

## CHAPTER III

### RESEARCH METHOD

This chapter consists of research type and design, Place and Time of the Study, Population and Sample, Research Instrument, Data Collecting Method, and Technique of Data Analysis.

#### **A. Research Type**

The type of this research is quantitative research. Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity.<sup>57</sup> It is because this research is purely quantitative with questionnaire as the main instrument to obtain the data which was in the form of numerical in the statistic analysis.

#### **B. Research Design**

The research design of this study is correlation research. According Donal Ary “Correlational research is nonexperimental research that is similar to ex post facto research in that they both employ data derived from preexisting variables. There is no manipulation of the variables in either type of research”.<sup>58</sup> In correlation research, Before a researcher starts to do the research, firstly make the planning. The planning, it self, is named as research design. Based on Arikunto research design is a plan or program made by a researcher, as the activity target that will be done.<sup>59</sup>

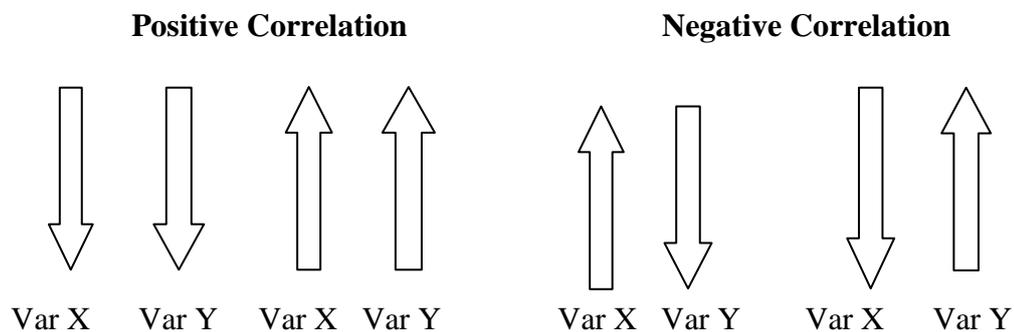
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<sup>57</sup> C.R Kothari, *Research Methodology*, New Age International (P), Jaipur (India), 2004, p. 3

<sup>58</sup> <sup>58</sup> Donal Ary, Lucy Cheser Jacobs, and Chris Sorensen, *Introduction to Research in Education*, p. 349.

<sup>59</sup> Suharsimi Arikunto, *Dasar-dasar Evaluasi Pendidikan*. Jakarta: Bumi Aksara. 2002, p.45

A correlation relationship is summarized by using a descriptive statistic called a correlation coefficient. A positive correlation coefficient means that as one variable increases, the other also increases. A negative correlation coefficient means that as one variable increases, the other decreases. Morissan describe positive correlation and negative correlation as bellow.<sup>60</sup>



The size of of the number (regardless of the sign) indicates how strong the relationship is between the variables.

### **C. Place and time of the study**

A research was conducted at Palangka Raya, especially at Campus of IAIN Palangka Raya. This research took a month to collect the data.

### **D. Population and Sample**

#### **1. Population**

According to DonalAry ‘a population is defined as all members of any well defined class of people, events or objects.’<sup>61</sup> According to Suharsimi population is the total number of the subjects of an investigation.<sup>62</sup>

<sup>60</sup> Morissan, *Metode Penelitian Survei*, Kencana Prenadamedia Group, jakarta:2012, p.378

<sup>61</sup> DonalAry(et...all) *Introduction to Research in Education*, p.129.

<sup>62</sup> Suharsimi Arikunto, *Prosedur Penelitian suatu pendekatan Praktik*, p.134.

The writer concluded that population is a number of groups interest to the researcher, a number of groups which she would like to make the results of the study to be reported. The population in this study is all of students on sixth semester, and eight semester of english students of The State Islamic Institute of Palangka Raya in the academic year of 2015/2016 which consisted of 154 students.

**Table 3.1 The Population of The Research**

Semester	Number
Semester 6	68
Semester 8	86
	$\Sigma=154$

*Source data: from the Data of academic years 2015/2016*

## 2. Sample

According to Suharsimi Arikunto, Sample is a part of population which has same characteristics. There are two ways in selecting a sample. First, if the population is less 100, all population can be sampled. Second, if the population is over 100, the researcher can take 10%-15% or 20%-25% from all population as a sample.<sup>63</sup> For determine the sample, the writer used random sampling. In this research, the writer used the slovin formula:

$$\text{Sample} = \frac{N}{N \cdot d^2 + 1} = \frac{154}{154 \cdot 0.1^2 + 1} = \frac{154}{(154) \cdot (0,01) + 1} = \frac{154}{2,54} = 60,6$$

$$\text{Minimum} = 61$$

$$\text{Sample} = 70 \text{ Respondents}$$

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<sup>63</sup> Ibid., p.134

The writer used slovin's formula because the 10 % of the sample can represent a number of population and the level of trust is about 90 % .<sup>64</sup>

From the formula above it can be derived that the sample is 70 respondents. Those 70 respondents are derived from the total population that is all of the State Islamic Institute of Palangka Raya in the academic year of 2015/2016.

