CHAPTER III
RESEARCH METHODOLOGY

This chapter is intended to describe the research methodology was used to conduct the study and the way of collecting and analyzing the data. This chapter consists of the research design, place and time, population and sample, instrument, data collation, and data analysis.

3.1 Research Design of the Study

The researcher determines the design of this research is a quantitative approach, namely research on social problems that is based on testing a theory consisting of variables, which are measured with numbers, and analyzed with statistical procedures to determine the truth of the theory. The quantitative approach allows real research data to be recorded in the form of numbers, making it easier to analyze and interpret the data using a statistical approach. With SRL and learning motivation as independent variables and student speaking ability as the dependent variable.

The design of the research was as follows:

Descripton:

X_1 = Self-Regulated Learning

X_2 = Learning Motivation

Y = Speaking Skill

In this case, the researcher applies a multiple correlational research design, according to (Jensen 2006). The multiple correlation coefficient (R^2) produces the maximum degree of linear relationship that can be obtained between two or more independent variables and one dependent variable. This research is a type of multiple correlational research that focuses on finding out the correlation between students SRL and their learning motivation in speaking skills. It can be interpreted as the extent to which the variabel varies direcly positive correlation or negative

correlation. This research uses correlation techniques to determine the direction and data collection that will be carried out in this research by distributing questionnaires and taking the results of oral tests. Then, after the data is complete, the next step is data processing. In this process statistical analysis techniques are used multiple regression analysis.

3.2 Place and Time of the Study

The author will conduct this research at SMAN 1 Mantup school, which is located in JL. Balongpanggang Mantup, Tugu, Mantup, Kec. Mantup, Kabupaten Lamongan, Jawa Timur 62283. The study implementation is scheduled for July 2024.

3.2 Population and Sample

The population of this study were all 12th grade (XII) of SMAN 1 Mantup in the 2024/2025 academic year. There are seven classes in the twelfth grade, with a total of 280 students. The sample of this study taken by using purposive sampling technique. Purposive sampling is non-probability sampling techniques where the researcher selects samples based on their own judgment that they represent the population. The researcher decides which subjects to include in the sample based on specific considerations, like a recommendation from the teacher to pick this class. However, there are 52 students as a sample taken by using purposive sampling techniques. Moreover, this study used purposive sampling because the research has limited time, energy and funds.

3.4 Research Instruments

In this research, there are two kinds of instruments used by the researcher to collect the data needed, that are:

1. Questionnaire

The questionnaire described a set of questions that were answered by the respondent. Regarding Sugiyono (2008, p.97), explained that a questionnaire is a technique of collecting data that is done by giving some questions or statements to the respondent. There are two questionnaires used in this research. The first questionnaire was used to find out students Self-Regulated

Leaning (SRL), the statements are adopted from The Self-Regulation Questionnaire (SRQ) by Brown and Miller (1999). The second questionnaire was used to find out student learning motivation, using the statements adopted from Attitude/Motivation Test Battery (ATMB) by Gardner questionnaire. The following are the indicators from the two questionnaires used in this research:

a. Self-Regulation Questionnaire (SRQ) by Brown and Miller (1999), the indicators are as follows:

Table 3. 1* Self-Regulation *Questionnaire (SRQ)

Variable	Indicators	Question Number	Total Question
Self-Reguated Learning (X_1)	1 Receiving relevant information	1, 8, 36	3
	2 Evaluating the information and comparing it to norms	2, 16, 23	3
	3 Triggering change	10, 24, 45	3
	4 Searching for options	25, 32, 39	3
	5 Formulating a plan	19, 26, 33	3
	6 Implementing the plan	41, 55, 62	3
	7 Assessing the plans effectiveness	49, 56, 63	3

Adopted : Brown, Miller, & Lawendowski, The self-regulation questionnaire (SRQ). 1999, p.281-292

