

CHAPTER III

RESEARCH METHOD

A. Research Design

This is quantitative study because it is a means for testing objective theories by examining the relationship among variable (Creswell, 2008, p. 145). Furthermore, in conducting the research, the writer uses correlation method. Correlation method is the relationship between two or more variable (Murdan, 2006 p. 133). This is in order to investigate the correlation between vocabulary mastery and paragraph writing skill. The correlation method is most appropriate for this study, because it uses two variables to find out the relationship between vocabulary mastery and paragraph writing skill. It will show if they any positive or negative relationship and examining hypothesis.

After that, Pearson Product Moment formula is used to correlate two variables and to find out the significance correlation between vocabulary mastery and paragraph writing skill. The independent variable of this research is vocabulary mastery (variable X) and paragraph writing skill is the dependent variable (variable Y).

B. Research Setting and Time

1. Research Setting

This research is conducted at English Department Faculty of Tarbiyah and Teachers Training at UIN Antasari Banjarmasin Jl. A. Yani Km. 4,5 Banjarmasin, South Kalimantan.

2. Research Time

In this research, the writer to collect the data and got some information about vocabulary and writing test. It is conducted about two months from 05th December until 05th February 2017. To collect data for findings, the writer administered two tests they are: vocabulary mastery and paragraph writing test.

C. Population and Sample of Research

1. Population

The population of this research is the fifth semester students of English Department in UIN Antasari Banjarmasin Academic Year 2016/2017. The total number of the students is 138 students. The students are divided into four classes. There are class A, B, C, and D. The following table is the description of the population in this research.

Table 3. 1. Population of the Fifth Semester Students' at English Department of UIN Antasari Banjarmasin.

No.	Class	Sexual Status		Total
		Male	Female	
1.	A	10	26	36
2.	B	9	24	33
3.	C	10	25	35
4.	D	9	25	34
Total		35	89	138

Source: Document of English Department

2. Sample

Sample is a subject of a number of people or things, or part of a whole. According to Suharsimi Arikunto (2006, p.51) 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% or more. In this research, researcher needs to take sample by using proportional random sampling technique. In this research, the researcher will take 20% from fifth semester students of English Department of UIN Antasari Banjarmasin academic year 2016/2017 as a sample. So the number of samples in this study is:

Table 3. 2. Sample of the Fifth Semester Students' at English Department of UIN Antasari Banjarmasin

No.	Class	Sexual Status		Total
		Male	Female	
1.	A	2	4	6
2.	B	3	3	6
3.	C	3	3	6
4.	D	2	4	6
Total		10	14	24

Source : Sample of students of the sixth semester

D. Research Instrument

The writer gave two tests. The first is test to know vocabulary mastery. The scoring test that consists of 25 items. The second test is to know the paragraph writing skill. To measure of the writing test, the writer asks the students to write descriptive paragraph which consist of 200 to 300 words in their writing. Then, the data are analyzed by using Pearson Correlation Product Moment Formula to know the correlation between vocabulary mastery and paragraph writing skill.

Table 3.3. The Table of Vocabulary Mastery Scoring Test.

No.	Test	Number	No. Item	Score of Each Item	Total Score
1.	Vocabulary Mastery	25	1-25	4	100

According to Heaton (1989) there are five components of the rubric for writing: content, organization, vocabulary, grammar and mechanic.

Table 3.4. The Rubric for Elementary Paragraph Writing

Assessment	Score
Content	30
Organization	20
Vocabulary	20
Grammar	25
Mechanic	5
Score	100

Heaton (1989)

From the research instrument of the scoring test above, it will be examined the significant correlation between vocabulary mastery and paragraph writing skill of the fifth semester students of English Department at UIN Antasari Banjarmasin Academic Year 2016/2017.

E. Data and Source of Data

1. Data

There are two kinds of data in this study, namely primary and secondary data.

The primary data in this research include data about the vocabulary mastery and paragraph writing of the fifth semester students of English Department at UIN Antasari Banjarmasin academic year 2016/2017, which will be seen in their score from the written test.

The secondary data collect to complete the primary data such as:

- 1). Brief history of English Departement.
- 2). Description about lecturer, students, and administration staff.

2. Sources of Data

- a. Respondent : They are 24 of the fifth semseter students of English Department at UIN Antasari Banjarmasin Academic Year 2016/2017.
- b. Informants : Students, chief of English Department and lecturer of English Departments.
- c. Documents : All written reports that are needed in this research.

F. Data collection Procedure

The writer does the following procedures the data:

1. Written test

There are two kinds of the tests, the first test is vocabulary mastery and the second test is writing skill. The writer uses multiple choice items for vocabulary mastery each true answer scoring is 4 and total score 100 and the writing test the writer asks the students to make a descriptive paragraph, the topic about my Mother. The test will spend about 60 minutes in every class.

