

CHAPTER III

RESEARCH METHOD

This chapter is focused on description of research design, population and sample, instrument, data collection techniques and data analysis. All of those elements are discussed as follows:

A. Research Design

The researcher applies Correlational Research Design in conducting the present study. Correlational Research Design is specialized in figuring out the correlation or relationship between two or more continuous variables, like students' IQ and their academic achievement, which researcher is working on.

In this study the researcher attempts to find out the relationship between IQ and students' reading achievement towards their writing achievement in composing a Hortatory Exposition Text.

B. Population and Sample

1. Population

In order to gather the data needed in this research, the researcher conducts the research at SMA Negeri 4 Kediri. The school has 30 classes in total or about ten classes for each grade.

Since hortatory text writing are there in 11 grade syllabus, the researcher has the 11 grade students of SMAN Kediri 4 which are about 320 students as the population of the present study.

2. Sample

The 11 grade of SMAN Kediri 4 consists of ten classes in total. The researcher takes only XI-IPA 3 (XI-SCIENCE 3) out of the other classes to conduct the research on.

The researcher has the 32 students of XI-IPA 3 as the subject of the present study. XI-IPA 3 consists of 32 students which is divided by eight male students and 24 female students.

C. Instrument

1. IQ Test

IQ test is a test that is aimed at measuring individual intelligence, capability to deal with kinds of matter such as verbal, numerical, and spatial ability. There are many different types of intelligence tests; however, a typical IQ test might consist of three sections, each testing a different ability, usually comprising verbal reasoning, numerical ability and diagrammatic, or spatial, reasoning.¹⁹ Commonly the IQ test is compiled from those three sections. As for this study, the researcher obtains the data of students' IQ from the IQ test conducted by **Pusat Terapan Psikologi Pendidikan** or **PTPP**.

¹⁹ Philip Carter, *The Complete Book of Intelligence Tests*, 10.

2. Reading Comprehension test

Reading comprehension test is a test to measure how far students comprehend an English text or other discourses. Since there are many types of text in English, the researcher takes a hortatory text as a source to assess the students' comprehension.

There are 30 items that the students have to answer. They are in the form of multiple choice with five options that follow each questions. There are ten indicators (with three questions each) used in testing the student's comprehension in reading; they are: identifying topic, main idea, factual information, explicit information, implicit information, references, word meaning, purpose, generic structure and language feature. The time allocated for reading comprehension test is 90 minutes.

As for the scoring, each correct item is worth 1 (one) point. There will be 30 points when all of the questions are answered correctly. Based on that scoring. The formula to score the students' reading comprehension test is formulated as follows:

$$\text{Score} = \frac{\text{Number of Correct Answer}}{30} \times 100$$

3. Writing Test

Hortatory Exposition text is used to represent the students' writing achievement since hortatory exposition text is categorized as academic writing in which it needs quite intelligence to compose one. In this study, the writing test is in the form of essay. This is intended to

measure the four main aspects in writing, those are: Generic Structure, Developing Ideas, Accuracy, and Mechanic.

The researcher has 90 minutes allocated in this test. There are four points of scoring aspect that is going to be used as the criteria of good writing; those are generic structure, developing idea, accuracy and mechanics. The score of each point lies from 1-5 for then it is add-up with the other points and divided by 20 before it is finally multiplied by 100. [$\text{Score} = \frac{G+D+A+M}{20} \times 100$]

Table 3.1
The Scoring Rubric of Writing Test

No	Scoring Aspects	Score
1.	Generic Structure	1 – 5
2.	Developing ideas	1 – 5
3.	Accuracy (grammar, choice of words)	1 – 5
4.	Mechanics (writing style, punctuation)	1 – 5

SCORE	4.1 - 5	3.1 - 4	2.1 - 3	1.1 - 2	0.1 - 1
INTERPRETATION	very good	good	moderately good	not good	bad
G. STRUCTURE	There are 3 points of Generic Structures with very good sentences	There are 3 points of Generic Structures with good sentences	There are 2 of 3 points of Generic Structures with good sentences	There are 2 of 3 points of Generic Structures	There is only 1 of 3 points of Generic Structures
D. IDEA	There are at least three relevant supporting sentences or examples of each main idea.	There are two supporting sentences or examples of each main idea with very good sentences.	There are two supporting sentences or examples of each main idea with good sentences.	There is only one supporting sentence or example of each main idea with good sentences.	There are no (relevant) supporting sentences or examples
ACCURACY	There are no more than 2 grammatical errors or inappropriate words in each paragraph	There are only 3 grammatical errors or inappropriate words in each paragraph	There are 4 grammatical errors or inappropriate words in each paragraph	There are more than 4 grammatical errors or inappropriate words in each paragraph	There are grammatical errors or inappropriate words in each sentence.
MECHANICS	There are no more than 2 capitalization or punctuation errors in each paragraph	There are only 3 capitalization or punctuation errors in each paragraph	There are 4 capitalization or punctuation errors in each paragraph	There are more than 4 capitalization or punctuation errors in each paragraph	There are capitalization or punctuation errors in each sentence.

D. Data Collection Technique

The researcher divides the data collection into two sections/parts. The first one is to have the students of 11 grade copy and submit their IQ test results. The results of the test becomes the variable X_1 . In order to obtain the students' reading achievement (variable X_2), the researcher gets the students to do a reading comprehension test; while for writing achievement (variable Y), the researcher has the students compose Hortatory Exposition text.

E. Data Analysis

Upon obtaining the data from the IQ test, students reading comprehension test and students' hortatory exposition text writings, the researcher put them into SPSS and Microsoft Excel 2013 to deal with the computing matter.

The researcher uses SPSS to compute the correlation degree of the two correlations as well as to determine the normality of the obtained data. Microsoft Excel is used to get further insight of each variable by calculating the mean of each scoring aspect of each variable as well as compare the mean score to figure out which scoring aspect do the students lack of.

The data is then divided into three parts. The first one is about the correlation between IQ and reading comprehension achievement. The next one is correlation between IQ and writing achievement. The other one is about the reading comprehension and students' hortatory exposition text

writing. The data is then analyzed by using Pearson Product Moment formula.

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

The researcher would like to find out the correlation coefficient of IQ with reading comprehension and EFL learners' writing achievement as well as reading comprehension with writing achievement by using SPSS 21 as already mentioned before.

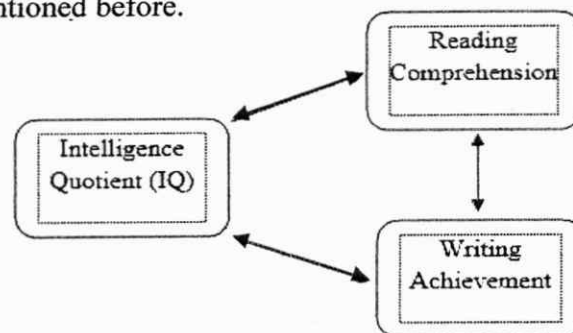


Table 3.2

The Standard of Correlation Coefficient

No.	Correlation Coefficient	Interpretation
1.	0,00 - 0,199	There is very low or no correlation
2.	0,20 - 0,399	The correlation is low/weak
3.	0,40 - 0,599	The correlation is moderate/Average
4.	0,60 - 0,799	The correlation is high/strong
5.	0,80 - 1,000	The correlation is very high/strong

Upon obtaining the correlation degree of the three correlations, the researcher compares them to find out which one of reading comprehension or writing achievement that IQ tends to have greater correlation with and which one between IQ and reading comprehension, which contributes more to EFL learners' writing achievement.