To measure students classification of self-regulated learning, the researcher used the table below, Gay in Anas (2015) indicated the scale to classify the gained percentage of SRL questionnaire as follow:

***Table 3. 2* Students Self-Regulated Learning Classification**

Interval	Classification
85-100	Very high
65-84	High
55-64	Fair
35-54	Low
0-34	Very low

Gay in Anas (2015)

b. Learning Motivaton Questionnaire using Attitude/Motivation Test Battery (ATMB) by Gardner the indicators as follows:

To construct the questionnaire, the writer using ATMB questionnaire to measure students learning motivation with a total items is 30. These are the components of indicators of students motivation in learning speaking used in this questionnaire:

Table 3. 3 Indicators of Extrinsic Motivation

Aspects	**Indicators**	**Question Number**
Teachers	Teacher gives reward to students.	1, 2, 3, 4, 4, 5, 6
	Teacher becomes an inspiration.	
	Teacher uses interesting method in teaching.	
Parents	Asking students to follow English private course.	7, 8, 9, 10, 11, 12
	Helping students to overcome difficulties.	
	Giving rewards to students.	
Environment	The situation in the classroom is very interesting.	13, 14, 15, 16, 17, 18
	Students are easy to speak wherever they are.	
	Students have high confidence to speak.	

Table 3. 4 Indicators of Intrinsic Motivation

Aspects	**Indicators**	**Question Number**
Effort	Practice English every day.	19, 20, 21, 22, 23, 24
	Asking to teacher when getting difficulties.	
	Doing English assignment.	
Desire	Students have strong desire to be able to speak English.	25, 26, 27, 28, 29
	English is very important for students carrier in the future.	
	Students exercise English by watching English program on television.	
Attitute	Students like to speak English.	30

To measure students classification of learning motivation, the researcher used the table below, the indicated the scale to classify the gained percentage of learning motivation questionnaire as follow:

Table 3. 5 Learning Motivation Classification

Interval	Classification
81-100	Very good
61-80	Good
41-60	Enough
21-40	Less
0-20	Very less

The validity using Bivariate's correlation. If the pearson correlation of an item is higher than r-table, it means that the item is significantly correlated with the total score, which indicates that the item is valid. r-table for df = (N-2) with a significance level of α = 0.05 (2-tailed). Testing the validity of the instrument is done by using the product moment correlation technique with the following formula:

$$r_{count} = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n(\sum X^2) - (\sum X)^2 \int n\,(\sum Y^2) - (\sum Y)^2]}}$$

Description

n = Number of respondents

x = Variabel score (respondents answer)

y = Total score of the variable (respondents answer)

The reliability of the questionnaire was assessed using Cronbach's coefficient. The standard used is alpha > 0.70 (sufficient reliability). To measure the reliability using the Cronbach alpha test with the formula:

$$r_{11} = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_t^2}\right]$$

Description:

r_{11} = Reliability

k = The number of test items

$\sum \sigma_b^2$ = Sum of the item variance

σ_t^2 = The variance of the score

Then the questionnaires used a Likert scale. The ith respondents opinions in responding to the following options based on the Likert scale (Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree) The score of the students answer for each item can be seen in the following table:

Table 3. 6 Score of the Scale

Scale	Score of Positive Statement	Score of Negative Statement
Strongly Agree	5	1
Agree	4	2
Undecided	3	3
Disagree	2	4
Strongly Disagree	1	5

Pallant (2010, p. 9)

2. Test

To know students speaking skills, students were assessed by oral tests. In this study, the researcher took students speaking skill scores from an English teacher using the assessment rubric used for speaking tests. The test was evaluated into three criteria: vocabulary, pronouncation, and fluency. The three criteria are the components of speaking skills and in this study will use the scale rating score of David P. Harris.

