CHAPTER III

RESEARCH METHOD

This part of study deals with research methodology which is designed as technique to collect and analyze the data.

A. Research Design

This study is classified as quantitative in nature because the data of this research is using numerical data and using statistic to analyze it. A quantitative research is a kind research that employs statistical procedures.[44] In others term quantitative research is 'Explaining phenomena by collecting numerical data that are analyzed using mathematically based methods (in particular statistics).[45] Therefore, as quantitative research is essentially about collecting numerical data to explain a particular phenomenon, particular questions seem immediately suited to being answered using quantitative methods.

The design of this research is correlation. According to Ary, Jacobs, and Sorenses's statement that correlation research produces indexes that show the direction and the strength of relationship among variables[46]. In addition,

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[44] Anifatun Nikmah, S1 thesis "*Correlation between students' performance in conversation and their English achievement in regular English at SMPN 1 Balongbendo*". (Surabaya: IAIN press, 2010)
[45]Sugiyono, *Metode Penelitian Pendidikan*. (Bandung; ALFABETA), 2012
[46] ibid

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Creswell states that "correlation design provide an opportunity for you to predict score and explain the relationship among variables. It was useful to describe and find out any significance correlation between two variables, the X and the Y variables. The research was aimed to find any significant relationship between optimism and students' speaking achievement. Therefore the correlation of research design suited the purpose of research.

In this research, the researcher used Pearson product Moment to analyze the relationship between optimism and students speaking achievement. Ary, Jacob, and Sorensen state that "a very useful statistic, the Pearson Product Moment correlation coefficient (Pearson r), indicates both the direction and the magnitude of the relationship between two variables[47]. So, the correlation between two variables will be known by using the Pearson Product Moment.

The first variable is the optimism; it is considered as independent variable (variable X). Then the second variable is the students' speaking achievement which is taken from the document, it is considered as dependent variable (variable Y).

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[47] Ibid

B. Population and Sample

1. Population

Population defines as the total number of research subject. Population can also define as the case collection which required some requirements which related to research problem.[48]

The population of this study was the student of second semester of speaking class of State Islamic University Sunan Ampel Surabaya. The consideration in choosing the population is because the researcher is going to examine the relationship of optimism of first-year student in the speaking class.

In the second semester of English Education Department there are 116 students. In this research the population took are they who qualified to be subject of research, because there are 3 students that not fulfill the final examination score. So that the population of this research is 113 students which derived from speaking class on second semester.

2. Sample

Sample is the part from amount and characteristic of population. Suharsimi Arikunto in his book state that if the subject is less from one hundred, better for the researcher to take all part of population, so the research

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[48] Mardalis, *Metode Penelitian Pendekatan Proposal* (Jakarta: Bumi Aksara, 1995), 53

is population research. Then, if the subject is amount of a hundred or more, it can be taken 10% - 15% or 20% -25% or more.[49] But in this research the researcher did not use this technique to determine the total of samples.

In this research, the researcher took 53 samples from 113 populations. The way to take the sample, the researcher use *Slovin* formula, as follows:

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

Where:

n = jumlah sample

N = jumlah population

e = error tolerance

In this research, the researcher has 113 population, and use error tolerance 10%.

$$n = \frac{113}{1+113\,(0,1)^2}$$

$$n = \frac{113}{2,13}$$

n = 53 students

The speaking class taught by two lecturers, Mr. Sigit Purnomo Jati and Mr. Hanafi. A and B class by Mr Sigit with the amount of 45students and C and D class by Mr Hanafi with amount of 68 students.

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[49] Suharsimi Arikunto. *Prosedur Penelitian Suatu Pendekatan Praktik*. (Jakarta: Rineka Cipta. 2010),134.

To define the proportional sample the researcher took data as follow from each class by the classification of the lecturer. So, from this way the researcher takes 53 students as the sample. Based on Slovin form, the researcher took the sample as follows by using proportionate stratified random sampling.

Class A and B = $\frac{45}{113}$ x 53 = 21 students

Class C and D = $\frac{68}{113}$ x 53 = 32 students

The exact number of the samples of each class determined by proportionate stratified random sampling as follows:

Class A = $\frac{29}{45}$ x 21 = 14 students

Class B = $\frac{16}{45}$ x 21 = 7 students

Class C = $\frac{35}{68}$ x 32 = 16 students

Class D = $\frac{33}{68}$ x 32 = 16 students

Proportionate stratified random sampling is technique sampling to take heterogenic population.[50] The consideration to take this technique is because there two lecturer that taught these four classes, so it consider to have different treatment of each class. In this research, to determine the students that chosen to be samples the researcher use lottery of the name.

