CHAPTER III
RESEARCH METHOD

In this part, the writer described about research method that used in conducting the research. It was purposed to answer the problem of the study. This chapter consisted of approach, research design, population and sample, research instrument, data collection procedures, and instruments try out.

A. Time and place of the study

The study was conducted at MTs MUSLIMAT NU Palangka Raya which located on Pilau stree. The writer started the research from 24 october 2013 until found the complete data from the English teacher and students at MTs MUSLIMAT NU Palangka Raya.

B. Approach

In this research, the writer used the quantitative approach. It was because the writer measured the students' vocabulary mastery by tests (pre-test and post-test). Quantitative is a research that relies less on focus groups, subjective reports and case studies but is much more focused on the collection and analysis of numerical data and statistics. It means the writer collects the data which contain of numbers and it was analyzed by statistic method. The field study is done in the form of experiment by applying two different techniques for two different groups of students. In this experiment, the writer teaches the students directly.

C. Research Design

The design of this study is experimental design because the writer want to measure the effeect of using flash card in the teaching learning English

vocabulary process. According to Arikunto, Experimental study is a study which aimed to know there is or not the effect of the variable studied. [30] The writer did field study, especially quasi experimental design. An experiment involves the comparison of the effects of a particular treatment with that of a different treatment or without treatment. Quasi experimental design are similar to randomized experimental design in they involve manipulation of an independent variable but different in that subjectst are not randomly assigned to treatments group.[31] The researcher uses the Quasi-Experimental design in this study. Because this study will compare with two ways and the writer wants to meassure the effectiveness of teaching vocabulary using that ways.

Altough true experiments are preferred, quasi-experimental designs are considered worthwhile because they permit researchers to reach reasonable conclusion even though full control is not possible. The type of this study is Quasi-Experimental study by the nonrandomized control group; pretest-posttest desugn is one of the most widely used quasi-experimental design in educational research.[32]

In a typical group situation, schedules cannot be distruped nor classes reorganized to accommodate a research study. In such a case,one uses groups already organized into classes or other preexisting intact groups.

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[30]Suharsimi Arikunto, *manajemen penelitian*, Jakarta : PT Rineka Cipta, 2002, p.272
[31]Donald Ary, Lucy Cheser Jacobs, and Christine K, Sorense*., Introduction to Research in Education*, USA: Wadsworth Cengage Learning, 2010, p. 316
[32]Alison Mackey and susan M.Gass, *Second Language Research Methodology and design*, London 2005 p.146

The nonrandomized control group, pretest-postest design is one of the most widely used quasi-experimental designs in educational research. Moreover, the design could be drawn in the following scheme below :

Table 3.1

Scheme of quasi experimental design

Nonrandomized control group, pretest – posttest design

Subject	Pre – test	Treatment	Post – test
E	Y1	X	Y2
C	Y1	-	Y2

Where :

E   : Experimental group

C   : Control group

X   : Treatment

Y1   : Pre – test

Y2   : Post - test

D. Population and Sample

   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. [33]

   In this research, the researcher took the students from the MTs MUSLIMAT NU PALANGKA RAYA for this research. Become population is

[33]Suharsimi Arikunto,*ProcedurePenelitian: Suatu Pendekatan Praktek*. Jakarta: PT. Rineka Cipta, 2000, p. 108.

eighth grade students of MTs MUSLIMAT NU Palangka Raya. The Population of
the research is of all eighth grade students of MTs MUSLIMAT NU Palangka
Raya.

Table 3.2

The number of population

No.	GRADES	THE NUMBER OF THE STUDENTS
1.	VII-A	36
2.	VII-B	36
3.	VII-C	36
THE TOTAL NUMBER		108

2. **Sample**

Students' in the eighth grade at the first semester in MTs MUSLIMAT
NU PALANGKA RAYA as a sample to get the data for this research. In this
research, to take sample, the writer takes two classes to be the sample, the first
class is experiment group use vocabulary card and the second class control group.
In this way, the writer takes two classes $VIII^A$ as an experimental class and $VIII^C$
as a control class which will be related to this study. In a typical situation,
schedules cannot be disrupted nor classes reorganized to accomodate a research
study. In this case, group sample already organized into classes or group. So, the
writer takes two class without randomized.

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.[34] 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.[35] Therefore, the use of cluster sampling is because the sample of study should be in group or class.