Table 3. 7 Speaking Scale Rating of David P. Harris

No	Criteria	Rating Score	Comments
1	Voccabulary	5	The use of vocabulary and idioms is virtually that of a native speaker.
		4	Sometimes uses inappropriate terms and/or must rephrase ideas because of lexical inadequacies.
		3	Frequently uses the wrong words conversation somewhat limited because of inadequate vocabulary.
		2	Misuse of words and very limited vocabulary makes comprehension quite difficult.
		1	Vocabulary limitation so extreme as to make conversation virtually impossible.

2	Grammar	5	Make few (if any) noticable errors of grammar and word order .
		4	Occasionally makes grammatical and word order errors that do not, however occure meaning.
		3	Make frequent errors if grammar and word order, which occasionally obscure meaning.
		2	Grammar and word order errors make comprehension difficult, must often rephrese sentence and rest rich himself.
		1	Errors in grammar and word order do, severe as to make speech virtually unintelligible.
3	Pronouncation	5	Has few traces of a foreign accent.
		4	Always intelligible, though one is conscious of a defined accent.
		3	Pronouncation problems necessitate concentrated listening and occasionally lead to misunderstanding.
		2	Very hard to understand because of pronouncation problems, most frequently be asked to repeat.
		1	Pronouncation problems to serve as to make speech virtually unintelligible.
4	Fluency	5	Speech as fluent and efforts less as that of a native speaker.
		4	Speed of speech seems to be slightly affected by language problems.
		3	Speed and fluency are rather strongly affected by language problems.
		2	Usually hesitant, often forced into silence by language limitation.
		1	Speech is also halting and fragmentary as to make conversation virtually impossible.
5	Comprehension	5	Appears to understand everything without difficulty.
		4	Understand nearly everything at normal speed, although occasionally repetition may be necessary.
		3	Understand most of what is said at slower than normal speed without repetition.
		2	Has great diffficulyt following what is said, can comprehend only “social conversation” spoken slowly and with frequent repetition.
		1	Cannot be said to understand even simple conversational English.

The collecting data of speaking skill, oral test type used by the teacher, students present a conversation about asking and giving advice opinion.The scoring criteria for the oral test are presented as follows:

Vocabulary	5	
Grammar	5	
Pronouncation	5	
Fluenty	5	
Comperhenssion	5	+
	25	

Score = $\frac{the\ result\ of\ score}{maximum\ score} \times 100$

The data from the speaking skill test was classified as follows:

Table 3. 8 Speaking Skill Interpretion

Interval	Categories
85-100	Very good
70-84	Good
55-69	Okey
25-54	Poor
0-24	Very poor

(Source: Huges, 2002)

3.5 Data Collection

The main components of the data collection technique are as follows:

1. Questionnaire: Data collection through distributing a set of questionnaires containing questions distributed to respondents via g-form. Distributing the questionnaire uses g-form to make data collection easier when calculating using the SPSS application and to save time. There are two questionnaires used, namely the SRQ (Self-Regulated Learning Questionnaire), which is used to find out students self-regulated learning and the LMQ (Learning Motivation Questionnaire), which is used to find out students learning motivation regarding their speaking skill.

2. Speaking Test: In this research, speaking tests are used to collect data on speaking skill tests, namely by using scores carried out by English teachers.

3.6 Data Analysis

1. The Description of the Data

a) Mean

Mean is the average of a set of number. It is calculated by summing all the values in a databest and then dividing by the number of values.

b) Median

Median is the central values in a databest. It is gained by picking the middle value of the data ranging from the lowest to the highest or inversely (Arikunto, 2006)

c) Mode

Mode Mode is the most frequent values in a databest. It is obtained by counting comparable data and determining the most significant value. (Arikunto, 2006)

d) Range

Range Range is the range or distance between the lowest and highest values in a databest. (Arikunto, 2006)

e) Standard Deviation

Standard Deviation Standard Deviation is an index number that shows the variability of the average score or distribution of a number of data values. Standard deviation can be said to be related to distance or average score. (McMillan and Schumacher, 2001).

