CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

The research is correlation research. The method used in this study is descriptive quantitative. Descriptive quantitative research is a scientific investigation that explains phenomena by using numbers (Hidayati, 2018).

There are several types of studies that may be classified as descriptive research design with the type of correctional study. Correlation design method as part of quantitative research was the most effective method for research study, pas it offer a non-obtrusive approach to the inquiry and resulted in identification of significant relationship between study and variable. Donald Ary (1985:327) says that: "Correlation studies are concerned with determining the extent of relationship between variables".

Therefore, it can be concluded that is used two variables and examine whether there is relationship between two variables, namely they were the students' personality type is Extrovert (X_1) and Introvert (X_2) and students' speaking skill (variable Y). This research is distributed of IKIP PGRI Pontianak. Then to find out the data of this research, both data from two variables analyzed using person product moment formula on SPSS 22.00 version for windows.

B. Population and Sample

1. Population

According to Shirley Dowdy, Stanley Wearden & Daniel Chiko (2004, p. 25) A population was a natural, geographical, or political collection (people, animals, plants, or objects) as understood general. So, the research of the population was not merely people, but also be objects or other objects, but also included the entire number of characters own by the objects or subjects. It can be conclude that population includes all objects and subjects in an area where the researcher conduct research and population in this research is the fourth semester students of English Education at IKIP PGRI Pontianak in Academic Year 2022/2023

2. Sample

According to Frankel, et, al (p:50, 2020) define that a sample in a research study is part of the group which information was obtain. It means that sample was a part of population that can be investigated in the study. According to Arinkunto, S (2020) if the total of subjects was larger or more than 100, it is better to take all of. And if the total of subject was low larger or more than 100 then it be taken between 10-25% or 20-25% or more. This study was used cluster random sampling. Cluster random sampling used if the number of the data sources studied is very wide and the sample will taken based on pre determine population area (Ratna:2021). Researcher was taking two classes out of four English Education classes in the 4th semester as samples to measure personality and speaking scores.

Table 3.1

Table of sample

Classes	Samples
A Morning	25
B Morning	25
Score	50

C. Variable and Indicators

1. Variable

Variable is something that becomes the object of research which will then be used as an object in determining the research objectives. So, it can be conclude that the variable is an important factor in research related to the phenomenon under the study. In this research there are two main variables such as:

a. Students personality (X)

b. Students speaking skill (Y)

2. Indicators

The indicators of this research are students's personality and students speaking skill. Students personality focus of five factors model personality including activity, sociability, risk taking, impulsiveness, expressiveness, reflectiveness, responbillity, and speaking skill aspect is pronunciation, grammar, fluency, and vocabulary.

D. Research Instrument

In order to do the research, this researcher requires a tool. The device is known as an instrument. A questionnaire and document were employed in this study. These instruments' specifics are as follows:

1.Personality Questionnaire

Questionnaire is data collection technique done by gave set of questionnaire written statement to responden answer. Ary (2010:648) state that "questionnaire is an instrument in which respondents provide written responses to questions or mark items that indicate their responses". The pupils' extrovert and introvert personalities were also determined using this personality test. This questionnaire was closed-ended and offered options for respondents to select from. Three scales, labeled as very, average, and badly introverted, were present. Based on scale, the questionnaire's options were created. The statement that best matched each participant's personality was offered for them to select.

To aquire data needed, questionnaire is distributed to the respondent. The questionnaire was used to find out and clarifications the student belonged to extrovert and introvert. The questionnaire used in this research was adapted from Eysenck Personality Questionnaire (EPQ). One of the most well-known and widely used tools for personality measurement in study and clinical settings a like is the Eysenck Personality Questionnaire (EPQ) developed by Hans J. Eysenck (Furnham et al. 2008, p. 200-13). There have also been extensive multi-cultural studies to test whether the EPQ factors are replicable in other countries and ethnicities.

2. Document

According to Riduwan (2010, p. 88) "Documentation is reffered to get the data directly from the place of research, enveloped of relevant books, rules, report of the activity, photos, film of documenter and research data relevant". Based on explanation the researcher concludes that documentation is a method used to provide documents by using accurate evidence from recording specific sources of information from essays / writings, wills, books, laws, and so on.

E. Data Collection

a. Questionnaire

Tools for gathering evidences or data on the sample were questionnaire and document. For gathering students' personality data, the researcher adapted from Eysenck's Personality Inventory (EPI) questionnaire. The questionnaire consist of two parts is personal information which contains three blank filling items, it reveal the subject name, registrasion number and class. The questionnaire using likert scale, it means response including five form statement consist of always, often, sometimes, Rarely, and Never. The questionnaire will translate into Indonesian in order to minimize misunderstanding by the students.

Table 3.2

Likert's Scale Types	Score
Always	5
Often	4
Sometimes	3
Seldom	2
Never	1

There are some procedures of data collection applied by the researcher, they are:

1. Determining the Population and Selecting the Samples

The researcher chooses two groups from English Education students of IKIP PGRI Pontianak academic year 2022/2023, especially A and B Morning Class.