E. Research Instrument

This research used the test as instrument. Test is a short examination of knowledge or ability, consisting of questions that must be answered.[36] The test is to know the students' score about their vocabulary. The writer gave the test instrument. First, try out November 06th 2013 at 10.20-11.40 o'clock, pre-test for control class VIIC was held on November 08th 2013 at 08.00 – 09.20 o'clock which followed by 36 students. Then the writer gave pre-test for experimental class VIIA was held on November 09th 2013 at 11.40 – 12.20 o'clock which followed by 36 students. Last the writer gave post-test for experimental class on Desember 04th at 08.40 – 10.20 which followed by 36 students. And post-test for control group class VIIC was held on Desember 04th 2013 at 11.40 – 13.00 which followed by 36 students. The time allocation of each test process was 90 minutes.

Related to the study, test was used to get data for measuring the students' ability in vocabulary mastery. The major data in the study were the data of the students' English score those were taken from pre-test and post-test. The test was constructed in the multiple choice test which consists of 50 items and has 4

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[34]Donald Ary, (etall) *Introduction To Research In Education Eight*, united state : Wadsworth (engange Learning, 2010), p.649.
[35]*Ibid.,* p. 154.
[36] Hornby, AS., *Oxford Advanced Learner's Dictionary*, New York: Oxford University Press, 1984, p. 1233.

multiple choice (a, b, c, and d). Some of the question was adapted from the book that used at MTs MUSLIMAT NU P. Raya, English on sky, Peter Watchyn – Jones in test your vocabulary 3. The item of the question are :

Table 3.3

Test item

No.	Indicators	Total	The number of the test
1	Noun	23	7,9,19,20,21,28,30,32,33,34,36,37,38,39,40,41,42,43,44,45,46,47
2	Verb	17	1,,3,4,5,6,15,18,23,24,25,26,27,29,35,48,49,50
3	Adjective	10	8,10,11,12,13,14,16,17,22,31

The total number of the test has include the material that appropriate with the material on the text book that use by MTs Muslimat NU palangkaraya's students.

F. Data Collection Procedure

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

1. The writer gives try out test to another class before testing for pre – test and post – test.

2. Telling the students how they must do with the test of try out.

3. Giving the test items to the student

4. Collecting to the student's work.

5. Calculating the result of the test

6. Analyzing the result of the test

7. The writer gives pre – test to the experiment group (Y1) and control grup (Y1)

8. On the contrary, the writer taught the experiment group vocabulary by using vocabulary card and taught the control group by convensional teaching.

Table 3.4

The description of teaching activities at experiment and control class

Experimental group	Control group

• First meeting
    Exploration
1. Eliciting vocabulary related to the theme / topic text (using flash card media, in this case the teacher using memory activities)
  • Teacher put the flash cards on the floor in a circle.
  • Students have one minute to memorise the cards.
2. Discussing about simple present tense
3. Discussing about adverb of frequency
Elaboration
1. The teacher showed the students a picture related the vocabulary that given by the teacher.
2. The teacher asked students opinion about the picture.
3. The teacher asked the
	• First meeting
	    Exploration
	1. Eliciting vocabulary related to the theme / topic text
	2. Discussing about simple present tense
	3. Discussing about adverb of frequency
	
	Elaboration
	1. The teacher showed the students a picture related the vocabulary that given by the teacher.
	2. The teacher asked students opinion about the picture.
	3. The teacher asked the students to write a descriptive text based on the picture (the affendix on English on sky's book)
	4. The teacher and the students checks the students' work

students to write a descriptive text based on the picture (the affendix on English on sky's book) 4. The teacher and the students checked the students' work together Confirmation 1. The teacher gave comments about the students' work 2. The teacher motivated the students to learn about the learning materials	together Confirmation 1. The teacher gave comments about the students' work 2. The teacher motivated the students to learn about the learning materials

• Second meeting
     Exploration
 1. Reviewing vocabulary (guessing game using flash cards) and grammar has been learned
 2. The students answered some questions or quiz related their homework last meeting.
 	
 Elaboration
 1. The teacher gave assesment
 2. The teacher checked the students' work
 3. The teacher and the students checked the students' work together
 Confirmation
 1. The teacher gave comments about the students' work
	• Second meeting
	     Exploration
	 1. Reviewing vocabulary and grammar has been learned
	 2. The students answered some questions or quiz related their homework last meeting.
	