2. Classic Assumption Test

Before testing the hypothesis, the analysis prerequisites are first tested. The prerequisite tests used in this research include:

a) Normality test

The normality test aims to find out whether the data is normally distributed or not. Normal or not is based on the normal distribution of

the data with the same mean and standard deviation. Normally distributed data is a condition for carrying out parametric tests. If the data is not distributed normally or the sample size is small, non-parametric statistics are used. The normality test used in this research is the one sample Kolmogorov-Smirnov test using a significance level greater than 5% or 0.05 (Santoso, 2010:208).

b) Linearity Test

Linearity tests were used to determine the relationship between free variables and linearly related variables or not. The multicollinearity test used in this study. Multicollinearity aims to test whether there is a regression model which in a correlation was found between the independent variables. In models A good regression should have no correlation between dependent and independent variables. Test Multicollinearity in this research was carried out by looking at the tolerance value and variance inflation factor (VIF). If the tolerance value is higher than 0.10 or the VIF is smaller than 10, it can be concluded that multicollinearity does not occur (Santoso, 2010:206)

c) Heteroscedastic Test

The heteroscedasticity test aims to test whether there is a regression model. There is an inequality of variance from the residuals of one observation to another (Santoso, 2010:207). If the probability value > value if the alpha is 0.05, then we can be sure that the model does not contain any elements of heteroscedasticity.

3. Hypothesis Testing

The hypothesis testing design was carried out to determine the effect between the independent variable and the dependent variable. In this research, testing the hypothesis is carried out as follows:

a) Bivariate analysis

Bivariate analysis is used to test the first and second hypotheses to test the coefficient between the independent variable and the dependent variable. To test the direction of the relationship between the

independent variable and the dependent variable, the formula used is the product moment correlation. In this study, the test was used for the first hypothesis test and a second hypothesis test wasused to determine the relationship between SRL and learning motivation toward students speaking skills. The interpretation of the correlation coefficient value from the calculation results is as follows:

1) If the correlation coefficient value is positive, then the relationship between the independent variable and the dependent variable is a unidirectional relationship, in other words, the increase in the independent variable will also increase the dependent variable.
2) If the correlation coefficient value is negative, then there is an inverse relationship between the independent variable and the dependent variable, in other words, the increase in the independent variable is followed by a decrease in the dependent variable.

The correlation formula used by researcher is the product moment formula. the formula is as follows:

$$r = \frac{n\sum - (\sum x(\sum y)}{\sqrt{\{n\sum X^2} - (\sum X)^2\}\{n\sum y^2 - (\sum y)^2\}}$$

Descrition:

r_{xy} = the coefficient of the correlation between variables X and Y

X = the independent variable

Y = the dependent variable

N = the number of the sample

The statistical hypothesis of the first and second hypothesis:

a. H0: rxy = 0, it means there is no correlation between X and Y
b. Ha: rxy > 0, it means there is a positive correlation between X and Y

b) Multibivariat Analysis

This analysis is used to test the third hypothesis, namely to find the correlation coefficient between the independent variables together with

the dependent variable. Through this analysis, the value of the determinant coefficient (R^2) of the relationship between the two independent variables together with the dependent variable will be obtained. In this study, the test was used for the third hypothesis test, to determine the relationship between SRL and learning motivation toward students speaking skills. The formula used is as follows:

$$Rx_1x_2y = \sqrt{\frac{r^2x1y + r^2x2y - 2rx1y.rx2y}{1 - r^2x1x2}}$$

c) Distribution of Contribution

After the researcher tested the third hypothesis, the next step taken by the researcher was to calculate the contribution distribution. In this study, the researcher used the coefficient of determination with the aim of calculating the distribution of the X variable to the Y variable. The formula used by the researcher was as follows:

$$CD = (r)^2 \text{ x } 100\%$$

CD = the coefficient of determination

r = the coefficient of correlation