**Table 3.2**

**The Sample of the research**

No	Semester	Total Student	Total Sample
1	Semester 6	68	35
2	Semester 8	81	35

**E. Research Instrument**

**1. Instruments**

To get the data accurately, it is important to use the instrument, for it is the tool to get the data on the field. In collecting the data, questionnaires, and documentation was used in this research to answer the problem of the study.

a) Questionnaire

A questionnaire instruments was used in this study. Zoltan Dornyei stated questionnaire is any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their

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<sup>64</sup> Umar Husein, . *Metode Penelitian untuk Skripsi dan Thesis*. Jakarta: PT. Raja Grafindo Persada. 1998, p. 78.

answers or selecting from among existing answers.<sup>65</sup> The two main types of questions are *open-ended* and *close-ended questions*.<sup>66</sup> In this case, the writer using the questionnaire close-ended is questionnaire that presented in a form such that the respondents were asked to choose one answer that suits the characteristics of him by giving the sign (x) or a checklist (√).

The writer used questionnaire to get the data about vocabulary learning strategies. The vocabulary learning strategy questionnaire was adapted based on Zhang Yunhao (Kristianstad University:Chinese, 2011)<sup>67</sup> with some modification. It is because the writer claimed that if took or use the present questionnaire, it would be helpful, effective and efficient.

In compiling the results of the research, the coding has been done, because Likert scale is used, and the interval scales also is used to code the question. The questionnaire is constructed in the form of Likert scale. Each response is given a number for example strongly agree = 4, agree = 3, disagree = 2, and strongly disagree = 1. And the questions in this study is in the form of check list items. To avoid confusion, the questionnaire was written in indonesia.

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<sup>65</sup>Zoltan Dornyei, “*Questionnaires in Second Language Research Construction, Administration, and Processing*” London: University of Nottingham, Lawrence Erlbaum Associates, Publishers, 2003, p.6.

<sup>66</sup> Sandra Lee Mckey, *Researching Second Language Classroom*, , London: Lawrence Erlbaum Associates, Publishers2006 p. 37.

<sup>67</sup> Zhang Yunhao, *The Use of Vocabulary Learning Strategies by Good and Poor Language Learners A case study of Chinese non-English major sophmores*, Chinese ;Kristianstad University, 2011.

It is because not all students have same skill in understanding L2. So that the writer adjust the language with the ability and the condition of students.

b) Documentation

Documentation provides the researcher with information that is used to support the available data. Based on Sugiyono “*Dokumentasi adalah mencari dan mengumpulkan data mengenai hal-hal yang berupa catatan, transkrip, buku, surat kabar, majalah, notulen, rapot, agenda dan sebagainya*”.<sup>68</sup>

In order words, it can be stated that documentation is used to collect data through printed materials. It means that the writer collected written data, such as the amount of the students on sixth and eight semester of english students of The State Islamic Institute of Palangka Raya, the result of vocabulary questionnaire, and the value result of speaking (KHS of speaking). In this research, the writer did not take a test by herself, but collect students’ score from their value result of speaking (KHS of speaking).

Based on yuliana in her research it is because to get scoring in speaking performance, we can not only give one test, but it needs on-going assessment or test. In this test, the lecturer had some criteria to score the students’ability, as fluency, performance or pronunciation. This criteria made the lecturer was easier to score and more objective.<sup>69</sup> So, the writer only took the value result of speaking (KHS of speaking) several reasons such as; *first*, it does not require much time, *second*, it doesn’t need the others people as an inter-rater.

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<sup>68</sup> Sugiyono, *Metode penelitian Kuantitatif Kualitatif dan R&D*, Alfabeta, Bandung, 2013. P, 240

<sup>69</sup> *Ibid.*, p. 43

And the *thrid*, this technique makes it possible to take a larger sample because it takes a relatively short time.

## 2. Research Instrument Try Out

Try out is used to measure the suitable instrument for students' vocabulary building strategy. The try out was done to the sixth and eight semester students by English students of the IAIN of Palangka Raya who did not become sample in this study, then the writer chose student in different semester to try out the questionnaire.

Procedures to do try out were:

- a) The writer gave try out to the students who did not become research sample.
- b) The writer collected the answers and gave score to the respondents.
- c) The writer analyzed the respondents score to find out instrumen reliability and validity use SPSS version 18.