	 Elaboration
	 1. The teacher gave assesment
	 2. The teacher checked the students' work
	 3. The teacher and the students checked the students' work together
	 Confirmation
	 1. The teacher gave comments about the students' work
	 2. The teacher motivated the

2. The teacher motivates the students to learn about the learning materials	students to learn about the learning materials

• Third meeting
 	
  Exploration
 	
  Eliciting vocabulary related to the theme / topic text (using flash card media)
 	
    • Teacher put the flash cards on the floor in a circle.
    • Students has one minute to memorise the cards.
 	
  Elaboration
  1. Discuss the homework
  2. Teacher and the students did the games related their homework last meeting
  3. The teacher gave assessment (the affendix on English on sky's book)
  4. The teacher and the students checked the students' work together
  Confirmation
  1. The teacher gave comments about the students' work
  2. The teacher motivated the students to learn about the learning materials
    • Fourth meeting
      Exploration
	• Third meeting
	
	  Exploration
	
	  Eliciting vocabulary related to the theme / topic text
	
	  Elaboration
	  1. Discuss the homework
	  2. Teacher and the students did the games related their homework last meeting
	  3. The teacher gave assessment (the affendix on English on sky's book)
	  4. The teacher and the students checked the students' work together
	  Confirmation
	  1. The teacher gave comments about the students' work
	  2. The teacher motivates the students to learn about the learning materials

	• Fourth meeting Exploration
1. Reviewing vocabulary and grammar has been learned (guessing game using flash cards) 2. Read descriptive text 3. Answering questions on a variety of information (main ideas, specific information, detailed information, the meaning of the word) Elaboration 1. Teacher asked the student to to look at the bold words on the text was their read and prepare to show the change of each word on flash cards. 2. The teacher gave some vocabulary related the material 3. Teacher put the flash cards on the floor in a circle. 4. Students has one minute to memorise the cards. 5. The teacher asked students to rearrange some paragraphs to make a good	1. Reviewing vocabulary and grammar has been learned 2. Read descriptive text 3. Answering questions on a variety of information (main ideas, specific information, detailed information, the meaning of the word) Elaboration 1. Teacher asked the student to to look at the bold words on the text was their read and prepare to show the change of each word that write on the whiteboard by the teacher. 2. The teacher gave some vocabulary related the material 3. The teacher asked students to rearrange some paragraphs to make a good descriptive text and answer the question based on the text (assesment)

descriptive text and answered the question based on the text (assesment) Confirmation 1. The teacher gave comments about the students' work 2. The teacher motivated the students to learn about the learning materials	Confirmation 1. The teacher gives comments about the students' work 2. The teacher motivates the students to learn about the learning materials

• Fifth meeting
   Exploration
1. Reviewing vocabulary (guessing game using flash cards) and grammar has been learned
2. Eliciting vocabulary related to the theme / topic text (using flash card media)
   • Teacher put the flash cards on the floor in a circle.
   • Students has one minute to memorise the cards.
3. The teacher asked students to write some vocabulary that their memorized
 	
Elaboration
1. Arrange random words into a coherent sentence.
2. Create and write descriptive sentences used vocabulary and grammar they have
	• Fifth meeting
	   Exploration
	1. Reviewing vocabulary and grammar has been learned
	2. Eliciting vocabulary related to the theme / topic text
	3. The teacher asked students to write some vocabulary that their memorized
	
	Elaboration
	1. Arrange random words into a coherent sentence.
	2. Create and write descriptive sentences using vocabulary and grammar they have learned
	3. Organize random sentences into a coherent paragraph.
	4. Arrange a random paragraph into a cohesive paragraph
	5. Teacher gave assessment
	6. The teacher and the students

learned 3. Organize random sentences into a coherent paragraph. 4. Arrange a random paragraph into a cohesive paragraph 5. Teacher gives assessment 6. The teacher and the students checked the students' work together Confirmation 1. The teacher gives comments about the students' work 2. The teacher motivates the students to learn about the learning materials	checked the students' work together Confirmation 1. The teacher gave comments about the students' work 2. The teacher motivated the students to learn about the learning materials

• Sixth meeting
    Exploration
1. Reviewing vocabulary and grammar has been learned (guessing game using flash cards)
2. The teacher asked students to match and fill the blank vocabulary (matching game and what's missing activity)
3. Elaboration
 	
