

CHAPTER III

RESEARCH DESIGN

This chapter explains the methodology of the study. It covers the research design, participants, and data collection techniques.

3.1 Research Design

This study is a quantitative type of research. According to Creswell (2014) quantitative research related to collecting, analyzing, and identifying samples. In the measurement of quantitative variables, the use of the instrument is very influential to collect data information (Creswell, 2002). So in the quantitative design, these variables can be measured, especially with instruments, so that numeric data can be examined using statistical analysis. Survey research has one example of quantitative approach provided a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population (Creswell, 2009). Widoyoko (2012) said that quantitative data is the data in the form of numbers as a result of observation or measurement.

This research is designed to know the strategies of language learning which is used by freshmen in a public secondary school in Yogyakarta. This research particularly uses survey as the research method. A survey research concerns about the data collection from a sample which taken from the population

by way of the use a questionnaire (Visser et al, 2014). So that survey is used as a research method for collecting data and describing certain aspects or characteristics of the population.

Furthermore, this study focuses on surveys which are, to measure students' mindsets in a population, employs numerical descriptions, in order to study samples from that population (Sugiyono, 2010). Conditions that must be in the survey research that is in the selection of samples, determine the required sample size, and consideration in the selection of appropriate survey media (Glasgow, 2005).

3.2 Population and Sample

3.2.1 Population

The population is an assembly of several samples. Sugiyono (2005) stated that Population is a generalization region consisting of objects or subjects that have certain qualities and characteristics established by researchers to be studied and then drawn conclusions. So the population defines as a certain group of things or people chosen by the researcher whose research results can be generalized to the group.

The population of this research consists of 147 students from grade X in a public secondary school in Yogyakarta, from 5 English classes. The researcher chose grade X students because Grade X students are students who

are in transition from junior high school, so they tend to use various language learning strategies when they learn in the class.

3.2.2 Grade X Students

This public secondary school has been accredited by BAN-PT with accreditation A and it is one of the best schools in Yogyakarta. It means that this school already has program feasibility, and has fulfilled certain service standards set by the government. English is one of the subjects in a public secondary school in Yogyakarta. The English Classes will be used as the population of this study. The researcher has selected the participants who are presently in Grade X students. There are 5 classes of Grade X in the school, that are X IPA 1, X IPA 2, X IPA 3, X IPA 5, and X IPS. The Grade X students were chosen by the researcher because grade X students are students who are in transition from junior high school, therefore their learning strategies while learning English in senior high school will be different when they were in junior high school. Grade X students need to adapt in learning foreign language process in the Senior High School because it is different with the learning process while in Junior High School and they did not know about the importance of language learning strategies. In addition, the researcher wants to know the language learning strategies used by grade X students in learning English.

3.2.3 Sample

According to Arikunto (2006), sample and population-related each other which had same characteristics. Another statement from Arikunto (2006), a significant difference of sample and population is on the number of the population gained. If the population was less than 100, then all the populations can be sampled but if the population is over 100, the researcher can take 10% up to 15% or 20% up to 25% or more from all the population as a sample. The sample of this research consisted of 108 students from grade X. In this study, the population will take up more than 100 participants, thus it is a big-scale population.

This is the table for the sampling of participants in grade X in a public secondary school in Yogyakarta.

Table 2. Population and Sample

NO	MAJORS	POPULATION	SAMPLE
1.	Grade X students	147	108

This study uses the Slovin formula to calculate the number of samples from the population. Slovin formula as follows:

$$n = \frac{N}{1 + Ne^2}$$

Explanation:

n = Number of sample

N = Population

e = Error rate (5% = 0.05)

The bigger the number of the error rate, the lesser number of sample size. the number of population for this research is 147 students. With the calculation above, thus the results as follows:

$$n = \frac{147}{1+(147)(0.05^2)}$$

$$n = \frac{147}{1.36}$$

$$n = 108.08 \text{ or } 108 \text{ students}$$

The level of confidence in this research is 99% and the margin of error is 5%. It means that the sample is considerable enough to represent the whole population.). Thus, the level of confidence taken by the researcher is to have a low sample based on population.

3.3 Data Collecting Techniques

This part describes data collection techniques which are instrument, validity, and reliability.