2. Try out the questionnaire

The researcher tries out the questionnaire to know the validity and reliability. The questionnaire in this research to measure student's personality extrovert and introvert. This questionnaire has been tested for validity and reliability by the previous author. This questionnaire was taken from a thesis written by Dyah Sri Wulandari (2017).

3. Distributing Questionnaire

The researcher gave the questionnaire to students to be answered. Students have 40 minutes to answer the questionnaire. The result of the questionnaire used to the group of students based on their type of personality.

4. Analyzing, Interpreting, and Concluding the Data

After collecting the data referring to the elements of speaking, analyzing, interpreting and concluding the data. The data gained from the test tabulated and calculated. The data divided into two groups based on the students' type of personality.

b. Document

The documentation in this research are includes;

1. The name of the students

2. The number of students' class

3. The result of questionnaire

4. The students speaking score

5. Photos during the research

F. Technique of Data Analysis

Various statistical data analyses were employed to answer all research questions. This data will be analyzed by using suitable formula and statical analysis by means of computer program SPSS 22.0 (Statical Package for Social Sciences).

The following are the various statistical data analyses that will be use to answer the research questions:

1. To answer questions 1 and 3, the linear product moment correlation formula is used.

Before testing the correlation between the independent variable and dependent variable, first perform a pre-conditional test, as follows:

a. Normality Test

Normality test is a test that is performed as a pre-conditional for performing data analysis. According to Siregar (2017:153) "The purpose of his normality test on a data set is to find out whether a data population is normally distributed or not." The study was conducted using the *Kolmogorov-Smirnov* method. The test criteria according to Siregar (2017:167) are as follows:

　1. If the probability (sig) is > 0,05, then the data is distributed normally.

　2. If the probability (sig) is < 0,05, then the data is not distributed normally

2. Linearity Test

The linearity test is used to find out the relationship of the independent variable to the dependent variable in order to know the relation of the independent variables to the dependent variable. According to Siregar (2017:178) "The purpose of the linearity test is to find out whether between the dependent variable (Y) and the independent variable(X) there is a linear relationship. This test is usually used as a prerequisite in the application of the linear regression method. This test is done to see if the specification of the model used is linear or not. The test criteria are as follows:

1. If the linearity value is < 0,05, then there is a linear relationship between the independent variable and the dependent variable.

2. If the linearity value is > 0,05, then there is no linear relationship between the independent variable and the dependent variable.

To answer this question, the researcher tested the normality of the data both of extrovert students' and speaking skill used *Kolmogrov-Smirnov Test.* The test was calculated by using SPSS. After found that both of the data was normal, researcher tested the correlation both of variables. Researcher used

Person Product Moment Correlation or PPMC, which showed the linear relationship between two variabels. The researcher used both SPSS version 22 and manually to analyze the data by applying this formula:

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

Where:

r	= Pearson r (correlation)
$\sum x$	= the sum of x distribution
$\sum y$	= the sum of y distribution
$\sum x^2$	= sum of the squared scores in X distribution
$\sum y^2$	= sum of the squared scores in Y distribution
$\sum xy$	= sum of products of paired X dan Y scores
N	= number of paired X and Y scores (subject)

(Ary, et al, 2010:130)

Results are between -1 and 1. A result of -1 meant that there is a perfect negative correlation between the two variables while a result of 1 meant that there is perfect correlation between the two variables, and result of 0 meant that there is no linear relationship between those variables.

Table 3.3

The Classification of Correlation Level

Size of Correlation	Strength of Relationship
0 to 0.19	No relationship or weak relationship; likely to be statistically significant only in large samples of 1,000 or more
0.20 to 0.34	Slight relationship detectable in samples of 100 or more

0.35 to 0.64	Moderately strong relationship
0.65 to 0.84	Strong relationship
0.84 or greater	Very strong relationship

<div align="right">(Lodico, et al, 2006:233)</div>

2. To answer questions 2 and 4, researcher calculated on the result of question number 1 and 3.

According Singh (2006:235). The rejection or acceptance of a null hypothesis is based upon some level of significance as a criteria. In psychological and aducational circle the 5% level of significance (0.5) is often accepted as a standard of the level of significance, the researcher found out the result after the question number one and three was answered.

Meanwhile, to test significance of the correlation, researcher used t-test formula to see significance level correlation between two variables. The t distributation was used to test whether a correlation coefficient is statistically significant. Therefore, the researcher had to conduct t-test (Urdan, 2005:82). The formula as follow:

$$t = \frac{r \sqrt{N-2}}{\sqrt{1-r^2}}$$

Where:

t   = the score of t-test

N   = the total of participant

r   = correlation coefficient

Where degree of freedom is the number of cases in the sample minus two df = N-2

Then the researcher compared the score of t_{value} and t_{table}. There were two possibilities of the result:

a. If $t_{value} \geq t_{table}$, it meant that null hypothesis (Ho) is rejected and alternative hypothesis (Ha) is accepted. Therefore, there is significant correlation between variables.

b. If $t_{value} \leq t_{table}$, it meant that null hypothesis (Ho) is accepted and alternative hypothesis (Ha) is rejected. Therefore, there is no significant correlation between variables.