

## **CHAPTER III**

### **METHOD OF RESEARCH**

#### **A. Research Design**

This research used quantitative and qualitative method to analyze the data. Quantitative there will probably be specific things in mind to connect statistics, numbers, and formulas. And qualitative research is a method of analyzing data qualitatively. After the data are collected, the writer classified them based on the limitation problem and analyzed them quantitative so that all data can be used to answer the problem questions systematically.

#### **B. Research Setting**

The research is conducted at the eight grade students of SMP Negeri 2 Takisung academic year 2017/2018. This school is located at Jl. Raya Tabanio, Tanah Laut Regency. The research was conducted about three weeks, from on November 11<sup>st</sup> 2017 to December 2<sup>th</sup> 2017.

#### **C. Population and Sample of Research**

##### **1. Population of Research**

According to Sugiyono population is the generalization of the object, a subject that has certain qualities and characteristics set by the researchers to learn and then drawn the conclusion (Sugiyono: 2012, p.117). The population in this research is the

entire grade eighth in SMPN 2 Takisung year 2017/2018 are 49 students, and they are divided into two classes (VIII A and VIII B)

**Tabel 3.1. Population of SMPN 2 Takisung**

Class	Male	Female	Total
VIII A	15	9	24
VIII B	13	12	25
Total	28	21	49

From the table above, the number of students who became known to the population in this study consists of 2 classes with the total number of students of 49 people, consisting 28 males, and 21 females students.

## 2. Sample of Research

According Sugiyono (2001, p.61) states that purposive sampling is a technique of determining the sample with certain considerations. Meaning in other words, the unit of the sample is adjusted according to certain criteria defined by the research objective.

The writer in this study chose purposive sampling because can determine the desired sample according to the criteria of male and female students who look more used learning strategies based on observation observations for 3 weeks and so that the number of male and female students can be balanced. The writer took students in grade VIII A and VIII B, the total number of the sample is 40 students, consisting 20 male and 20 female students.

**Table 3.2. Sample of VIIIA and VIIIB of SMPN 2 Takisung**

Class	Male	Female	Total
VIIIA	11	9	20
VIIIB	9	11	20
Total	20	20	40

#### **D. Instrument of the Study**

The instrument that the researcher used in this research are observation and questionnaire.

##### 1. Observation

This observation is used to observe detail information about the object directly that can complete this study. The writer do the observation focused on the students to identify strategies used by male and female students in learning English.

##### 2. Questionnaire

For questionnaire: First, the researcher the researcher prepares the materials. Second, the researcher gives questionnaire to students. Third, the researcher collects it back.

Questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. And this study use of Strategy Inventory for Second Language Learning (SILL) by Oxford (1989) version of 7.0. Regarding the design research and large number of respondent, SILL version 7.0 (Strategy Inventory for Second Language Learning) as is instrument

of data collection is preferred by the writer. This version is specialized for second a foreign language learner. Having employed widespread in ESL/EFL researches, the SILL is a constructed from used by Oxford (1989) to examine strategies applied by the students of English as second a foreign language that has been. For that reason, this form has been reliable and valid to apply.

**a. Background questionnaires**

The background questionnaire was designed to provide personal information from the participants. There were four items relating to personal information. These consisted of students' name, class, gender, and age. For the details, it will show in the Appendices section.

**b. Oxford's Strategy Inventory for Language Learning (SILL)**

There are two version of the SILL that are popular as widely used learning strategy questionnaire. One is for foreign language learners whose native language is English (version 5.0, 80 items). The other is for foreign learner or English as second language learners (version 7.0, 50 items). Because the participants of this study were Junior High School students, this study used SILL version 7.0 version translated in Indonesian language. In the SILL, language learning strategies grouped into six categorized of assessment: (a) memory strategies (9 items) which represent to remembering effectively, (b) cognitive strategies (14 items) which represent using mental process, (c) compensation strategies (6 items) which represent compensating

for missing knowledge, (d) metacognitive strategies (9 items) which represent organizing and evaluating the learning, (e) affective strategies (6 items) which represent managing emotion, and (f) social strategies (6 items) which represent learning with others.