3.3.1 Instrument

This section explains the technique of data collection using the instrument to gain result of research. According to Arikunto (2006), the instrument is a tool or facility in collecting data in a systematic study that used by the researchers that aim to make research easier, complete and achieve valid results so it is more easily processed. The instrument that used by the researcher is:

3.3.1.1 Questionnaire

The questionnaire is a self-report data collection instrument filled out by research respondents. In other words, the researcher tries to quantify various kinds of characteristics using questionnaires. In this study, the researcher adopts Strategies of Inventory Language Learning (SILL) version 7.0 questionnaire as the main instrument in data retrieval. This study focuses on the student's language learning strategies. Strategy Inventory of Language Learning (SILL), a self-scoring questionnaire, is an instrument developed by Oxford (1990) in her book entitled "Language Learning Strategies: What every teacher should know". This questionnaire is adopted by the researcher

and translated into Bahasa Indonesia. The 5-point Likert scale was then employed to rate the questions ranging from "Strongly Agree" to "Strongly Disagree". The version 7.0 of SILL contains of 50 items and characterized into six subscales: a) memory strategies (item 1 to 9), b) cognitive strategies (items 10 to 23), c) compensation strategies (items 24 to 29), d) metacognitive strategies (items 30 to 38), e) affective strategies (items 39 to 44), and f) social strategies (items 45 to 50).

3.3.2 Validity and Reliability of the Instrument

3.3.2.1 Validity

According to Brown, (1996), there are two methods to measure the validity in quantitative research that is content validity and construct validity. This instrument was consulted continuously with the thesis supervisor and considered valid, also based on its extensive use in the previous studies. In which, this questionnaire is already used by many experts and researchers around the world. According to Sukardi (2007), the level of data validity is measured from the extent to which the accuracy of data taken from quantitative studies. An instrument is called valid if the instrument is measured accurately and in accordance with expectations.

The researchers used Strategies of Inventory Language Learning (SILL) questionnaire as the main instrument in data retrieval in this study.

3.3.2.2 Reliability

Validity and reliability are interrelated techniques. According to Heale and Twycross (2015) reliability relate with the consistency of a measure. This means that the instrument is reliable when generating the same data more than once when used on different participants. In addition, questionnaires from Strategy Inventory of Language Learning (SILL) will be presented in Bahasa Indonesia, which sums up the authenticity of direct questions from SILL without any word changing. The reliability for this instrument was analyzed by using SPSS V.22 and the result showed the value is .92. It considered being valid based on Widoyoko (2017).

Table 3. Reliability

Reliability Statistics

Cronbach's Alpha	N of Items
.921	50

3.3.3 Steps of Data Collecting Techniques

By applying survey research, this study uses questionnaires to collect the overall students' language learning strategies. The researcher follows these steps of data collection techniques:

- a. The researcher will translate 50 items of SILL version 7.0 into Bahasa Indonesia

- b. The researcher will check the items periodically in the questionnaire to make sure it is easy to understand and semantically valid by consultation with the thesis supervisor
- c. The researcher will distribute questionnaires to the respondents
- d. The researcher will explain to the students-respondents how to complete the questionnaire (the students were allowed raise their hands if they have any questions about the items)
- e. The researcher will ask the student-respondents to complete a translated Indonesian version of a 50 items SILL (Strategy Inventory of Language Learning)

The questionnaires will be distributed to X grade students in SMA N 3 Yogyakarta on September 20, 2019, by requesting permission from the supervisors. The survey of Language learning strategies can be distributed individually. The total time is approximately 20 minutes for students to complete the questioner from SILL, plus about 5 minutes for the students to fill out the worksheet and the profile. As an opening, the researcher explains in advance the purpose of data retrieval. After that, the researcher guides respondents on how to use and fill the questionnaire. Then, the researcher directs the respondents to read the sample questions before entering the real question by using the Likert 5-point scale.

3.4 Data Analysis Technique

3.4.1 Data Indicator

This research showed a specific measurement to answer the research questions.

1. Questionnaire SILL (Strategy Inventory for Language Learning)

Scoring of SILL is quite easy, the manual step can be done by using Microsoft Excel. The researcher inputs the data from respondents manually into Microsoft Excel. After the data collected, the researcher determines the standard deviation (SD) and Mean by using the formula =STDEVA and =AVERAGE. After getting the results, the researcher found the highest strategies and the lowest in language learning.

3.4.2 Steps of Data Analysis Techniques

The steps in analyzing the data in this study are as followed.

- a. The researcher finalizes the literature review about language learning strategies.
- b. The Strategy Inventory of Language Learning (SILL) questionnaire is adopted as an instrument by translated the English question SILL items in Bahasa Indonesia.

c. The researcher analyzes the data using Microsoft Excel to measure the level of student's language learning strategies by analyzing SUM formula, MEAN and SD, also to calculating the amount data received and make into chart form.

d. After the data collected, the researcher determines the standard deviation (SD) and Mean by using the formula =STDEVA and =AVERAGE for overall respondents.

