CHAPTER III RESEARCH METHODOLOGY

A. Research Design

The writer chose quantitative method with correlational research design. In this research, bivariate correlation was used to describe the relationship between two variables. In this research, the independent variable or usually known as variable X in which affected another variable is "Students' Achievement in Reading Comprehension". For dependent variable or usually known as variable Y which is being affected by independent variable one is "Their Paragraph Writing Ability". The outline of this research can be seen as follow:



B. Research Setting

The research was conducted in the fourth semester students at English Department of UIN Antasari Banjarmasin, JL. A. Yani Km 4,5, Banjarmasin, Kalimantan Selatan. This place was chosen based on the consideration that is in English Department, the subjects is taught by highrise that is from easy to more difficult such as intensive reading I-III and extensive reading. However, it also prepared the students were able to write english writing through basic writing skill, paragrapah writing, short essay writing, and academic writing. Therefore, in this research, the students who achieved intensive reading I - III and achieved in basic writing skill and paragraph writing become sample since they have taken the subjects in the previous semester.

C. Population and Sample

1. Population

In this research, the writer chose the fourth semester students at English Departement of UIN Antasari Banjarmasin who had already passed in Intensive Reading III and Paragraph writing subject. The number of students in the fourth semester was 160 students.

English Class	Population
А	31 Students
В	34 Students
С	34 Students
D	34 Students
E	27 Students
Total	160 Students

 Table 3.1 Students Population in the Fourth Semester

2. Sample

According to Sugiono (2013, p.118), sample is a small group that observed and it is part of characteristic which had by the population. In this research, the writer used voluntary sampling technique which takes based on the students' willingness to participate in this research.

A voluntary sample is one of the main types of non-probability sampling methods, according to Jupp (2001, p.323), a volunteer sample is one in which the participants have volunteered to take part in the study. A major problem with a volunteer sample is that the participants may well have volunteered because they have their own agenda/ulterior motives which may clash with the researcher's aims. Therefore, by using this technique the writer found 40 students as the sample of this research. By using this sampling technique, the result of research can not be generalized for all students in the fourth semester because the writer only focused on the students' participant of ability.

D. Instrument of Research

In this research, the writer only used test as the instrument of the research. Test was set up to measure skill, knowledge, intelligence and talent of an individual or a group. In general, there are two kinds of tests. They were objective test and essay test. For this research, the writer used both objective test and essay test. The objective test was used for measuring students' reading comprehension which was constructed in the form of multiple choice tests. While the essay test was used for measuring students' ability in writing paragraph. These types of test were chosen because the aim of this research was to find out the possible correlation of students' achievement in reading comprehension and paragraph writing ability.

E. Data Collection Procedure

The function of data collecting was to determine the result of the research. In collecting data, the writer used some techniques as follows:

1. Reading Comprehension Test

Test for reading comprehension is multiple choice item that consist of some passages which taken from the book related of the reading test. According to Harris (1969, p. 60-61), suggests that the general form of the reading test consists of a number of short passages by a series of multiple choice comprehension items for reading comprehension test. The test consisted of 5 passages, every passage consist of 4 questions and totally amount to 20 questions. For more information about the indicator of reading comprehension test, it can be seen on appendix 11.

2. Writing Test

Writing test that given to the students is to write a comparative paragraph based on their syllabus of paragraph writing. The topics were given to the students and they choose one topic, then make a paragraph based on their own words. Before they write, the writer give some topics that appropriate with the syllabus of paragraph writing subject. That topics were given are English language and arabic language, a tiger and a lion, football and futsal, your teachers in high school and your teachers in university, your classmates in high school and your classmates in university, dry season in rainy season, banjarese people and javanese people, living in a boarding school and living in rent house, computer and laptop and watermelon and melon.

3. Try out

Before the test was used as an instrument for collecting the data, it had been tried out first. The test was tried out to the students in another sample. The main purpose of conducting the try out was to measure the validity, reliability and the effectiveness of the test. If the test had low validity and reliability, they had to be revised or omitted.

F. Data Analysis Procedure

The data were analyzed statistically by using IBM SPSS 22 version. It is a software package used for logical batched and non-batched statistical analysis and it is the newest one of the version. To analyze the data, the writer has procedures as follows:

- 1. Validity and Reliablity
 - a. Validity test

According to Brown (2007,p.448-449)), the most complex criterion of a good test is validity, the degree to which the test actually measures what it is intended to measure. Validity divided into three types are content validity, face validity and construct validity. In this research, the writer used two types validaton, both were construct validity and content validity. Construct validity used for reading comprehension test in which this form refers to the degree to which scores on ameasure permit inferences about underlying traits. In other words, it examines whether the test is a true reflection of the theory of the trait being measured (Murcia, 2001, p.526).

