

CHAPTER III

RESEARCH METHOD

A. Research Design

Research design refers to the schema or plan that constitutes the entire research study.¹ There are two kinds of research design/method; they are qualitative and quantitative research. Quantitative research is the research which is based on positivism philosophy in which is used for observing certain populations or sampling. The technique to get sample is usually done randomly, collecting data commonly uses instrument and data analysis using statistical approach to examine a hypothesis. While Qualitative approach is research method which is based on post-positivism philosophy, it is used to observe natural object where researcher is the instrument key.² Quantitative research generates statistics through the use of large scale survey research, using methods such as questionnaires or structured interviews.³

Comparative research is a descriptive study that compares between two or more situation, phenomenon, activity and others which are same or similar, and then it is shown to find the

¹ David Scott and Marlene Morrison, *Key Ideas in Educational Research*, (London: Continuum International Publishing Group, 2006), p.58

² Sugiyono, *Metode Penelitian Pendidikan*, (Bandung: Alfabeta Press, 2008), p.15.

³ Catherine Dawson, *Introduction to Research Methods*, (Begbroke: How To Books, 2009), p.15

similarity or difference.⁴ The purpose of this research is to compare between students of Arabic Department of Tarbiyah Faculty in IAIN Walisongo Semarang that are graduated from modern and traditional *pesantren* in achievement of English I class.

Characteristics of quantitative research according to Zoltán Dörnyei are as follow:

1. Using Numbers

The single most important feature of quantitative research is, naturally, that is centered on numbers. This both opens up a range of possibilities and sets some limitations for researchers.

2. A Priori Categorization

Because the use of number already dominates the data collection phase, the work required to specify the categories and values needs to be done *prior to* the actual study. If, for example, respondents are asked to encircle figures in a questionnaire item, they have to know exactly what those figures represent, and in order to make sure that each respondent gives their numerical answer based on the same understanding, the definition and value descriptors need to be unambiguous.

⁴ Nana Syaodih Sukmadinata, *Metode Penelitian*, (Bandung: PT Remaja Rosdakarya, 2006), p.79

b. To determine standard of deviation of each variable

$$SD^2 = \frac{\sum x^2}{n} - M_x^2$$

c. To determine standard of deviation of mean for each variable

$$SD^2 M_x = \frac{SD^2 X}{n - 1}$$

d. To determine standard of deviation of both mean variable

$$SD_{bm} = \sqrt{SD^2 M_x + SD^2 M_y}$$

e. To determine t_{test}

$$t = \frac{M_x - M_y}{SD_{bm}}$$

f. To measure degree of freedom by $dk = n_1 + n_2 - 2$

g. To check the criteria T_{table} with significant degree 5 %

h. To get conclusion

The criteria H_0 is $t < t_{1-\alpha}$

Alternative hypothesis is acceptable, so is H_a .
So, the conclusion is: the students from modern *pesantren* have better ability than students from traditional *pesantren* in attending English I class.

If H_0 is acceptable, alternative hypothesis is unacceptable. So, the conclusion is: the students from modern *pesantren* don't have better ability than students from traditional *pesantren*.

system in their *pesantren*, etc. By this way, it can prove that the researcher has done the investigation therefore.

F. Data Analysis Technique

After collecting the data, the researcher then analyzed them by some steps:²⁰

1. Preparation

The researcher checked all of completeness data to make sure that no data being left by following activities:

- a. Checking list of students and identity completeness.
- b. Checking instrument in this case is test sheets.
- c. Checking all of answered questions of the test.

2. Tabulation of the data

They are:

- a. Giving score on multiple choice test.
- b. Changing interval data to ordinal data by making stage.

3. Assembling

After major data have been collected, comparative analysis was done by taking following steps:²¹

- a. To determine mean of each variable

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

²⁰ Suharsimi Arikunto, *Prosedur Penelitian, Suatu Pendekatan Praktek*, p.235 - 240

²¹ About the formulas, see: Tulus Winarsunu, *Statistik dalam Penelitian Psikologi dan Pendidikan*, (Malang, UMM Press, 2007)

3. Variables Rather Than Cases

Quantitative researchers are less interested in individuals than in the common features of group of people. Therefore, in contrast to the qualitative emphasis on the individual case, quantitative research is centered around the study of *variables* that capture these common features and which are quantified by counting, scaling, or by assigning values to categorical data. All the various quantitative methods are aimed at identifying the relationships between variables by measuring them and often also manipulating them.

4. Statistics And The Language Of Statistics

Because of the close link of quantitative research and statistics, much of the statistical terminology has become part of the quantitative vocabulary, and the resulting unique quantitative language adds further power to the quantitative paradigm.

5. Standardized Procedures To Access Objective Reality

Quantitative methodology has indeed gone a long way toward standardizing research procedures to ensure that they remain stable across investigators and subjects.⁵

⁵ Zoltán Dörnyei, *Research Method in Applied Linguistics*, (Shanghai: Oxford University Press, 2009), p.32-34

6. Quest For Generalizability And Universal Law

Numbers, variables, standardized procedures, statistics, and scientific reasoning are all part of the ultimate quantitative quest for facts that are generalizable beyond the particular and add up to wide-ranging, ideally universal, laws.⁶

These are the Strengths and Weaknesses of quantitative research based on Zoltán:⁷

1. Strengths

- a. Quantitative proponents usually emphasize that at its best the quantitative inquiry is systematic, rigorous, focused, and tightly controlled, involving precise measurement and producing reliable and replicable data that is generalizable to other context.
- b. The research process is relatively quick and offers good value for money, particularly because the data analysis can be done using statistical computer software.
- c. Quantitative findings tend to enjoy a universally high reputation with almost any audience or stakeholder group.

