CHAPTER III

RESEARCH METHODOLOGY

This chapter is allotted to describe that have been taken to conduct this study. The descriptions below involve: (1) Research Design, (2) Data Collection, (3) Data Analysis, (4) Validity and Reliability, and (5) Ethical Consideration.

3.1. Research Design

This study is a descriptive quantitative study which is intended to describe the language learning strategies employed by male and female college students. A descriptive study is the exploration and description of phenomena in real-life situation; it provides an accurate account of characteristics of particular individuals, situations, or groups (Kerlinger & Lee, 1999, cited in Burns & Grove: 2003). Through descriptive studies, the descriptions of what exists, the frequency which something occurs, and category of information can be revealed.

3.2. Data Collection

3.2.1. Population and Sample

One of the important things in conducting a study is participants. In quantitative study, the participants are taken from the population. Creswell (2008) states that population is a group of individuals who have the similar trait. The college students of Department of English Education were chosen as the population of this study. Furthermore, the large amounts of individuals in that

population, then, were selected to represent the sample for this study. In line with this, the simple random sampling was used as the technique to gather the sample in this study. The simple random sampling, according to Gall, Gall, and Borg (2003), is the technique of selecting sample where the individuals of the population are considered to have an equal and independent chance of being selected as a member of the sample. Thus, this study was employed 100 college students as the sample to support this study.

3.2.2. Data Collection Instrument

This study used questionnaire as the instrument in collecting the data. The questionnaire employed for this study was the Strategy Inventory Language Learning (SILL) by Oxford (1990). The SILL was the first instrument designed for assessing the frequency of the use of language learning strategies. The version 7.0 of SILL was chosen for this study since there were two versions of SILL designed by Oxford. The first design was aimed to assess the learners' language strategies of foreign language whose native language is English, while the second one was designed for the learners of English as second or foreign language (ESL/EFL). Furthermore, within the last 10 to 15 years, the SILL appears to be the only one language learning strategy instrument that has been continuously checked for reliability and validated in multiple ways (Oxford and Burry-Stock, 1995, cited in Chang, Liu, Lee, and Mian: 2007).

The version 7.0 of SILL contains of 50 items which represent the six language learning strategies proposed by Oxford (1990). Below is the matrix of the SILL by Oxford (1990).

Tabel 3.1 Framework of SILL Questionnaire

Content	Item Number	Amount
Memory Strategy	1 – 9	9
Cognitive Strategy	10 – 23	14
Compensation Strategy	24 – 29	6
Metacognitive Strategy	30 – 38	9
Affective Strategy	39 – 44	6
Social Strategy	45 – 50	6
Total		**50 items**

Meanwhile, the 50 SILL items are scored into five-point Likert Scale ranging from 1 to 5. Below is the description of each score.

Table 3.2 Scoring system of SILL questionnaire

Statement	Scoring
Always or almost always true of me	5
Generally true of me	4
Somewhat true of me	3
Generally not true of me	2
Never or almost never true of me	1

3.3. Data Analysis

The large amount of data collected from the data collection process is continuously analyzed. The Statistical Package for the Social Science (SPSS) is used to complete the analysis of the data collected data. Descriptive statistics, including frequencies, means, standard deviations and percentages, are applied in order to investigate the data, and the use of language learning strategies. Meanwhile, the *t*-test is applied to examine the relationships between gender

differences and the use of language learning strategies. This computation is used to test the hypothesis presented in chapter 1. Below is the description of *t*-test formula.

$$t_{obt} = \frac{M_1 - M_2}{\sigma_{M_{1-M_2}}}$$

$$\sigma_{M_{1-M_2}} = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_{2p}^2}{N_2}}$$

$$\sigma_p^2 = \frac{(N_1 - 1)\sigma_1^2 + (N_2 - 1)\sigma_2^2}{N_1 + N_2 - 1}$$

Where:

t_{obt} = the value of t obtained through the data

N_1 , N_2= the number of subjects in each of the two groups

σ_1^2 , σ_{2p}^2= the estimates of the variances of the two populations

M_1, M_2 = the means of the two groups

(Kranzler & Moursund, 1999)

3.4. Validity and Reliability

3.5. Validity

In order to gain a good result of a study, the data collected should be make sense, meaningful, and enable the researcher to draw good conclusions from the sample of the population (Creswell: 2008). However, constructing validity process was no longer used for this study since the SILL questionnaire appears to be the only one language learning strategy instrument that has been continuously

checked for its validty in multiple ways (Oxford and Burry-Stock, 1995, cited in Chang, Liu, Lee, and Mian: 2007).

3.6. Reliability

Aside from validity test, the data collected must also reliable, because according to Creswell (2008), a goal of good study is to measures the data which are reliable. This study applied Cronbach alpha to test the reliability of the data collected. Below is the description of the formula.

$$r = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma^2}{\sigma_t}\right]$$

where:

k = number of items considered

$\sum \sigma^2$ = total of item variance

σ_t = total variances

(Gliem & Gliem, 2003)

3.7. Ethical Consideration

In educational research where the study involves human participants, some considerations should be emphasized to minimize unexpected result. Since this study use questionnaire as the instrument, the initial name of each participant was not stated in this study. The participants of this study were only labeled by male or female term.