CHAPTER III

RESEARCH METHODOLOGY

This chapter discusses the description of methodology which will apply in this study. It is about the research design of this study, population and sample, data collection, and data analysis used in this research.

3.1. Research Design

According to the purpose of this study in which wants to know whether there is significant correlation or not between two variables, the researcher uses quantitative research as the design of this study by using correlation procedure. This study will investigate the relationship between two or more variables by comparing the proven testing scores. Here, the researcher will not give a treatment for the subject, but only collects the data based on the subjects' knowledge.

There are two kinds of variable that will be applied in this study. Those variables are independent variable and dependent variable. The independent variable of this study symbolized by (X), that is metacognitive listening strategies which includes of five kinds of strategy, those are planning and evaluation, problem-solving, personal knowledge, directed knowledge, and mental translation strategies. The dependent variable of this study is students' listening comprehension that symbolized by (Y).

3.2. Population and Sample

The population of this study is eleventh-grade students of SMA Negeri 1 Gresik. There are two courses for this grade includes of science and social. Here, there are three classes for each course that separated from 1, 2, and 3.

Before selecting the sample, the researcher gives a questionnaire in order to know students who used metacognitive listening strategy. Here, the questionnaire has been adapted from Vandergrift & Tafaghodtari (2010) which has been translated into Indonesian language in order to make it easier for the students (see Appendix A). After that, in order to determine the sample of this study, the researcher uses stratified random sampling technique. The researcher uses this technique for determining the sample because the researcher will classify the subject into three categories, they are high, middle, and low-level students. The classification of the students' level is based students' score of listening comprehension test which will converse by using the conversion score of TOEFL. The score itself is about 24 - 42 for low level, 43 - 52 for middle level, and 52 - 68 for high-level students. Here, the researcher will choose the sample randomly for each category. The number for each category itself is 10 students, so the total number of the sample is 30 students. It is the total minimum sample for correlation research.

For listening comprehension test, the researcher uses TOEFL test, which the content of each item is relevant to the curriculum of English subject for senior high school. The content of each item includes: 1) expression of asking and giving

opinion, 2) giving instruction, 3) asking and giving information, 4) agreement and disagreement, 5) asking and giving something, 6) accepted and rejected invitation, 7) accepted and rejected help, 8) expression of praise, 9) expression of admiration, and 10) descriptive text. The completed English curriculum would present in appendix B.

3.3. Data Collection

Data collection is the process of collecting specific information from both of students' perception or students' ability. The purpose of this process is to find the real data in the field which has been collected from the subject. Furthermore, the researcher will explain the procedure of data collection includes of the instrument and the procedure of collecting the data. Those process as follows:

3.3.1. Instrument

In order to collect the data, the researcher needs some kinds of instrument. Here, the researcher uses two kinds of instrument; those are metacognitive awareness listening questionnaire (MALQ) and TOEFL test, which is only focuses on listening comprehension. The purpose of the first instruments is to know the different use of metacognitive listening strategy by proficiency level. In order hand, the purpose of the second instrument is to know the students' ability in listening comprehension. Those two instruments will explain more as follows:

a. Metacognitive Awareness Listening Questionnaire (MALQ)

Metacognitive awareness listening questionnaire is kind of questionnaire that has a purpose to know metacognitive listening strategy that often uses by the students before, during, and after listening process. Here, the researcher uses questionnaire which has been adapted from metacognitive awareness listening questionnaire that developed and validated by Vandergrift, Goh, Mareschal, & Tafaghodtari (2006). There are 21 items of this questionnaire includes of five kinds of strategy, those are planning and evaluation (item 1, 10, 14, 20, and 21), problem-solving (item 5, 7, 9, 13, 17, and 19), personal knowledge (item 3, 8, and 15), directed attention (item 2, 6, 12, and 16), and mental translation (item 4, 11, and 18). This questionnaire used the six-point Likert scale ranging from "strongly disagree" to "strongly agree". This first instrument would be presented in appendix C.

b. Listening comprehension by TOEFL Test

TOEFL test is one kind of tests that have a purpose to know the students' ability in English which has been applied English as their foreign language. Here, the researcher uses TOEFL paper-based test. There are three kinds of skill that will be tested in this test includes of listening comprehension, language structure and written expression, and reading comprehension. Because the purpose of this study is to identify the correlation between metacognitive listening strategies and listening comprehension, so the researcher only focuses on listening comprehension test. There are 50 questions with four options for each item

includes of A, B, C, and D. The form of listening TOEFL test would be presented in appendix D and the listening script would be presented in appendix E. The score of this test will be calculated based on the correct answer which will be converted using conversion score of TOEFL. The conversion of TOEFL score will explain as follows:

JUMLAH JAWABAN BENAR	SKOR TERKONVERSI 1 (*LISTENING COMPREHENSION*)	SKOR TERKONVERSI 2 (*STRUCTURE AND WRITTEN EXPRESSION*)	SKOR TERKONVERSI 3 (*READING COMPREHENSION*)
50	68	-	67
49	67	-	66
48	66	-	65
47	65	-	63
46	63	-	61
45	62	-	60
44	61	-	59
43	60	-	58
42	59	-	57
41	58	-	56
40	57	68	55
39	57	67	54
38	56	65	54
37	55	63	53
36	54	61	52
35	54	60	52
34	53	58	51
33	52	57	50
32	52	56	49
31	51	55	48
30	51	54	48
29	50	53	47
28	49	52	46
27	49	51	46
26	48	50	45
25	48	49	44
24	47	48	43
23	47	47	43
22	46	46	42
21	45	45	41
20	45	44	40
19	44	43	39
18	43	42	38
17	42	41	37
16	41	40	36
15	41	40	35
14	38	38	34
13	37	37	32
12	37	36	31
11	35	35	30
10	33	33	29
9	32	31	28
8	32	29	28
7	31	27	26
6	30	26	25
5	29	25	24
4	28	23	23
3	27	22	23
2	26	21	22
1	25	20	21
0	24	20	22