**Table 3.3. Description of SILL**

Category	Number of Items	Item
Memory strategies	9	1,2,3,4,5,6,7,8,9
Cognitive strategies	14	10,11,12,13,14,15,16,17,18,19,20,21,22,23
Compensation strategies	6	24,25,26,27,28,29
Metacognitive strategies	9	30,31,32,33,34,35,36,37,38
Affective strategies	6	39,40,41,42,43,44
Social strategies	6	45,46,47,48,49,50

This questionnaire use a five-point Likert Scale (*1=tidak pernah, 2=jarang, 3=kadang-kadang, 4=sering, 5=selalu*). Students were asked to respond to each item according their honest answer. This questionnaire if the students choose answer give a value is 1=1, 2=2, 3=3, 4=4 and 5=5.

## **E. Data Collection Procedures**

The data collected from all instruments, as follow:

### **1. Observation**

In this study the writer do observation began on November 11, 2017 to November 25, 2017 was implemented to observation. The observation focused on strategies used by male and female students in learning English.

### **2. Questionnaire**

In this study the writer shared questionnaire on November 25<sup>th</sup> 2017 to December 2, 2017. First, the researcher the researcher prepares the materials. Second, the researcher gives questionnaire to students. Third, the researcher collects it back.

## **F. Technique of Data Collection**

The steps collecting data as follow:

1. Observation in class VIIIA and VIIIB.
2. Make the instruments, using questionnaire.
3. Perform the validation and reliability of questionnaire.
4. Analysing data and conclusion.

## G. Technique of Data Analysis

### 1. Mean

The mean is the average of all numbers and is sometimes called the arithmetic mean. To calculate mean, add together all of the numbers in a set and then divide the sum by the total count of numbers. The 'Mean' (Average). And the formula is

$$\bar{x} = \frac{x_1 + x_2 + x_3 + \dots + x_n}{n}$$

Explanations:

- $x$  : The mean
- $X_1$  : The first value
- $X_2$  : The second value
- $X_3$  : The third value
- $X_N$  : The last value
- $N$  : The number of value

### 2. Standard Deviation

Standard deviation is the measure of dispersion of a set of data from its mean. It measures the absolute variability of a distribution; the higher the dispersion or variability, the greater is the standard deviation and greater will be the magnitude of the deviation of the value from their mean.

$$s = \sqrt{\frac{n \sum_{i=1}^n x_i^2 - (\sum_{i=1}^n x_i)^2}{n(n-1)}}$$

S <sup>2</sup> :	Variance
S :	SD
X <sub>i</sub> :	Value x to i
$\bar{x}$ :	Mean
n :	Total of sample

### 3. Variance

The average of the squared differences from the mean. The sample variance is used in homogeneity test calculation and t test. According Sugiono, to calculate the sample variance used the formula:

$$S^2 = \frac{\sum f_i(X_i - \bar{X})^2}{n-1}$$

Explanation :

$S^2$  = Variance of sample

## H. Data Analysis Procedure

Before the questionnaire used for the research, it tried in XIA grade. Instrument processed and analysed after that. As following is analysis that use to know the suitable of research instrument:

### 1. Validity Test

Validity is a measure that shows the levels validity or the validity of an instrument. A test is said to be valid when able to measure what is about to be measured Product Moment = 5 %. The writer corrects all of the items to know whether each of them valid or not. It is counted using product moment formula:

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

Explanations:

$r_{xy}$  : Correlation coefficient between X and Y variable

N : Total of test participant

X : Score for each item

Y : Total score

(Arikunto: 2010, p.168)

**Table 3.4. The Criteria of items validity**

<b>R</b>	<b>Interpretation</b>
$0.80 < r \leq 1.00$	Very High
$0.60 < r \leq 0.79$	High
$0.40 < r \leq 0.59$	Average
$0.20 < r \leq 0.39$	Low
$0.00 < r \leq 0.19$	Very Low

