

CHAPTER III

RESEARCH METHODS

This chapter contains research design, population and sample, data collection, and data analysis.

3.1 Research Design

The method used in this study was quantitative method because the data dealt with number. Ary et al (2002, p.22) state that quantitative research uses objective measurement and statistical analysis of numeric data to understand and explain phenomena.

3.2 Population and Sample

According to Sugiyono (2009, p.80), population is the generalization range containing objects/subjects which have certain quality and characteristic selected by researcher to be learned, and then drawn a conclusion. In addition, sample is part of the number and characteristic of the population. In this case, the writer used proportionate stratified random sampling as Sugiyono (2009, p.82) states that proportionate stratified random sampling is used when the population has members/elements that are not homogeneous and has levels proportionately.

3.2.1 Population

The population of this research was 259 students of 11th grade at SMAN 3 Malang that were divided into 9 classes including 7 regular science classes, and 2

regular social classes. The students were male and female with the ages between 16 and 17.

3.2.2 Sample

The sample of this research was taken by proportionate stratified random sampling. The sample were 134 students of 11th grade at SMAN 3 Malang who were classified into high (24 students whose score >85), intermediate (90 students whose score between 80 and 85), and low (20 students whose score <80) level.

The significant level was 10% as Sugiyono (2009) states that the significance level of 10% means the error probability to generalize the result of the statistical analysis to the population is 90%.

3.3 Data Collection

Data in quantitative research could be collected through pencil-and-paper questionnaires, telephone or face-to-face interviews and online methods such as web-based questionnaires (Muijs, 2004, p.41).

3.3.1 Instrument

In order to collect her data, the writer used Strategy Inventory for Language Learning (SILL) questionnaire version 7.0 (ESL/EFL) by Oxford (1990) as the instrument which is designed for second or foreign language learners while the other version is for native English speakers. The questionnaire was valid and reliable as Oxford (1990, p.199) states that the questionnaire had been extensively field-tasted, demonstrated to be highly valid and reliable, and used for both research and classroom practice.

Mills & Plonsky (2007, cited in Lee, 2010, p.133) state that SILL is the most influential instrument in the area of language learning strategies and lays out the most exhaustive hierarchy of language learning to date. The questionnaire was multiple choice questions which consist of 50 items subdivided into 6 categories of language learning. They were memory strategies consisting of 9 items, cognitive strategies consisting of 14 items, compensation strategies consisting of 6 items, metacognitive strategies consisting of 9 items, affective strategies consisting of 6 items, and social strategies consisting of 6 items. The answer ranges from 1 (never or almost never true of me) to 5 (always or always true of me). Here, the participants only needed to circle the number from 1 to 5. The other instrument was English score to measure the students' English proficiency.

3.3.2 Procedure of Data Collection

Before collecting the data, the writer translated the SILL questionnaire which was written in English to Bahasa Indonesia to avoid some misunderstanding and misinterpretation. Then, the writer checked the appropriate translation to the thesis supervisor. After the questionnaire had the appropriate translation, it was piloted to 5 students of 11 grade at SMAN 3 Malang to make sure that the SILL questionnaire could be understood and acceptable by the students.

To collect the data, the writer used these following steps:

1. Asking the students' English score of the 1st semester to the teachers from each class of 11th grade at SMAN 3 Malang

2. Classifying the students from each class into 3 different levels of English proficiency those are high, intermediate and low based on the English score of the 1st semester.
3. Giving the questionnaire to participants in each class of 11th grade students of SMAN 3 Malang and asking the participants to fill in the questionnaire in 30 minutes.

3.4 Data Analysis

After having the questionnaire answered, the writer put all the data into *Statistical Product for Service Solutions* (SPSS) software 16 for windows. Then, the data was calculated using *Cronbach Alpha* and the result score was 913 meaning that the data had been valid and reliable so that the data could be conducted by using these following steps:

1. Calculating the scores of every part of SILL questionnaire to find out the mean score
2. Classifying the mean score to the scoring description based on Oxford (1990) shown in table below:

Table 3.1 Scoring Description SILL version 7.0 (ESL/EFL) Oxford, 1990.

1	High level	Always or almost always used	4.5 to 5.0
		Usually used	3.5 to 4.4
2	Medium level	Sometimes used	2.5 to 3.4
		Generally not used	1.5 to 2.4
3	Low level	Never or almost never used	1.0 to 1.4

3. Calculating the data using descriptive statistic analysis to investigate how language learning strategy used by high, intermediate and low English proficiency students
4. Calculating the data using One Way ANOVA to investigate the significance difference among high, intermediate, and low English proficiency students
5. Calculating the data using *Pearson Product Moment Correlation* to find out the correlation between English proficiency and language learning strategies
6. Interpreting the results of correlation based on Pearson's correlation (r) that the coefficient of correlation can range in value from +1.00 indicates a high positive correlation, value 0 indicates there is no correlation, and value close to -1.00 indicates a high negative correlation.

The statement above is explained in the table below:

Table 3.2 Guidelines of Correlation Coefficient Interpretation (Sarjono, H & Julianita, W, 2011, p.90)

No	Coefficient Interval	Correlation Level
1	0.80 - 1.000	Very high
2	0.60 - 0.799	High
3	0.40 - 0.599	Sufficient
4	0.20 - 0.399	Low
5	0.00 - 0.199	Very low

7. Drawing a conclusion by reviewing descriptive statistics, significance difference, and the correlation related to language learning strategies used by high, intermediate, and low English proficiency students of 11th grade at SMAN 3 Malang.