Table 3.3.1.c. Conversion score of TOEFL
Adapted from www.toeflconversionscore.com

3.3.2. Procedure

In order to accomplish the purpose of this study inwhich to know the significant difference on the use of metacognitive listening strategy and the significant correlation between metacognitive listening strategies and students' listening comprehension, the researcher tries to make a list some procedures for collecting the data to support the data analysis, they are:

a. The researcher observes eleventh-grade students at SMA Negeri 1 Gresik.
b. The researcher prepares the instruments for the research, which is metacognitive awareness listening questionnaire and listening comprehension test.
c. The researcher distributes questionnaire of listening strategies in order to determine the students who used metacognitive listening strategies.
d. The researcher input the students' answer.
e. The researcher gives listening comprehension test for the students at XI-IPA 1 and XI-IPS 1 class.
f. The researcher inputs the students score and classifies it into three categories, whether the students includes of high, middle, or low proficient level students.
g. The researcher chooses the sample of the research randomly in which there are 10 students for each category.
h. The researcher gives metacognitive awareness listening questionnaire to the subject of the study.
i. The researcher collects the students' answer of the questionnaire.

j. The researcher inputs the students' answer of the questionnaire and students score of the test and analyze the result by using statistical data of SPSS 16.0 program.
k. After doing all of the procedure, the researcher will test the hypothesis by seeing the column of sign. 2 tailed.

3.4. Data Analysis

After collecting the data through doing all of the procedure that mentioned above, the researcher analyzes the data by doing some steps in order to find the answer of the research question. Here, the researcher inputs the data from the questionnaire and listening comprehension of eleventh grade students at SMA Negeri 1 Gresik into Microsoft Excel and SPSS 16.0 program for doing statistical analysis.

3.4.1. Normality Test

Normality test is one of procedures that has a purpose to check whether the data is distributed normal or not by using Shapiro-Wilk test. If the data distributed normal, it means that the data distributed evenly for the population. The result has an important role in determining the next step of the data analysis that will be used to examine the objective of the study. Here, if the data is distributed normal, the researcher will analyze the objective of the study by using

parametric statistic. Meanwhile, if the data is not distributed normally, the data will analyze by using non-parametric statistic.

3.4.2. Compare Means

Compare means is statistical analysis that uses to know the different means of one or more groups. Because in this study involves three group for the sample includes of high, middle, and low proficient level. Therefore, to know the significant difference on the use of metacognitive listening strategy by proficiency level, the researcher analyzes the data by statistical data for more than two groups. Here, if the data is distributed normal, the researcher will analyze the data using one-way ANOVA, but if the data is not distributed normally, the researcher will analyze the data using Kruskal Wallis.

3.4.3. Correlation Coefficient

The correlation coefficient is the number of correlation in which shows how much the level of correlation between two variables. The result of correlation coefficient will determine the strength of the correlation between metacognitive listening strategies and students' listening comprehension of eleventh grade at SMA Negeri 1 Gresik. Here, the researcher uses Pearson Product Moment as the data analysis. The researcher uses Pearson Product Moment because the data that will analyze is coming from ordinal and interval data. The ordinal data is metacognitive awareness listening questionnaire and the interval data is students' listening score.

3.4.4. Hypothesis Testing

Because there are two objectives of this study, so, there are two steps in order to test the hypothesis. The first objective of this study is to know whether there is significantly different on the use of metacognitive listening strategies by proficiency level or not. Hypothesis testing is needed to determine the significant difference on the use of metacognitive listening strategies. So, the hypothesis needs to be drawn and formulated as follows:

$H_0$1 : There is no significant difference in the use of metacognitive listening strategies by proficiency level

$H_1$1 : There is significantly different on the use of metacognitive listening strategies by proficiency level

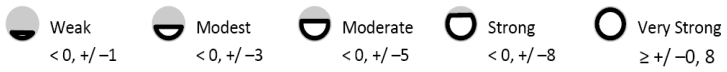
After formulating the hypothesis, the next step is comparing the strategies by using SPSS 16.0 program. If the result of normality test showed that the data is distributed normal, the researcher will analyze the data by using One-Way ANOVA, but if the data is not distributed normally, the researcher will use Kruskal Walis.

The second objective of the research is to know whether there is a significant correlation between metacognitive listening strategies used by proficiency level and their listening comprehension for eleventh grade at SMA Negeri 1 Gresik or not. Here, the researcher also needs to formulate the hypothesis of the study as follows:

$H_0$2 : There is no significant correlation between metacognitive listening strategies used by eleventh-grade students at SMA Negeri 1 Gresik and their listening comprehension

$H_1$2 : There is significant correlation between metacognitive listening strategies used by eleventh-grade students at SMA Negeri 1 Gresik and their listening comprehension

After formulating the hypothesis, the researcher has to compare the r-value from the output of SPSS 16.0 program in order to test the level of significance from the hypothesis. After the scores has been computed in SPSS, then the researcher has to see the *r* output and take the output that if sig. (2-tailed) > α (0.05), the researcher should accept the H_0, but if sig. (2-tailed) < α (0.05) so the researcher can reject H_0, it means H_1 is accepted. The rules to determine the strength of correlation defines as follows:



Source: Mujis (2004)