

CHAPTER III

RESEARCH METHOD

3.1 Research design

This research's design is quantitative. Method used in the study is correlation. Correlation is where there are two or more variables and we want to find out is there any relation between those variables and how strong the relation is. Why the researcher chose this design is because the researcher wants to know the relation between students in listening English pop songs and vocabulary mastery. The researcher uses bivariate correlation analysis as a research design because this study aims to find the relationship between two variables. Researchers also use descriptive statistics to describe the data obtained into clearer and more detailed information. Then, a simple linear regression analysis is used to find the significant contribution of students in listening English pop songs to vocabulary mastery and Pearson's product moment correlation is used to analyse the relationship between two variables, namely; students in listening English pop songs (X) and students' vocabulary mastery (Y). To make it easier to calculate data, researchers used statistical software, the IBM SPSS Statistics program, which is used to solve business and research problems.

3.2 Population and Sample

3.2.1 Population of the Research

Population is a set or element that processes one or several interesting attributes (Arikunto, 2006). The population of this study is all 7th grade students of Al Ibrah Middle School, which consists of 6 classes and 146 students in total.

3.2.2 Sample of the Research

The sample is part of the population that is being studied (Arikunto, 2006). The first step before the researcher takes the research sample is to sort the students first by distributing an open-questionnaire to all 7th grade students of SMPIT Al-Ibrah with certain categories such as who often listen to English pop songs, because not all students listening English pop songs and know what pop songs are.

The researcher hand-out open questionnaire consisting of four question through google form to all 7th grade students of SMPIT Al-Ibrah and found 77 students who match with the categories to this research.

The next step is that the researcher determines the sampling technique. In this study, researcher employed simple random sampling. For the number of students in conducting correlational studies at least 30 participants are needed as a research sample (Creswell, 2012). Thus, the researchers took 30 students as a sample of this study.

In choosing the sample for the study, the researcher writes the name of the students on a piece of paper and put the name inside a bottle or a glass. Then shake the bottle or glass and pick the students name one by one until 30 students is chosen. The sample may be seen within the following table:

Table 3.1 Sample of 7th grade students SMPIT AL Ibrah

Class	Number of Students
A	4
B	5
C	2
D	11
E	3
F	5
Total	30

3.3 Technique of Data Collection

Data collection in this study is collected by using questionnaires and tests. (1) The questionnaire is used to collect data from students' in listening to English pop songs while (2) vocabulary mastery test is used to collect data from students' vocabulary mastery.

3.3.1 Students' in Listening to English Pop Songs Questionnaire

Questionnaire is used to obtain data or information from respondents about something related to them in question form (Arikunto, 2010). In this research questionnaire is adaptation from Al-efeshat, and Baniabdelrahman (2020) to collect data on students' listening to English pop songs with five scale likert table which in order from positive to negative is "Strongly Agree" as 5, "Agree" as 4, "Neutral" as 3, "Disagree" as 2, and "Strongly Disagree" as 1. Shown in the table below:

Table 3.2 Likert Scale Types

Likert Scale	Scale
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

The questionnaire is in the form of several statements for respondents to find out how students' in listening to English pop songs in seventh grade students at Al-Ibrah Middle School. Listening English pop songs questionnaire is given in Indonesian with the aim to making it easier for students to answer the questionnaire. Table below represents the category of the questionnaire:

Table 3.3 Category of the Questionnaire

Category	Number of items
Discovery Skill	1, 5, 11, 12, 13, 17
Activity Skill	3, 6, 9, 16, 20
Word Recognition Skill	8, 10, 15, 18
Attention	2, 4, 7, 14, 19

*See on appendices

There are twenty statements in the questionnaire which are divided into four parts. In the first part, there are six statements which aim to measure the discovery skills of the respondents. The second part, there are five statements which aim to measure the activity skills of the respondents. The third part, there are four statements which aim to measure the word recognition skills of the respondents. And the last part, there are five statements which aim to measure the attention of the respondents.

Instrument development is pursued in several ways, namely, (1) translating instruments by linguists; (2) instrument testing; and (3) testing the validity and reliability of the instrument.

First, the questionnaire was tested before being used for research to test its validity and reliability. If the indicators show valid and reliable, the questionnaire can be used for research. Then the questionnaires were distributed to respondents, namely seventh grade students in the odd semester of the 2020/2021 school year at SMPIT Al-

Ibrah. The results of the questionnaire were then tabulated using a Likert scale. For the next stage, the answers to the questionnaire are calculated and discussed and interpreted according to the analysis. And in the final stage, the findings of the study are summarized and suggested by the researcher.