1. Do various tasks to reinforce vocabulary and grammar has been learned.
2. Make sentences used the vocabulary and grammar has been learned
	• Sixth meeting
	    Exploration
	1. Reviewing vocabulary and grammar has been learned
	2. The teacher asks students to write some vocabulary that their memorized
	
	    Elaboration
	1. Do various tasks to reinforce vocabulary and grammar has been learned.
	2. Make sentences used the vocabulary and grammar has been learned
	3. Random sentences into coherent paragraphs

3. Random sentences into coherent paragraphs 4. Random sentences into coherent paragraphs 5. Individually made sentences based on a picture 6. Individually compose and write simple descriptive text Confirmation 1. The teacher gave comments about the students' work 2. The teacher motivated the students to learn about the learning materials	4. Random sentences into coherent paragraphs 5. Individually made sentences based on a picture 6. Individually compose and write simple descriptive text Confirmation 1. The teacher gave comments about the students' work 2. The teacher motivated the students to learn about the learning materials

9.   The writer gives post-test to experimental group and control group.

10. the writer gives score to the data from the experimental and control group.

11. the writer analyzes the obtained data from mean of post test score the experiment group and control group.

12. the writer interprets the ststistical result.

13. The writer concludes the activity of the study whether the use of flash card about noun and verb to teach vocabulary gives effect or not to the students' vocabulary mastery score.

G. Research Instrument Try Out

In order to prove the test were suitable to the students who were the sample of this study , the writer will be conducting a try out test. Then the writer chooses student in the same school but different class to try out the test. The try out test was conducted to VIII^B class of MTs Muslimat Nu. If the result is valid, it

means that the test item as the instrumentation of this study are suitable to be given.

In this study, the writer used multiple – choice to check students' vocabulary mastery. Threfore, the writer used multiple – choice that consists of 50 item. If the result is valid, it means that the test item as the instrumentation of this study are suitable to be given. In order to find out the description of how well the individual student has mastery the vocabulary, the final scores are related to the following qualification :[37]

Table 3.5

The standard of valuation

Score	Criteria
70-100	Mastery
<69	Fall

From the result try out, it was find the instrument of validity,reliability and index difficulty.

H. Research Instrument Reliability

The good instrument in a study is not only the instrument valid but also reliable to measure what suppose to be measured. In analyzing the reliability could be used the internal consistency method. This method was done by testing the instrument once time and then the result is analyzed by using several formulas that can be used to measure the reliability.[38]

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[37]Based on KKM at MTs Muslimat NU palangkaraya

[38]Sugiyono, *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif dan R&D,* p. 131.

To measure the realibility test, the writer used the Kuder Richardson (KR20) and the formula as follow:

The formula to be use:

$$r = \frac{k}{k-1} X \left\{ 1 - \frac{\sum pq}{S^2} \right\}$$

Notes

R   : Reliability of test

K   : Number of test items

P   : Mean of the correct answer

Q   : Mean of the wrong answer

S^2 : Variants

According to Suharto, the result of the calculation above is connected to the following criteria :

0.800-1.000   = Very High Validity

0.600-0.799   = High Validity

0.400-0.599   = Fair Validity

0.200-0.399   = poor Validity

0.000-0.199   = Very Poor Validity[39]

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[39]Suharto, *Metodologi Penelitian Dalam Pendidikan Bahasa*. Jakarta: Dekdikbud Proyek Pengembangan Pendidikan Tenaga Kependidikan, 1988, p.125

Index of diffulty

"the index of diffulty (or the facility value) of an item simply shows how easy or difficult the particular item proved in the test"[40]. To know the level of difficulty of test, use formula as follow:

$$F.V = \frac{R}{N}$$

Notes :

F.V = index of the diffiluties

R = the number of the correct answer

N= the total of the student[41]

2. Research Instrument Validity

The validity of a test is the extent to which it measures what is supposed to measure and nothing else.[42] An instrument is considere being a good one if it meets some requirement. One of them is validity. Every test, wheter it is short, informal classroom test or a public examination, will be a valid the constructor can make it. The test must aim to provide a true measures external knowledge and other skills at the same time, it will be not a valid test. Validity on this study is distinguish into some kinds as follows[43] :

a. Face validity :

This type of validity, in fact is often referred to as face validity : if a test item looks right to other testers, teachers, moderators, and tastes.[44] The test used