## 3. Instrument Reliability

The good instrument in a study is not only the the instrument valid but also reliable to measure what suppose to be measured.

According to Donal Ary, "Reliability is concerned with the effect of error on the consistency of scores. Reliability is consistent in measuring whatever it is measuring."<sup>70</sup>

The reliability of a measuring instrument is the degree of consistency with which it measures whatever it is measuring.

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<sup>70</sup>Donal ary, *Introduction To Research In Intoduction*, secon edition, New York:Wardsworth/Thomson Learning, 1974, p. 237

On a theoretical level, reliability is concerned with the effect or error on the consistency of scores.<sup>71</sup> To measure the reliability of the questionnaire and speaking score, the writer used SPSS Program in order to make easy and valid. The scores of tryout can be seen at the appendices I.

#### **4. Instrument Validity**

One of the requirements of a good instrument is the instrument must be valid. Validity is defined as the extent to which scores on a test enable one to make meaningful and appropriate interpretations.<sup>72</sup> Validity is the most important consideration in developing and evaluating measuring instruments.

##### **a. Face Validity**

Face validity is taken to ensure that the questionnaire is valid. Face validity is a term sometimes used in connection with a test's content.

Face validity refers to the extent to which examinees believe the instrument is measuring what it is supposed to measure.<sup>73</sup>

The face validity of the test items is that this questionnaire used to measure the students' perception of vocabulary building strategy.

##### **b. Construct Validity**

Construct validity is type of validity which assumes the existence of certain learning theories or constructs underlying the acquisition of ability and skill.<sup>74</sup>

The item questionnaire is constructed based on students perception about vocabulary learning strategy. The instrument measures certain specific

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<sup>71</sup> Ibid., p.237.

<sup>72</sup> Ibid., p.224.

<sup>73</sup> Ibid.p.228

<sup>74</sup> J.B. Heaton, *Writing English Language test*, Longman, 1974, p.154.

questionnaire. It means how the instrument ability can cover the indicator of english vocabulary learning strategy.

### c. Content Validity

Content validity demands the appropriateness between the ability to be measured and the test being used to measure it.<sup>75</sup> In this study the instrument for collecting the data must be valid. It means the items in the instrument are equal and proportional in their distribution as the indicators of questionnaires.

## F. Data Collecting Procedure

Collecting data is the most important step in conducting the research. Before conducting the real test, the writer conducted a try out test and then analyzed the test to get its validity, reliability, difficulty of level and discriminating power of each item of the test. In this research, there were two steps to collect the data, questionnaire and speaking test.

To collect the objective data, this research has several steps as follows:

1. The writer preparing the questionnaires.
2. The writer giving the questionnaire to the respondents try out.
3. The writer Collecting the responses.
4. The writer Calculating the result of responses.
5. The writer Analyzing the data obtained using SPSS version 18.
6. The writer Concluding the students' perceptions of vocabulary building strategy in the English class of English Education Study Program at IAIN Palangka Raya.

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<sup>75</sup> M.Soenardi Djiwandono, *Tes Bahasa dalam Pengajaran*, Indeks, Jakarta. Cetakan pertama, 2008, p. 92.

7. The writer Collecting the data value result of students speaking (KHS Speaking).
8. After obtained students' result of questionnaire, the writer compared the result with students' score for speaking test. To know and analyze the data, the researcher using SPSS program that would be easier.

### G. Normality Testing

In quantitative research, it important to know the normality of the data. An assessment of the normality of data is a prerequisite for many statistical tests because normal data is an underlying assumption in parametric testing.

**Table 3.3 The data of two variables.**

No	Participant	Questionnaire Score	Speaking Score
1.	E1	89	73,18
2.	E2	85	67,5
3.	E3	93	75.45
4.	E4	87	81,13
5.	E5	79	70.93
6.	E6	89	70.8
7.	E7	91	65,36
8.	E8	79	78,86
9.	E9	91	80,3
10.	E10	95	72,84
11.	E11	81	75,8
12.	E12	79	81,43
13.	E13	89	80,4
14.	E14	81	79,54

<b>No</b>	<b>Participant</b>	<b>Questionnaire Score</b>	<b>Speaking Score</b>
15.	E15	77	76,34
16.	E16	77	73,86
17.	E17	77	67,70
18.	E18	79	80,2
19.	E19	81	70,15
20.	E20	75	74,14
21.	E21	91	77,85
22.	E22	89	70,84
23.	E23	93	70,74
24.	E24	89	73,57
25.	E25	87	70,77
26.	E26	87	76,44
27.	E27	75	67,01
28.	E28	89	71,77
29.	E29	85	67,04
30.	E30	85	79,5
31.	E31	83	81,77
32.	E32	89	77,37
33.	E33	77	85,83
34.	E34	79	80,90
35.	E35	85	78,57
36.	E36	89	74,25
37.	E37	79	72,87
38.	E38	77	80,95
39.	E39	77	76,84
40.	E40	79	78,87
41.	E41	77	72,6
42.	E42	85	77,84