3.3.2 Vocabulary Mastery Test

Arikunto (2010), stated that an instrument to rate people's ability or skill, intelligence, and talent with couple of question it is called a test. In this research the researcher uses vocabulary size test to measure students' vocabulary mastery. The form of test is multiple choice test which consisted of a, b, c, or d answer. In this study, Vocabulary Size Test was adapted from Nation and Beglar's (2007) based on vocabulary contained in English pop songs that students often listen to. Researcher adjust the vocabulary in the test with vocabulary in the English pop songs which students often listen to. English pop songs that often listened by students is Happier, Roxanne, Thank You Next, Savage, Runaway, This Town, Boss Bitch, What You Know Bout Love, 7 Years, Curious, Cold, With You, Doin' Time, Nonstop, Hands All Over, You've Got Me Where You Want Me, Nil-Nil Draw. From the mentioned English pop songs title that students often listen mostly themed love song and friendship. The test consists of 20 questions and the vocabulary test is distributed via google form. To anticipate of cheating in doing the test the researcher gives 60 minutes of timer in the test, so the respondent does not have time to search for an answer in internet or any media. When the time is up the test will automatically be closed so the respondent cannot do the test anymore.

Previously the test is also tested before being used for research to test its validity and reliability, if the indicators are valid and reliable, then the test can be used for research. Then the test was distributed to respondents, in this case the seventh-grade students in the first semester of the 2020/2021 school year at SMPIT Al-Ibrah who were selected as the research sample. The next stage, the answers to the test are calculated and then discussed and interpreted according to the analysis. In the final stage, the findings of the study are summarized and suggested by the researcher.

3.4 Collecting Data Procedure

The procedure of collecting the data firstly is the researcher went to ask permission to SMPIT Al-Ibrah to hand out an open questionnaire in order to pick the

samples who often listening to English pop songs. The open questionnaire handed out through google form, in handing out the questionnaire the researcher helped by the teacher to share the questionnaire through group classes zoom and invited the researcher to explain the purpose of the study and how to fill the instrument. The students of 7th grade SMPIT Al-Ibrah is 146 students. Then, researcher found 77 students who often listening to english pop songs. After that, the researcher picks randomly 30 students who often listening to english pop songs to be the sample of the study. Researcher used two instruments which is Students in Listening English Pop Songs Questionnaire and Vocabulary Mastery test.

In collecting the data for questionnaire and especially test the students fill the instruments all individually at their own house because of the pandemic. In answering the questionnaire, they answer it by their own choice. In the test form, the researcher gives a timer in the test up to 60 minutes to make students do not have any chance in finding the answer through the dictionary, google, or even friends because when the time is up the form will be logged out automatically. With that method it is hoped that the data which filled by the students can be guaranteed the originality. To find the correlation between students' in listening english pop songs and vocabulary mastery of 7th grade students at SMPIT Al-Ibrah, the following is a procedure for collecting data needed by researchers to support data analysis:

- Researcher ask for permission from SMPIT Al-Ibrah to hold correlational research between students' in listening english pop songs and vocabulary mastery in 7th grade students at SMPIT Al-Ibrah.
- Researcher come to see 7th grade english teacher to ask for permission to hand out open questionnaire. Then, teacher helped the researcher to share the questionnaire through group classes zoom and invited the researcher to explain the purpose of the study and how to fill the instrument.
- After the students fill the questionnaire which up to 146 students, the researcher sorts the students who often listening to english pop songs and found 77 students who often listening to english pop songs.
- Then the researcher picks 30 students to become research samples from 77 students using simple random sampling.
- Researcher come to see the 7th grade english teacher again to inform which students who were selected as research samples and also ask for permission to share the students' listening to english pop songs questionnaire and vocabulary

mastery test to the students, and the teacher suggest giving the link of the instruments to be given to 7th grade students.

- After the instruments was filled and collected, the researcher calculates the results in Ms. Excel
- Then the researcher enters the instruments data which to be analysed with descriptive statistics, test the normality of the data, then test the hypothesis using simple linear regression and Pearson's product moment correlation using SPSS.

3.5 Validity

3.5.1 Validity of Questionnaire

When the researcher is going to do research, the research instrument must be confirmed to be valid and reliable, for the researcher to test the validity of the questionnaire first using the Bivariate Correlation in SPSS17. In the validity test, researcher used 15 students as the sample population. Researcher use a population sample that is equivalent to the study population. The results show that 20 items were declared valid. The following is a table of instrument validity:

Table 3.4 Validity Result of Questionnaire

Item	r hitung	r table $\alpha=0.05$; n=0.482	Description
1.	0.501	0.482	Valid
2.	0.737	0.482	Valid
3.	0.593	0.482	Valid
4.	0.736	0.482	Valid
5.	0.612	0.482	Valid
6.	0.524	0.482	Valid
7.	0.541	0.482	Valid
8.	0.566	0.482	Valid
9.	0.550	0.482	Valid
10.	0.604	0.482	Valid
11.	0.599	0.482	Valid
12.	0.702	0.482	Valid
13.	0.600	0.482	Valid