## 2. Reliability Test

To test the extent to which measuring instruments can be trusted or reliable, in this study used the alpha formula because the measured data in the form of data with Likert scale. The questionnaire answer on Likert scale has gradation from very positive to very negative.

$$r_{11} = \left( \frac{n}{n-1} \right) \left( 1 - \frac{\sum \sigma_b^2}{\sigma_t^2} \right)$$

$r_{11}$  = Instrument of reliability

$\sum \sigma_b^2$  = The number of variance items

$\sigma_t^2$  = Total of variance

$n$  = Number of questions

(Arikunto: 2010, p.109)

**Table 3.5. Interpretation Table of Reliability**

<b>Points</b>	<b>Interpretation</b>
$\alpha \geq 0.9$	Excellent
$0.7 \leq \alpha < 0.9$	Good
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

### 3. Normality Test

A normality test is a statistical process used to determine if a sample or any group of data fits a standard normal distribution. This test used SPSS 22 program.

The steps to get data as follows:

- a) Open file normality.
- b) Choose *Analyze - Nonparametric Test - Legacy Dialogs – 1-Sample K-S*
- c) Input variable in *Test Variable list*
- d) On active check box on the *Test Distribution* and then choose *Normal*
- e) Click OK.

This test used SPSS 22 program. Shapiro-Wilk because there are 40 students in this study.

Normality test is also given by criteria as follows:

#### a. Hypothesis

$H_0$  : If the data is normality so there is no significance different score between male and female students on language learning strategies in learning English.

$H_a$  : if the data is not normality so there is significance different score between male and female students on language learning strategies in learning English

b. Test Criteria

If the value of probability  $> 0,05$   $H_0$  is accepted.

If the value of probability  $< 0,05$   $H_0$  is rejected

4. Homogeny test

Homogeneity test sample to determine a homogenous whether or not the variances of samples taken from the same population (Sugiyono:2012, p.275).

$$F = \frac{Vb}{Vk}$$

Notice :

$Vb$  : Bigger varian

$Vk$  : Smaller varian

Homogeneity test same on the normality test is also given by criteria as follows:

a. Hypothesis

$H_0$  : if the data has a homogeneity variation so there is no significance different score between male and female students on language learning strategies in learning English.

$H_a$  : if the data has not a homogeneity variation (not same) so there is significance different score between male and female students on language learning strategies in learning English

b. Test Criteria

If the value of probability  $> 0,05$   $H_0$  is accepted.

If the value of probability  $< 0,05$   $H_0$  is rejected

5. T-Test

This two samples T Test under comparative test. This test purposes to compare is the sample has a real comparative with other sample. The steps as follow:

$$T \text{ count} = \frac{X_1 - X_2}{\sqrt{\frac{(n_1-1)s_{12} + (n_2-1)s_{12}}{n_1+n_2-2} \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$\bar{x}_1$  = Average of sample 1

$\bar{x}_2$  = Average of sample 2

$s_1$  = SD of sample 1

$s_2$  = SD of sample 2

$s_1^2$  = Sample variance 1

$s_2^2$  = Sample variance 2

$r$  = Correlation between 2 samples

a. Hypothesis

$H_0$  : there is no significance different score between male and female students on language learning strategies in learning English.

$H_a$  : there is significance different score between male and female students on language learning strategies in learning English

b. Test Criteria

If the value of probability  $> 0,05$   $H_0$  is accepted.

If the value of probability  $< 0,05$   $H_0$  is rejected

6. U-Test

If the analyzed data are not normally distributed then the Mann-Whitney test or U test is used. According Sugiono, the U test serves as an alternative to the use of t-test if the parametric prerequisite is not met.

$$U = n_1 n_2 + \frac{n_2(n_2 + 1)}{2} - \sum_{i=n_1+1}^{n_2} R_i$$

Explanation:

U = The value of the Mann-Whitney test

N1 = Ranking 1

N2 = Ranking 2

R = Ranking size sample

If the value of probability  $> 0,05$   $H_0$  (Null Hypothesis) is accepted. And If the value of probability  $< 0,05$   $H_0$  (Null Hypothesis ) is rejected.