Moreover for writing test, the writer used content validity in which used to compare content of the test to the domain being measured. Gay (2000, p.161) also states that there is no formula used in this kind of validity and there is no way how to express it quantitatively. To determine the validity is by referring to the material given to the students based on the syllabus. Based on the explanation, the writer used the content validity and construct validity to measure whether the test was valid or not in this research.

b. Reliabilty test

According to Brown (2003, p.19-27), reliability has to do with accuracy of measurement. This kind of accuracy is reflected in the obtaining similar results when measurement is repeated on different occasions or with different instruments or by different persons. The characteristic of reliability is sometimes termed consistently. It means the test was reliable when an students's results are consistent on repeated measurement. To obtain the reliability, the mean and the standard deviation of the test must be known.

The writer used reliability test in this research to measure the students' reading comprehension test.which analyzed by IBM SPSS 22 version. For writing test, the writer saw from the learning material on paragraph writing subject. Thus, based on learning material had given for the students the writer can measure the reliability test.

2. Scoring Students' Answer of the Test

a. Calculate the mean (M) of the respondents' score.

Mean is the average of all respondents' score. It found by dividing all scores by number or total of the respondents. In case, according to Arikunto (1999, p. 264), the mean will be determined by using the formula as follow:

$$M_X = \frac{\Sigma X}{N}$$
 $M_Y = \frac{\Sigma Y}{N}$

Where:

 $\sum X$: The sum of students' reading comprehension test

 $\sum Y$: The sum of students' writing test

N : The number of respondents

b. Classifying the Score

In classifying the score, the writer used the measurement of students right answer in reading comprehension and paragraph writing test in the following table:

No	Score	Category
1	80 - 100	Very Good
2	66 – 79	Good
3	56 - 65	Enough
4	46 - 55	Low
5	0-45	Fail

 Table 3.3 Score Category of Students' Achievement in Reading

 Comprehension and Paragraph Writing Ability

(Kasdi, 2006,p.21)

Table 3.4 Categories of Writing Aspects Adapted from Brown (2010, p.285)

Categories	Point
	values
Content	30
Organization	20
Vocabulary	20
Grammar	25
Mecahanics	5
Total	100

- 3. Assumption test (Normality and Linearity Test)
 - a. Normality test is used to determine whether the data are obtained is normal distribution or not. For measuring the normality test, the writer use IBM SPSS 22 version with used Kolmogorov Smirnov theory. If P value > 0,05, so "data is normal". Vice verca, if P value < 0,05, so "data is not normal".
 - b. Linearity test is used to determine whether the variable obtained was linear correlation or insignificant. Two variables are linear if the significant value is >0,05. To measure the linearity, the writer used IBM SPSS 22 version.
- 4. Correlation Analysis

The writer uses formula of Pearson's product moment to know whether is correlation between variable X and variable Y or not.

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

In which:

- Rxy : correlation coefficient
- N : total number of respondents
- $\sum X$: the sum of the score for the strength of reading comprehension test

- $\sum Y$: the sum of the score for the students' writing achievement score
- $\sum XY$: the sum of the product multiplying the score for the strength of reading comprehension test and writing test.

The writer uses that formula because the data in this research are interval. The coefficient correlation obtained is tested for its significant. Correlation is significant when its α value is $\leq 0,05$. To know the category of coificient correlation, it can be seen in the following table:

Coefficeient Correlation	Category	Interpretation
(rxy)		
0,00 - 0,199	Very Low	There is a correlation between variable X and variable Y, but the correlation is very low. It means that the correlation is disregarded or in other words there is no correlation between between variable X and variable Y
0,20 - 0,399	Low	There is a low correlation between variable X and variable X and variable Y
0,40 - 0,599	Moderate	There is a moderate correlation between variable X and variable Y.
0,60 - 0,799	High	There is a strong correlation between variable X and variable Y.
0,80 - 1,000	Very High	There is a very strong correlation between variable X and variable Y.

 Table 3.5 Coefficient Correlation Interpretation

(Sugiyono, 2014, p. 192)

5. Testing Hypothesis

Measuring the hypothesis test was to find out the significant correlation between variable X dan variable Y by using formula:

$$t_{hitung} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

In which:

Criteria : Level of significancy (α) = 0,05 Degree of freedom (df) = (n-k)

It means that:

- a. If Sig. $\leq \alpha$ so H_a accepted and H₀ rejected and there was significant correlation.
- b. If Sig. > α so H₀ accepted and H_a rejected and there was no significant correlation.

G. Research Procedures

In this research, there were some procedures which have been done, as follows:

- 1. Planning Step
 - a. Survey to the location.
 - b. Consultation with advisor.
 - c. Make and set proposal design about the research.
- 2. Preparation Step
 - a. Hold the seminar of proposal design.
 - b. Asked research letter to the Faculty of Tarbiyah and Teachers' Training.

- c. Give the research letter to the lecturer that the writer will conduct this research in the related class.
- d. Prepare the instruments to collect the data.
- 3. Implementation Step
 - a. Conducting research to collecting data in field.
 - b. Collecting data by using test and documentary.
 - c. Processing and analyzing the data.
 - d. Giving conclusion about the collecting data.
- 4. Reportation (Reflection) Arranging Step
 - a. Report the result of research into thesis form.
 - b. Consultation with advisor.
 - c. Revise and copy the thesis to be analyzed in munaqasyah room.