14.	0.716	0.482	Valid
15.	0.612	0.482	Valid
16.	0.655	0.482	Valid
17.	0.542	0.482	Valid
18.	0.560	0.482	Valid
19.	0.702	0.482	Valid
20.	0.486	0.482	Valid

3.5.2 Validity of Test

Before conducting the research, the researcher also tested the validity of the test first using the Bivariate Correlation in SPSS17. In the validity test, researchers used 15 students as the sample population. Researcher use a population sample that is equivalent to the study population. The results show that 20 items were declared valid. The following is a table of instrument validity:

Table 3.5 Validity Result of Test

Item	r hitung	r table $\alpha=0.05$; n=0.482	Description
1.	0.675	0.482	Valid
2.	0.552	0.482	Valid
3.	0.501	0.482	Valid
4.	0.646	0.482	Valid
5.	0.646	0.482	Valid
6.	0.552	0.482	Valid
7.	0.580	0.482	Valid
8.	0.617	0.482	Valid
9.	0.534	0.482	Valid
10.	0.584	0.482	Valid
11.	0.552	0.482	Valid
12.	0.588	0.482	Valid
13.	0.584	0.482	Valid
14.	0.617	0.482	Valid
15.	0.732	0.482	Valid

16.	0.584	0.482	Valid
17.	0.560	0.482	Valid
18.	0.520	0.482	Valid
19.	0.526	0.482	Valid
20.	0.553	0.482	Valid

3.6 Reliability

3.6.1 Reliability of Questionnaire

After the researcher calculates the validity of the questionnaire which results show valid, the next step is the researcher calculating the reliability using SPSS 17. Researcher use 15 students from the population sample which is equivalent to the study population sample, and there are 20 questionnaire items, the researcher calculates the Cronbach's Alpha Coefficient between 0 and 1. The results of the reliability test are the alpha is 0.901 ($\alpha > 0.5$) which means very strong or reliable (see Table 3.6). Therefore, the researcher can use this questionnaire in research.

Table 3.6 Reliability Result of Questionnaire

Cronbach's Alpha	N of Items
.901	20

3.6.2 Reliability of Test

After the researcher calculates the validity of the test which results show valid, the next step is the researcher calculating the reliability using SPSS 17. The researcher uses 15 students from the population sample which is equivalent to the study population sample, and there are 20 test items, the researcher calculates the Cronbach's Alpha Coefficient between 0 and 1. The results of the reliability test, namely the alpha is 0.898 ($\alpha > 0.5$) which means very strong or reliable (see Table 3.7). Therefore, the researcher can use this test in research.

Table 3.7 Reliability Result of Test

Cronbach's Alpha	N of Items
.898	20

3.7 Technique of Analysing data

After collecting the data from questionnaire and test, the next step is to analyse them to know whether there is a positive correlation between the students' in listening English pop songs and vocabulary mastery.

3.7.1 Data Analysis Steps

The researcher checks the data before entering the data into SPSS, after the data were checked the researcher enter the data into SPSS using descriptive and Pearson's product moment correlation in order to do statistical analysis. This square measure the steps in data analysis:

- Researcher calculating the results of the questionnaire on Microsoft Excel, before entering the data of students' in listening English pop songs into SPSS.
- Then, researcher enter the scores of students' in listening English pop songs questionnaires into SPSS descriptive statistic based on the fourth categories of students' in listening English pop songs.
- After that, the researcher describing the result of descriptive statistic based on the fourth categories of students' in listening English pop songs.
- To determine the categories that influence in listening English pop songs, the researcher describe the average score from the fourth categories of students' in listening English pop songs
- Then, the researcher measuring the level of students' listening English pop songs, the researcher must determine the strength of students' listening English pop songs. Formula for interpreting scores taken from Anas (2006, pp. 175-176):

- a. Finding the Mean (M)

$$M = \frac{\Sigma fX}{N}$$

In which:

M = Mean

N = total number of respondents

ΣfX = Total score of students' listening English pop songs

b. Finding the Standard Deviation (SD)

$$SD_x = \sqrt{\frac{\sum f(X - M)^2}{N}}$$

In which;

SD_x = Standard deviation of students' listening English pop songs

N = total number of respondents

c. Classifying the score into three categories

The researcher classifies the score into three categories: high, moderate, and low by using formula below:

No	Formula	Category
1	$X \geq M + 1 SD$	High
2	$M - 1 SD \leq X \leq M + 1 SD$	Moderate
3	$X \leq M - 1 SD$	Low

Afterward, researcher measuring the level of students' vocabulary mastery. In this study, researchers have prepared vocabulary size test, students are provided with 20 questions given four multiple choices consisting of a, b, c, or d and students must choose the right answer according to the statement. The formula to score students' vocabulary mastery is shown below:

$$\text{Students' score} = \frac{\text{Student's correct answer} \times 100}{\text{Total items}}$$

