

CHAPTER III

RESEARCH METHOD

A. Research Design

This research chose quantitative method with correlational research design. The aims to show the relationship between two variables. In this research two variables that will be measured are students reading ability and students' writing ability at the tenth grade students of senior high school. So that, the researcher used this type and method of research since to know whether there is correlation between students' reading and their writing ability or not.

This research promotes a hypothesis that has stated in chapter one. The hypothesis offers two variables: they are variable X and variable Y. In this research, variable X is identified as students' reading ability and variable Y is identified as students' writing ability. Which is variable X as independent variable and variable Y as dependent variable.

Both variable are measured through the tests. There are two kinds of test that will be used, they are multiple choice and writing essay. Hence, the researcher used the score of these tests to measure variable X and variable Y. Then, the researcher find out the mean score of multiple choice and writing essay tests. These mean score is used to determine the students' reading and writing ability and examine whether there is a

significant correlation of students' between reading and writing ability at the tenth grade students of senior high school by using Correlation Product Moment Formula and in order to confirm the calculation result, it will be verified with SPSS 22 (Statistical Package for The Social Science).

B. Research Setting

This research is conducted at SMAN 4 Banjarbaru, Jl.Ayani Km 21 Landasan Ulin Utara, Kec Liang Anggang, Kalimantan Selatan. It hold on 03 January –03 March 2019. This place is choosen based on these considerations:

1. In this school, there is English Department that teach students about reading and writing in English. But, there were some students who could only read while writing it still could not and some could only write it but they couldn't read it. So from that researcher interested to know about the correlation between reading and writing ability and also to prepared their reading ability to their writing ability in english like short essay writing. Therefore, the students at this place fulfill the requirments to become subject in this research since they have taken all of those courses.
2. This place is achiev able in terms of energy, time and cost. The implementation of the selected location studies does not cause problems about the researcher energy because it is near with the

researcher's residence. Therefore, the researcher do not need much time and able to minimize the cost to arrive the research location.

C. Participant

The participant in this research is the tenth grade students of SMAN 4 BANJARBARU school year 2018/2019. The researcher just chooses randomly the cluster as sample. Furthermore, the reseacher take 33 samples of different classses. The researcher chose the tenth grade as a research because this was a middle class so that at this stage the teacher still had the opportunity to improve reading and writing ability students so in the next class their reading and writing skills would be better.

D. Population and Sample

Fraenkel and Wallen (2006, p. 93) states that "population is the group of interest to the researcher, the group to whom the researcher would like to generalize the result of the study". According to Selinger and Shohamy (1989), "a sample in a research study is the group on which information is obtained".

The population of this study was the second year students of the tenth grade students at SMAN 4 Banjarbaru school year 2018/2019. There were five classes there that consist of 179 students. According to Arikunto (2006, p.134) stated that "if the population is more than 100, we can take 10-15% or 20-25% or more than it". Because the number of the population was relatively large, then the researcher took 18% of them. It means that

the sample consisted of about 33 students. The total numbers of them are 179 students as seen the following table :

Table 3.1. Participants

No	Class	Population	Sample
1	X IPS 1	36	6
2	X IPS 2	37	6
3	X MIPA 1	36	7
4	X MIPA 2	34	7
5	X MIPA 3	35	7
	Total	179	33

The sample in this research was taken by using cluster sampling. According to Gay (2000:322) the sample for correlation research is selected by using an acceptable method, and 30 participants are generally considered to being minimally acceptable sample size. In this research, the populations will be grouped or clustered as classes. The writer just chooses randomly the cluster as sample. Furthermore, the writer take 33 samples of different classes.

E. Research Instrument

The instrument of this study is to determine the result of the research. In collecting the data, the researcher makes some instruments First is about interview, second is about reading comprehension test and the third is about writing test as follows:

1. Interview

The interview is a question and answer that is done systematically based on the research objectives. This interview was conducted with the school principal, English teacher, and some student at the tenth grade with the aim of obtaining information about students reading and writing ability at the tenth grade.

2. 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 kind of reading test is the researcher give announcement text, expressed congratulations, recount text, and descriptive text. The respondents asked to choose the most correct answer from the given option. The total amount of the text items are 20 multiple choice questions with 5 point for each corect answer. The test was taken from reading textbook (Kementrian Pendidikan & Kebudayaan, *Bahasa Inggris SMA/MA/SMK/MAK kelas X*, (Jakarta : Kementrian pendidikan & kebudayaan, 2016).

3. Writing Test

Writing test that given to the students is to write a short essay 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 theme. the researcher will ask them to write one to two paragraphs with 150-200 words length. the paragraphs may talk about the following topic : their weekend activities, an interesting place they have visited, and their holiday.

F. Data Collection Procedure

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

1. Planning Step

First, the researcher conducted a location survey that the researcher wanted as a place of research. then the researcher consulted with the advisor. After completion of the consultation, the researcher make and set proposal design about the research.

2. Preparation Step

The steps taken by researcher to make preparations include conducting a seminar of proposal. After the seminar the researcher then asked for a research letter to SMAN 4 Banjarbaru from Tarbiyah and Teachers' Training Faculty and gives the research letter to the

teacher that the researcher will conduct this research in the related class. After that, the researcher prepare the instruments are needed to collect data.