2. Weaknesses

- a. By working with concepts of averages it is impossible to do justice to the subjective variety of an individual life.

⁶ Zoltán Dörnyei, *Research Method in Applied Linguistics*, (Shanghai: Oxford University Press, 2009), p.32-34

⁷ Zoltán Dörnyei, *Research Method in Applied Linguistics*, p.34-35

2. Interview

Interview occurs when there is a meeting between two persons to exchange the information and ideas through question and answer.¹⁸ According to Denzin (1970) “an interview is any face-to-face conversational exchange where one person elicits information from another”.¹⁹ Shortly, interview is a technique of data collection by asking question to the respondents.

Interview is done to get data that needed in this research. The data is got from the students both from modern *pesantren* and traditional *pesantren*.

3. Documentation

In collecting data, the researcher used documentation study. Document study may refer to technique of collecting data by gathering and analyzing documents. While document is any communicable material (such as text, video, audio, etc) used to explain some attributes of an object, systems or procedure.

The researcher collected data by searching them in actual form. Documentations that were used in this research are students' name list, profile of *pesantren*, educational

¹⁸ Beni Ahmad Saebani, *Metode Penelitian*, (Bandung: Pustaka Setia, 2008), p.190

¹⁹ James A. Black and Dean J. Champion, *Methods and Issues in Social Research*, (U.S.A.: John Wiley & Sons, Inc, 1976), p.354

- a. Less Motivation.
- b. Consolidation.
- c. Difficulty.
- d. High Complexity.
- e. Interest.
- f. Inappropriate Teacher Method.¹⁶

E. Data Collection Technique

There are many techniques which can be used to collect data either primary or supporting data. According to Suharsimi Arikunto, there are five methods in data collection; interview, observation, test, questionnaire, and documentation.¹⁷ However, in this research the researcher used four of them namely observation, test, interview and documentation which are explained as follow:

1. Test

In this research, the researcher used an achievement test to measure the students ability in attending English I class.

It is useful to collect the main data of English ability in English achievement in English I class. The results of this technique would be analyzed later.

divides them into several with appropriate way without any reduction of the theoretical framework.

¹⁶ Inappropriate Teacher Method here deals with English student work sheet features (material summary form & multiple choice questions form) and classroom environment.

¹⁷ Suharsimi Arikunto, *Prosedur Penelitian, Suatu Pendekatan Praktek*, p.149 - 150

- b. Similar scores can result from quite different underlying process.
- c. Quantitative methods are generally not very sensitive in uncovering the reasons for particular observations.
- d. The general exploratory capacity of quantitative research is rather limited.
- e. Quantitative research as 'overly simplistic, decontextualized, reductionist in terms of its generalizations.

B. Research Setting

This research was conducted at English I class of Arabic Department of Tarbiyah Faculty of IAIN Walisongo Semarang in the academic year of 2011/2012.

C. Population and Sample

1. Population

The population is the group of people the researchers want to generalize to.⁸ The population in this research is all the students of Arabic Department of Tarbiyah Faculty of IAIN Walisongo Semarang academic year of 2011/2012. There are two classes. A class and B class. A class consists of 36 students and B class consists of 37 students.

⁸ Daniel Muijs, *Doing Quantitative Research in Education with SPSS*, (London: SAGE Publications Ltd, 2004), p.15

2. Sample

Sample is part of population, which is determined to participate on the research.⁹ Who or what is included in the sample dependent upon the core research problem and the methodological approach taken.¹⁰ The researcher determined 20 students of A class and B class as sample. 10 students from modern *pasantren* and 10 students from traditional *pasantren*.

3. Sampling Technique

Sampling technique is part of statistics methodology that deals with a portion of population acquisition. If the sample analyzed by appropriate method, the statistics analysis of a sample can be used to generalize entire population.¹¹ The researcher employed stratified random sampling. By this way, the population was divided to strata (sub population), then sample collection is done in each stratum, either simple random sampling or systematic random sampling.¹²

As in previous pages, comparative research is a descriptive study that compares between two or more situation, phenomenon, activity and others. Thus, this research uses

⁹ Suharsimi Arikunto, *Prosedur Penelitian, Suatu Pendekatan Praktek*, (Jakarta: PT Rineka Cipta, 2006), p.131

¹⁰ David Scott and Marlene Morrison, *Key Ideas in Educational Research*, p.219

¹¹ *Teknik Sampling*, http://id.wikipedia.org/wiki/Teknik_sampling, retrieved on 24th August 2011.

¹² Rozaini Nasution, *Teknik Sampling*, (Fakultas Kesehatan Masyarakat Universitas Sumatera Utara, USU digital library, 2003), p.3

descriptive quantitative approach where the data are presented in verbal words and numeral.

D. Variable and Indicator

1. Variable

Matheson, Bruce, & Beauchamp stated that a variable is a phenomenon that varies along some quantitative measure.¹³ A variable therefore is defined as any attribute of a person or unit that can vary in its value.¹⁴ In this case, the researcher wants to focus on the English ability in English achievement as a main variable.

The variable of this research is English ability in English achievement in English I class. It is the English ability in English achievement in English I class of students graduate from modern *pasantren* as variable X, the English ability in English achievement in English I class of students graduate from traditional *pasantren* as variable Y.

2. Indicators

The indicators which are used in this research that regarding with the achievement of English I class can be classified as follow:¹⁵

¹³ Ennio Cipani, *Practical Research Methods for Educators*, (New York: Springer Publishing Company, 2009), p.3

¹⁴ David Scott and Marlene Morrison, *Key Ideas in Educational Research*, p.258

¹⁵ The indicators are based on crucial things that influence students in English achievement. These are taken from chapter 2 that the researcher