The researcher uses the following formula to see the average score of students' vocabulary mastery:

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

In which,

M : Mean

$\sum x$: Sum of scores

N : Total number of respondents

After calculating the average student test results by applying the formula above, the researcher determined the level of vocabulary score from Salkind (1994) as quoted by Kartika (2019). The level of vocabulary score can be seen in the table below:

Table 3.8 The Level of Vocabulary Mastery Score

Score	Category
80 – 100	Very Good
70 - < 80	High
60 - < 70	Average
50 - < 60	Low
0 - < 50	Very low

- Later on, researcher measuring the correlation between students in listening English pop songs (X) and students' vocabulary mastery (Y). Pearson product moment formula used to analyse the correlation between the two variables. There are several steps that must be taken before using the Pearson product moment, including:

a. Pre-requirement Test

In the following steps, the pre-requisite testing will be analysed with a normality test.

1. Normality test

Normality test is a test to determine whether the sample from the population is normally distributed or not. In this study, researchers use the normality test to determine whether the data that has been collected by the researcher will be normally distributed or taken from the normal population, because the data to be tested must be normally distributed. If the level of significance ($p \text{ value} > 0.05$) the data will be normally distributed. To calculate the normality test, the researcher uses Kolmogorov Smirnov. The following are the steps:

Input data - analyze - nonparametric tests - sample K-S - input test variable list - distribution test - normal - ok.

There are two hypotheses in this test, including:

- Ho: data is normally distributed
- Ha: data is not normally distributed

b. Hypothesis testing

There are two hypotheses in this study:

Ho: $\rho = 0$ There is no correlation between students in listening English pop songs towards vocabulary mastery.

H1: $\rho \neq 0$ There is positive and significant correlation between students in listening English pop songs towards vocabulary mastery.

To test the hypothesis of the study, the researcher uses simple linear regression analysis and Pearson's product moment correlation.

1. Simple Linear Regression Analysis

Simple Linear Regression Analysis is used to determine the form of two or more variables, this analysis can predict the value of one variable (dependent variable) through another variable (independent variable). Researchers used simple linear regression analysis in this study to find out the direction of the relationship between students in listening English pop songs and vocabulary mastery whether it is related positively or negatively, and to predict the value of students' in listening English pop song if the vocabulary mastery score up or down. Because the data to be tested must have a linear relationship between variables X and Y. If the level of significance (p value < 0.05) means variable X affected to variable Y. Following is the Simple Linear Regression Analysis formula using the IBM SPSS program:

Analyze - Regression - Linear - input Variables - click Method - choose Enter - OK

2. Pearson's Product Moment Correlation

Pearson's product moment correlation is to analyse the relationship between two variables. To test the relationship between students' in listening English pop songs and vocabulary mastery, researchers used Pearson's product moment correlation because both variables had interval scale data. Ghozali (2010) states that the Likert scale is data that is considered interval. Sulyanto (2011) also found that there are many studies that have been published in international journals which also have the view that the Likert scale is interval data so that researchers no longer carry out data transformations. Because to use the Pearson product moment correlation, it is mandatory to use data with an interval or ratio scale. If (p value < 0.05) there will be a significant correlation. The relationship may be positive or negative. Pearson r coefficients vary between -1 and +1, with +1 indicating a perfect positive relationship and -1 indicating a perfect negative

relationship, and 0 = no relationship. Following is the formula of Pearson's product moment correlation using the IBM SPSS program:

Analyse - Correlate - Bivariate - Input Variables - click Pearson correlation - click Two tailed - Option - click Means and Standard Deviation - OK.

- Last, researcher interpreting the hypothesis from the Pearson's product moment correlation coefficient whether there is a positive and significant correlation or not based on the standard 'r' category in the following table:

Table 3.9 Standard Categories of “r” Pearson Product Moment Value (Suharsimi, 2006)

The value of “r” Pearson Product Moment (r_{xy})	Interpretation
0,810- 1,00	There is very strong correlation between variable X and variable Y
0,610 – 0,800	There is a strong correlation between variable X and variable Y
0,410 – 0,600	There is an average correlation between variable X and variable Y
0,210 – 0,400	There is a weak correlation between variable X and variable Y
0,00 – 0,200	There is no correlation between variable X and variable Y

3.7.2 Display Data

This part is explaining about how the researcher display the data. First, the result of questionnaire the researcher displays the data with using descriptive statistics in SPSS, with table and also a graphical display. Researchers used descriptive statistics in displaying data because to measure students' listening to English pop songs, researchers could determine the mean, standard deviation, maximum and minimum values for each category. Tables is used to show the results of students' in listening English pop songs, graphical display is also used to display the mean results in total of the four categories. And for displaying the test results, researcher used a table to show the score of students' vocabulary mastery.