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[50] Prof. Dr. Sugiyono, *Metode Penelitian Kuantitatif, Kulaitatif dan R & D,* (Bandung: ALFABETA, 2010),82

C. Research Setting

This research was conducted in class of speaking in the second semester of University of Sunan Ampel Surabaya academic year 2015-2016. The students are from heterogeneous background. The researcher chooses them because they are included to the first year-student of University of Sunan Ampel Surabaya.

D. Research variable

Variable is the object of research or the focus of the study. There were two variables in the study, they are:

1. Independent variable

It is a variable that will be studied its relation or influences toward other certain variable that becomes main discussion. The independent variable of this study is optimism.

2. Dependent variable

It is the main study that will be examined its condition by studying its relation with other variable. It is the variable that the results are influenced by the independent variable. The dependent variable here is students' speaking achievement.

E. Research instrument

According to Arikunto, Research instrument is tools or facilities that are used by the researcher in order to collect data. By using this tools can make the job easier, complete, and systematic.[51]

The instruments used in this research are:

a. Questionnaire

Questionnaire is data collection technique which given a set questions or written explanation in order to answer with respondent[52]. There are many advantages of questioner are:[53]

1. The researcher is not necessarily present in front of the respondent

2. It can be shared directly to many respondent

3. It can be answered be the respondents as fast as their own and depended on their part time.

4. It can be anonymous so respondents will feel free, honest and confident to answer

5. It can be standardized in similar question for all respondents.

b. Documentation

Documents are "A readily source of data in research as many already exist in the institutional system."[54] In this study, the

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[51] Ibid, 149.

[52] Prof. Dr. Sugiyono, *Metode Penelitian Kuantitatif, Kulaitatif dan R & D, (*Bandung: ALFABETA, 2010) p.142

[53] Suharsimi Arikunto, Op. Cit 10

documentation data is taken from the lecturer data of students' speaking result in the second semester. The data is required to know the correlation between students' optimism and their speaking achievement in one semester.

F. Data Collection Technique

To obtain the valid data, the writer used kinds of data collection. For conducting the research, in collecting data the writer uses some technique.

a. Questionnaire

This technique is used to know students' optimism in speaking English; Students got some question about their optimism that has been made by researcher. The questionnaire that was used in this research had been developed based on Selligmans' theory on his book entitled Learned Optimism. The questionnaire of optimism consists of 22 items of statement in multiple choice forms and had 5 options for each indicator that was divided into two kinds of items: the favorable items and the unfavorable items. The technique of scoring optimism for each item used Likert scale.

The questionnaire consisted of 22 items of statement. The distribution of the question in questionnaire could be seen in the table below:

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[54] Anne Burns. *Collaborative action research for English Language Teachers* (Cambridge: Cambridge University Press, 1999), p.140

Table 3.1 Blue print of optimism questionnaire indicator

Dimension (Aspect of Optimism)	Indicator	Favorable	Unfavorable
Permanence: a. Permanence b. Temporary	a. Believe that the cause of good thing is permanent b. Believe that the cause of bad thing is temporary	3 (1,14, 17) 2 (13, 22)	3 (4, 18, 19) 1 (16)
Pervasiveness: a. universal b. spesific	a. The optimist believes that bad events have specific causes, while good events will enhance everything he does. b. The optimists who experience the bad event will have specific explanation that the bad event is caused of the specific cause and will never dilating to other event.	2 (2, 3) 3 (8, 9, 15)	2 (11) 2 (5, 10)
Personalization: a. internal b. eksternal	a. Believe that an event is caused by internal factor. b. Believe that an event is caused by external factor.	1 (7)	2 (6, 12,) 2 (20, 21)
Total		11	11

The technique of scoring optimism used Likert scale. The procedure of scoring favorable items of optimism test was given as follow:[55]

Option: SA (strongly agree)   = 5

              S (agree)   = 4

              N (neutral)   = 3

              D (Disagree)   = 2

              SD (strongly disagree) = 1

The procedure of scoring unfavorable items of optimism was given as follow:

Option: SA (strongly agree)   = 1

              S (agree)   = 2

              N (neutral)   = 3

              D (Disagree)   = 4

              SD (strongly disagree) = 5

Then the researcher categorized the samples into three category grade of students' optimism in the speaking class, which was high, moderate, and low. The way to get the first dominant optimism was looked for mean score

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[55] Sugiyono,"*Metode Penelitian Kuantitatif Kualitatif dan R&D",* (Bandung: Alfabeta, 2001), 94

(M) and standard deviation (SD). To determine mean and standard deviation the researcher used SPSS 21. Then mean and standard deviation score were applied to this form. The form was derived from saifuddin azwar *Penyusunan Skala Psikologi*, that cited by Muharnia Dewi in her thesis[56]. The form of optimism category as follows:

Table 3.2 The Form of Categorization of Optimism

Category		Interval	Frequency	%
High	$\geq M + 1SD$			
Moderate	$M - 1SD < X < M + 1SD$			
Low	$\leq M - 1SD$			
Total				

Description: M = Mean

                SD = Standard Deviation

                1 = Constant number

b. Documentation

This technique used for collecting the students' score as a comparison with the result of questioner. Then writer can know the result of the research. In this study writer took students' rapport or the result of their English test at the class in order to compare the result of questionnaire. From this data we know the correlation itself.

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[56]Muharnia Dewi A, Undergraduate Thesis: "*Hubungan Self-esteem dengan Optimisme Meraih Kesuksesan Karir pada Mahasiwa Fakultas Psikologi UIN Syarif HidayatullahJakarta*" (Jakarta: UIN Syarif Hidayatullah, 2010)

G. Data Analysis Technique

The technique of data analysis used by the researcher was the formula of Pearson's product moment correlation.

To examine whether there was the correlation between optimism and students' speaking achievement the researcher analyzed in the following procedures:

1. The questionnaire giving score for each item and summing up had been checked.

2. The data on students' optimism and speaking achievement had been tabulated.

3. The coefficient of correlation between the students' optimism (X) and the students' speaking achievement (Y) had been determined. Correlation coefficient usually represented by r indicates indicating both the direction of the correlation (either positive or negative) and the strength or the degree of the relationship between variables.

4. Before analyze the correlation, the researcher do prerequisite test. The prerequisite test is conducted before doing correlation analysis. The prerequisite test was normality test and homogeneity test. This analysis was used SPSS 21.

5. To correlate between the EQ and English achievement had been analyzed by product moment, The researcher used the following formula:[57]

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

Note :

r = correlation coefficient of variable X and Y

$\sum xy$ = the sum of the product of X and Y scores for each students

$\sum x$ = the sum of X scores

$\sum y$ = the sum of Y scores

$\sum x^2$ = the sum of square of students' participation score

$\sum y^2$ = the sum of square of students examination score on PeerWise

$(\sum x)^2$ = the sum of squared X scores

$(\sum y)^2$ = the sum of squared Y scores

N = the total of respondents

According to Sugiyono that cited by Gunawan Sudarmanto said that Statistic parametric is used to analyze interval and ratio data that taken from normal distribution of population.[58] Analysis of Pearson Product moment is included to parametric statistic. In this research, the researcher also uses SPSS

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[57] Anas Sudiyono, "*Pengantar Statistik Pendidikan",* (Jakarta: Rajawali Press, 2009), 206

[58] R. Gunawan Sudarmanto, *"Statistik Terapan berbasis Komputer dengan Program IBM SPSS Statistic 19".* (Jakarta: Mitra Wacana Media, 2013),9

21 to analyze data, in order to make the calculation easier and more valid. The level of significance 0,05 is used and the value of sig from output of SPSS.

The above formula is very important due to find out whether or not the (Ho) Hypothesis or (Ha) Hypothesis is accepted in this research. The result computation indicates whether there is any correlation between the two variables or not. Then, from the result of the r computation (r-*observation*), it is classified as the perfect positive relationship (+1.00), no relationship (0), or the perfect negative relationship (-1.00). As Donald Ary, Lucy Cheser J. and Chris Sorensen's explanation that explain.[59]

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[59]Donald Ary, Lucy Cheser Jacobs, and Chris Sorensen, *Introduction to Research in Education*, 350