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[40]J.B. Heaton, *Writing Language English Test*, London: Logman 1974, p.172
[41]*Ibid*, p.172
[42]*Ibid,* p. 153
[43]*Ibid, p. 153*
[44]*Ibid, p. 153*

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by the writer was suitable to others and the same level that is Junior High School level. So that is why, the writer made the type of test items also suitable to the same level in the eight grade students at the Islamic Junior High School Nu of p.raya. the face validity of the test item as follows :

1. The kind of the test was vocabulary test which was about part of speech especially about noun, verb, and adjective.

2. The forms of the test items was multiple choice.

3. The language of items used English.

4. The test items are suitable to the junior high school.

b. Construct validity

   Construct validity is type of validity which assumes the existence of certain learning theories or construct underlying the acquisition of abilities and skills.[45] In this case, the test was a written test in order to measure the students' vocabulary mastery.

c. Content validity

   The test item in this research was to measure the students' English vocabulary mastery and based on the English teaching learning curriculum applied in MTs Muslimat NU palangkaraya. In making the test, the writer tried to match each of item test with the curriculum that was used by MTs Muslimat NU palangkaraya.

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[45]Ibid, p. 154

To measure the validity of the instrument, the writer used the formulation of product moment by pearson as follows[46] :

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where:

r_{xy} : Index Correlation Number "r" Product Moment.

N   : Number of Cases.

$\sum XY$: Multiplication Result between score X and Score Y.

$\sum X$: Total Value of Score X.

$\sum Y$: Total Value of Score Y.

Interpretation:

$r_{xy} > r_t$ = Valid

$r_{xy} < r_t$ = Invalid

The criteria of interpretation the validity:[47]

0.800 – 1.000 = Very High Validity

0.600 – 0.799 = High Validity

0.400 – 0.599 = Fair Validity

0.200 – 0.399 = Poor Validity

0.00 – 0.199 = Very Poor Validity

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[46]Riduwan, 2004. *Metode dan teknik menyusun tesis,* Bandung : alfabeta, p. 110
[47]SuharsimiArikunto. *Prosedur Penelitian Suatu pendekatan praktik*. Jakarta: PT.Rineka Cipta, 2006. p, 274.

I. Data Analaysis procedures

Data analysis is the last step in the procedure of experiment, in this case, processing the data. Data processing is the first step to know the result of both the experiment class and controlled class and also their difference.

To find out the differences between students score in using flash card in learning English Vocabulary and without using flash card in learning English Vocabulary the writer uses the formula that is as follow :

1. The writer gave test to the eighth year students at MTs MUSLIMAT NU Palangka Raya.

2. The writer collected the data of the students test results.

3. The writer gave score the students test results by used the scoring system.

4. The writer gave score for each item by using formula:

$$\frac{\text{score acquisition}}{\text{total score}} \times 100$$

5. The writer tabulated the pretest score into distribution of frequency of score table.

6. The writer tabulated the distribution normality pretest of experiment and control group by using SPSS program

7. The writer tabulated the homogeneous of the data pretest by using SPSS program

8. The writer calculated the data t-test with the formula: [48]

$$t_o = \frac{Mx_1 - Mx_2}{SE_{mx_1} - mx_2}$$

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[48]Nana Sudjana, *MetodeStatistik,*Bandung: PT. Tarsito Bandung, 1996, p.242.

Where:

$Mx_1 - Mx_2$: Differentiation of Two Means.

$SEmx_1 - mx_2$: The Standard Error of the Difference between TwoMeans.

With the criteria:

If t_{test} > t_{table} = Ha is accepted and Ho is rejected.

If t_{test} < t_{table} = Ha is rejected and Ho is accepted.

The writer used the level of significance at 1% and 5%. If the result of t_{test} is higher than t_{table}, Ha is accepted but if the result of t_{test} is lower than t_{table}, Ho is accepted.

9. The writer used SPSS 15.0 after using t_{test} to answer the problem of the study.

10. The writer calculated the degree of freedom with formula:[49]

$$df = (N1 + N2 - 2)$$

Where:

df : Degree of Freedom

N1 and N2 : Number of Cases

11. The writer determined the level of significant of $t_{observed}$ by comparing the $t_{observed}$ with the t_{table}.

12. The writer made the conclusion of data analysis that will obtain.

13. In addition, the writer used SPSS program to compare the data.

14. The writer discussed and concluded the result of data analysis.

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[49] Anas Sudijono, *Pengantar Statistik Pendidikan*, p. 330