<b>No</b>	<b>Participant</b>	<b>Questionnaire Score</b>	<b>Speaking Score</b>
43.	E43	77	72,27
44.	E44	75	81,59
45.	E45	77	70,3
46.	E46	77	80,00
47.	E47	81	73,5
48.	E48	83	77,44
49.	E49	93	73,7
50.	E50	83	71,34
51.	E51	77	76,44
52.	E52	77	76,67
53.	E53	79	79,32
54.	E54	81	69,54
55.	E55	77	71,05
56.	E56	81	73,89
57.	E57	79	80,00
58.	E58	81	71,00
59.	E59	75	76,64
60.	E60	75	76,7
61.	E61	81	71,47
62.	E62	77	75,62
63.	E63	89	86,27
64.	E64	79	70,67
65.	E65	77	76,91
66.	E66	79	65,6
67.	E67	87	77,40
68.	E68	81	77,25
69.	E69	85	78,47
70.	E70	77	82,33

From the data above, the researcher found out whether the data is normal or not by using SPSS program. The result can be looked below:

**Table 3.4 Normality testing by One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		70
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	4,70631158
Most Extreme Differences	Absolute	,066
	Positive	,059
	Negative	-,066
Kolmogorov-Smirnov Z		,552
Asymp. Sig. (2-tailed)		,923

Hypothesis testing:

- a. Ho accepted if N. Sig < 0,05
- b. Ha rejected if N. Sig > 0.05

As the table show above, the percentage of the significance (Sig.) 0,923 > 0,05 it means the distribution data is normal.

## H. Technique of Analyzing Data

After all data have been collected, the next step is analyzing the data. To analyze the data obtained from the field, several techniques are conducted as follow:

1. Examination and scoring on each questionnaires.
2. For the vocabulary building strategy questionnaires rated between 1 and 4. Which consisted 12 items.
3. Calculating the results of the vocabulary building strategy questionnaires using SPSS application.

4. Calculate the value result of speaking I (one), II (two) and speaking III (three). For the students speaking test, as the writer said above, the score collecting from their value result of speaking (KHS of speaking). There were many score that the lecturer had (students' tasks, mid-term test, UAS). After the writer got the score of students' speaking score, then calculated them until got the final score.
5. To find out the correlation both the two variables, the writer used the formula as below:
  - d. Pearson Product Moment formula as follows<sup>76</sup>:

$$r_{xy} = \frac{N(\sum xy) - (\sum x)(\sum y)}{\sqrt{[N(\sum x^2) - (\sum x)^2][N(\sum y^2) - (\sum y)^2]}}$$

Where:

$r_{xy}$  : The coefficient of correlation

$\sum X$  : Total Value of Score X

$\sum Y$  : Total Value of Score Y

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

N : Number of students

The formula above is very important due to finding out whether or not the (Ho) Hypothesis or (Ha) Hypothesis is accept in this research. A correlation greater than 0.5 is generally described as strong, whereas a correlation less than 0.5 is generally described as weak. These values can vary based upon the "type" of data being examined.

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<sup>76</sup> Morissan, *Metode Penelitian Survei*, Kencana PG, Jakarta:2012, p. 386

However, to get the correlation both of the variables the writer used manual calculate and also used SPSS 18 application. Then the writer used the distribution (t table) for  $\alpha = 0,05$  (significance of 5% or 0,05, is a standard measure that is commonly used in research.)<sup>77</sup>.

The writer used the 5% significant level because field of research is language subject not an exact subject. In the language study, it is better to use 5% significant level. On the other hand, for exact study it is better to use the 1% significant level. The writer determined the table interpretation of product moment scales, as follow:

**Table 3.5 interpreted to the criteria by Riduan<sup>78</sup>**

Correlaation Value (r)	Interpretation
0.800 – 1.000	Very High Correlation
0.600 – 0.800	High Correlation
0.400 – 0.600	Fair Correlation
0.200 – 0.400	Low Correlation
0.000 – 0.200	Very Low Correlation

From these formula, it could be gotten the correlation coefficient value (r) of the two variables. And by the interpretation table, the writer can conclude the strength of the correlation.

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<sup>77</sup> Riduan, *Metode dan teknik Menyusun Thesis*, Alfabeta, Bandung:2009, p.221

<sup>78</sup> Ibid.,p. 110.