3. Implementation Step

For implementation step the researcher go to the field to do research and collect data. The data is collecting by using test and documentary. The researcher then processing and analyzing the data to giving the results and conclusion about the collecting data.

4. Reportation (Reflection) Arranging Step

After completing the research, the researcher write report from the research results into thesis form. Then do consultation with advisor. after that, do revise and copy the thesis to be analyzed in thesis examination room.

G. Technique of Data Collection

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 test

According to Brown (2003,p.22-26), 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 validation, 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 a measure 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 (2001:526).

Moreover for writing test, the writer used content validity in which used to compare content of the test to the domain being measured. Gay (2000:161) 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 researcher used the content validity and construct validity to measure whether the test was valid or not in this research.

2. Reliability test

According to Brown (2003:19-27), 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 researcher used reliability test in this research to measure the students' reading comprehension test which analyzed by IBM SPSS 22 version. For writing test, the researcher saw from the learning material on paragraph writing subject. Thus, based on learning material had given for the students the researcher can measure the reliability test.

3. 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:

$$M_X = \frac{\sum X}{N} \qquad M_Y = \frac{\sum Y}{N}$$

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 researcher used the measurement of students right answer in reading ability and writing ability in the following table:

Table 3.2 Score Category of Reading and Writing Ability in English

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

Sudijono(2003) in Kasdi (2006, p. 21)

To assess the students writing ability the researcher used analytical score. The analytical score categories of writing aspects can be seen in the following table :

Table 3.3 Categories of Writing Aspects Adapted from Brown (2003, p. 246)

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

There is a breakdown of each trait above into subtraits of the writing scoring above, which are also small in number and homologous or corresponding. See Table 2, which teases out the subtraits of the main traits in Jacobs et al. (1981) in Haswell (2007) :

Table 3.4 Composition for Scoring Writing (Jacobs et al. 1981)

Score	Level	Criteria
Content	30-27	EXCELLENT TO VERY GOOD: knowledgeable, substantive, thorough development of ideas, relevant to assigned topic
	26-22	GOOD TO AVERAGE: some knowledge of subject, adequate range, limited development of ideas, mostly relevant to topic, but lacks detail
	21-17	FAIR TO POOR: limited knowledge of subject, little substance, inadequate development of ideas
	16-13	VERY POOR: does not show knowledge of subject, non-substantive, not pertinent, or not enough to evaluate
Organization	20-18	EXCELLENT TO VERY GOOD: fluent expression, ideas clearly stated/supported, succinct, well-organized, logical sequencing, cohesive
	17-14	GOOD TO AVERAGE: somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing
	13-10	FAIR TO POOR: non-fluent, ideas confused or disconnected, lacks logical sequencing and development
	9-7	VERY POOR: does not communicate, no organization, not enough to evaluate
Vocabulary	20-18	EXCELLENT TO VERY GOOD: sophisticated range, effective word/idiom choice and usage, word form mastery, appropriate register
	17-14	GOOD TO AVERAGE: adequate range, occasional errors of word/idiom form, choice, usage but meaning not obscured
	13-10	FAIR TO POOR: limited range, frequent errors of word/idiom, choice, usage, meaning confused or obscured
	9-7	VERY POOR: essentially translation, little knowledge of English vocabulary
Language Use	25-22	EXCELLENT TO VERY GOOD: effective complex constructions, few errors of agreement, tense, number, word order/function, articles,

		pronouns, preposition
	21-18	GOOD TO AVERAGE: effective but simple construction, minor problems in complex constructions, several errors of agreement, tense, number, word order/function, articles, pronouns, preposition but meaning seldom obscured
	17-11	FAIR TO POOR: major problems in simple/complex constructions, frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, preposition and/or fragment, run-ons, deletions, meaning confused or obscured.
	10-5	VERY POOR: virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate
Mechanics	5	EXCELLENT TO VERY GOOD: demonstrate mastery of convention, few errors of spelling, punctuation, capitalization, paragraphing
	4	GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing but meaning obscured
	3	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused or obscured
	2	VERY POOR: no mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate

4. 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. 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 researcher used IBM SPSS 22 version.

5. Correlation Analysis

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

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

In which :

R_{xy} : 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 essay score

$\sum XY$: the sum of the product multiplying the score for the strength of reading comprehension test and writing ability essay test.

The researcher 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:

Table 3.5 Coefficient Correlation Interpretation

Coefficeient Correlation (rxy)	Category	Interpretation
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 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.

Sugiyono (2014:257)

6. 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 H_0 rejected and there was significant correlation.
- b. If Sig. $> \alpha$ so H_0 accepted and H_a rejected and there was no significant correlation.

H. Data Analysis

Data analysis in this research includes validity, reliability, student answer scores on the reading ability test and the writing ability test, assumption tests (normality and linearity), and correlation analysis. To analyze all the data and find the result about the correlation between reading and writing ability in English of the tenth grade students of senior high school the researcher used IBM SPSS 22 version.