: none"> - The teacher gives feedback on the students by giving verbal reinforcement in the form of the students who have been able to finish the job. - The teacher facilitates the students' reflection to gain learning experience that has been done. - The teacher gives to the students who lack motivation and have not been able to
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	follow in the material.
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3. The writer gave post-test to experimental group and control group.
4. The writer gave score to the data from the experimental and control group.
5. The writer analyzed the obtained data from mean of post test score the experiment group and control group.
6. The writer interpreted the statistical result.
7. The writer concluded the activity of the study whether the use of comic strip media that gives effect or not to the students' vocabulary size.

Table 3.7
Teaching Procedure

Group	Pre-Test	Treatment	Post-test
Experiment (E)	√	Using Comic Strip	√
Control (C)	√	Using traditional media	√

E. Data Analysis Procedure

The writer analysed the data with a few of way, they are :

1. The writer collected the result of test
2. The writer gave score for the students that suitable with the criteria.

3. The writer arranged into for the table.⁵⁸
4. The writer determined the mean score with the formula:

$$M_x = m' + i \left[\frac{\sum fx'}{N} \right]$$

Where :

M_x	= Mean
f	= frequency of score
i	= Interval
N	= Number of test. ⁵⁹

5. To analysis the data the writer used T-Test, this statistical calculation is choosen because the study compares the mean of one group. The conclusion of study shown the rejection or acceptance of the hypothesis, The writer used t-test the formula as follows :

$$T_0 = \frac{M_{x_1} - M_{x_2}}{S_{emx_1} - S_{emx_2}}$$

Where :

⁵⁸ Suniati, "Teaching Vocabulary trough total physical Respond (TPR) Method to the first Grade of MtsN-1 Model Palangka Raya Academic year 2005/2006", *Thesis*, Palangka Raya: UNPAR, 2006. p. 31.

⁵⁹ Hartono, *Statistik untuk Penelitian*, penerbit: Pustaka Belajar, p. 38.

T_o = The value of the mean difference will be judge

Mx_1 = The mean of the first group

Mx_2 = The mean of the second group

$Semx_1 - Semx_2$ = Standard error of the first and second mean.⁶⁰

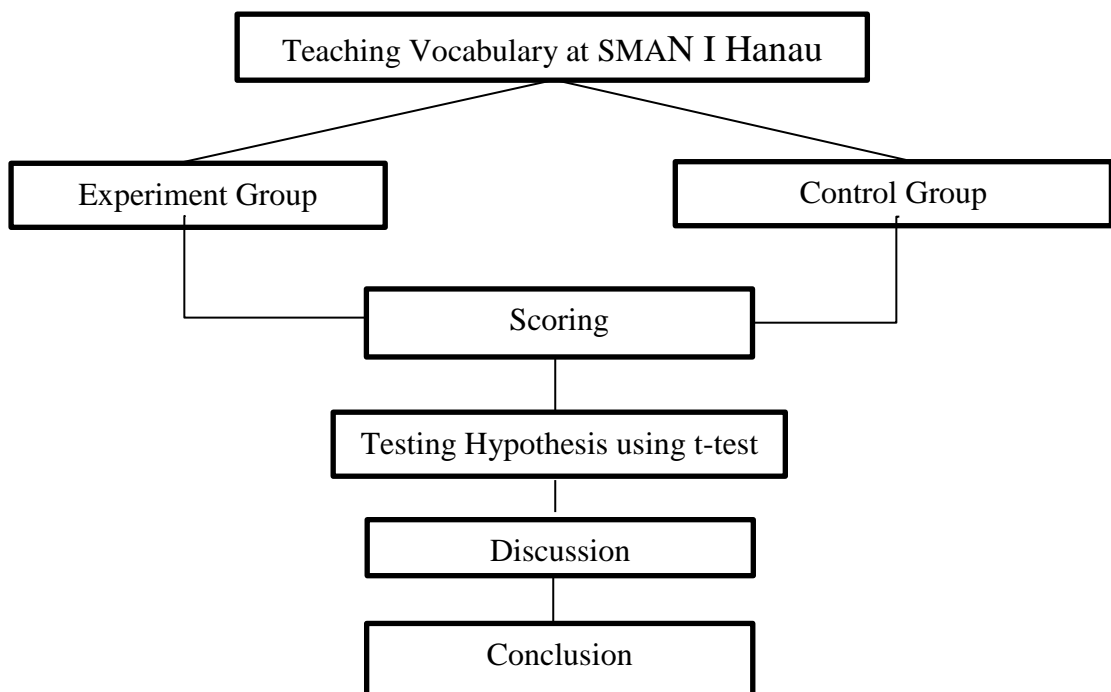
Then, the t value compared with T table.

If $t\text{-test} \geq t$ table, H_a is accepted and H_o is rejected

If $t\text{-test} < t$ table, H_a is rejected and H_o is accepted.⁶¹

After that, the interpretation made to answer the research problem. To sum up, the procedures of collecting data and analysis data, as describe in figure.

Figure 3.1



⁶⁰ Nana Sudjana, *Metode Statistik*, Bandung: Tarsito, 1996, p. 239.

⁶¹ Hartono, *Statistik untuk penelitian*, penerbit: Pustaka Belajar, p. 148.