2. Documentary

Documentary is a technique to collect data from written source (Arikunto, 1992, p.131). Documentation is used to collect basic data obtain from research location, dean, administration staff, and total number of teachers, classes, and students.

G. Data Analysis Procedure

There are four steps of analyzing the data. The first step is to find out the degree of students' vocabulary mastery. The second step is to find out the students' paragraph writing skill. The third step is to see the correlation degree of them. The last step is to test hypothesis.

1. Measuring the degree of students' vocabulary mastery

The first step is measuring the degree of students' vocabulary mastery. The writer determines the students' vocabulary mastery by applying this formula:

$$M = \frac{\sum X}{N}$$

M = Mean

$\sum X$ = Total score of students' vocabulary mastery

N = Total Number of the respondents

After calculating the mean of the students test result by applying formula above, the writer determines the degree of the students' vocabulary mastery by consulting to these following categories:

Table 3.2 Categories of Students' vocabulary mastery

Score	Category
91-100	Excellent
81-90	Very good
71-80	Good
61-70	Fair
51-60	Poor
Less than 50	Very poor

(source: Sudjiono,2004)

2. Measuring the degree of students' paragraph writing skill

The second step is measuring the degree of students' paragraph writing skill.

The writer determines the students' paragraph writing skill by applying this formula:

$$M = \frac{\sum Y}{N}$$

M = Mean

$\sum Y$ = Total score of students' paragraph writing skill

N = Total Number of the respondents

After calculating the mean of the students test result by applying formula above, the writer determines the degree of the students' paragraph writing skill by consulting to these following categories:

Table 3.3 Categories of Students' Paragraph Writing Skill

Score	Category
91-100	Excellent
81- 90	Very Good
71-80	Good
61-70	Fair
51-60	Poor
Less than 50	Very poor

(source: Sudjiono, 2004)

3. Making working table as following:

Table 3.5 Working table

Subject	X	Y	Xy	x^2	y^2
1					
Until					
N= 24	$\sum X=$	$\sum Y=$	$\sum xy=$	$\sum x^2=$	$\sum y^2=$

Riduwan (2004: p.137)

Where:

X = The score of students' Vocabulary Mastery

Y= The score of students' Paragraph Writing Skill

xy= sum of multiplication of X and Y

x^2 = sum of X quadrate

y^2 = sum of Y quadrate

4. Measuring the correlation between the students' vocabulary mastery and paragraph writing skill.

The third step is measuring the degree of the correlation between vocabulary mastery and paragraph writing skill. The writer uses a Pearson product moment formula because both of data are interval data, Murdan (2006) says, if the correlation has two kinds of variables that are interval data, the writer should use the coefficient person product Moment Formula.

Product moment formula is usually used to correlate two variables based on its correlation coefficient value, it is useful to describe and find out the significance of the correlation between those two variables, variable X and variable Y. It is usually symbolized by r or r_{xy} (because it is also known as there regression coefficient).

Pearson product moment formula as follow:

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

where:

r_{xy} = The correlation coefficient between correlated variable X and variable Y

$\sum xy$ = The sum of the multiplication between variable X score and variable Y

$\sum x^2$ = The sum of students' deviation from variable X

$\sum y^2$ = The sum of students' deviation from variable Y

5. To test hypothesis

- 1) Consulting the degree of correlation (r_{xy}) and the degree of coefficient correlation product moment table to determine whether there is a correlation between students' vocabulary mastery and paragraph writing skill or not.

In this research, the number of the respondents is 24 by looking at the table of coefficient correlation degree of pearson product moment, the table of correlation for 24 in 5% fault significant is 0.404 and its degree of correlation in 1% fault is 0.515.

- 2) Interpreting the result and making conclusion. There are possibilities conclusions:
 - If $r_{xy} < 0.404$ or $r_{xy} < 0.515$, the hypothesis null (H_0) is accepted and the hypothesis alternative (H_a) is denied. It means there is no significant relation between students' vocabulary mastery and their paragraph writing skill.
 - If $r_{xy} > 0.404$ or $r_{xy} > 0.515$, the null hypothesis (H_0) is denied and hypothesis alternative (H_a) is accepted. It means there is a significant relation between students vocabulary and their paragraph writing skill.
- 3). Interpreting the result by referring to rough standard (if the second possibility conclusion accepted), so that the degree of correlation can be classified.

Table 3.4 Standard Categories of “ r ” Product Moments Value

The value of “ r ” Pearson Product Moment (r_{xy})	Interpretation
0,800-1,000	There is very strong correlation between variable X and variable Y
0,600-0,800	There is a strong correlation between variable X and variable Y
0,400-0,600	There is fair or moderate correlation between variable X and variable Y
0,200-0,400	There is a weak correlation between variable X and variable Y
0,000-0,200	There is no correlation between variable X and variable Y