CHAPTER III

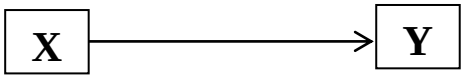
METHOD AND PROCEDURES

This chapter presents: (1) method of the study, (2) variables of the study, (3) operational definition, (4) the population and sample, (5) data collection, (6) data instrument analysis, and (7) data analysis.

3.1. Method of Study

In conducting this study, correlational research was used in terms of explanatory and prediction research design to find out the correlation between variables and explain the results that may appear. Moreover, Creswell states "correlation design is procedures in quantitative research in which investigators measure the degree of association (relationship) between two or more variables using the statistical procedure of correlation analysis" (as cited in Lestari & Holandiyah, 2016, p. 49). Furthermore, this correlational research was used to find out the correlation between LOC and reading achievement of tenth grade students at MAN 2 Palembang.

The procedures were that, first, the LOC was identified by using questionnaire. Second, the students' reading achievement was identified by using reading test. Then, the correlation and influence between variables was analyzed through Statistical Package for Social and Science (SPSS) 20 based on the result of the questionnaire and students' reading test scores. And the last, explanation and interpretation of the results was discussed. The following is the research design:



X = Students' Locus of Control

Y = Students' Reading Achievement

3.2.Variables of the Study

Creswell (2012) argues "variable is a characteristic or attribute of an individual or organization that (1) researchers can measure or observe and (2) varies among individuals or organizations studied" (p.112). There were two kinds of variables, independent variable, and dependent variable. Independent variables were those that the researcher chooses to study in order to assess their possible effect(s) on one or more other variables. Moreover, dependent variable was the variable that was hypothesized as being influenced by the independent variable.

In this study, the independent variable was locus of control, while the dependent variable was reading achievement of tenth grade students at MAN 2 Palembang.

3.3. Operational Definitions

To avoid the possibility of misinterpretation about some terms in this study, especially those used in the title, the definition were provided. There were terms that need to be defined in this study. First, the word *locus of control* refers to the students view events as being a matter of luck, chance, or fate, or life events are influenced by one's own action. And the last, the word *reading achievement*

refers to the result of the reading test. In this study I focus on some text type such as narrative, descriptive and recount text, it is chosen based on syllabus.

3.4. Population and Sample

3.4.1. Population

Fraenkle and Wallen state "population is a group of interest to the research, the group whom the research would like to generalization results of the study" (as cited in Mawaddah, 2015, p. 62). Moreover, population is a group of individuals who have the same characteristics. The population of this study was tenth grade students at MAN 2 Palembang. The distribution of population of the study can be seen in table 2 below:

Table 2.
Distribution of Population

No	Classes	Number of students
1	A	34
2	B	31
3	C	32
4	D	37
5	E	30
6	F	30
7	G	34
Total Population		228

Note : Diknas Kota Palembang, 2017

3.4.2. Sample

Creswell (2012) states “sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population” (p. 142). In this study, purposive sampling was used to get the sample, Johnson and Christensen (2012) “purposive sampling (judgmental sampling) is nonrandom sampling technique in which the researcher solicits persons with specific characteristics to participate in a research study” (p. 231). In purposive sampling, the researcher specifies the characteristics of a population of interest and then tries to locate individuals who have those characteristics. Moreover, Fraenkel, Wallen, and Hyun (2012) argue “purposive sampling method is a method where investigators use personal judgement to select a sample” (p.100).

Based on explanation above, I used purposive sampling because I have some purposes. Most of the eleventh grade students are doing practical work in other subject and active in some extracurricular activities. While twelfth grade students were focus on examination. Consequently, it was quite difficult for me to collect the data from them. Furthermore, only some classes that have contemplated as a sample. In addition, I took the best class, moderate class and low class in order to generalize the sample. According to Gay and Diehl, “the sample size of correlational research at least 30 subject” (as cited in Pratiwi, Furuya, Sulistiantara, 2014, p. 249). The distribution of the sample can be seen in table 3 below:

Table 3.
Sample of the Study

No	School type	Number of Students
1	A	34
2	D	37
3	G	34
Total		105

3.5. Data Collection

In this study, there were two kinds of instrument that used to collect the data; questionnaire, and reading test.

3.5.1. Questionnaire

Creswell (2012) argues "the questionnaire is a form used in a survey design that participants in a study complete and return to the researcher" (p. 382). I used the questionnaire to obtain students' locus of control and to gain information whether or not students' locus of control influence their reading achievement. I used a ready-made questionnaire by Nowicki and Strickland (1973). This questionnaire was designed for seventh through twelfth grades students. This questionnaire consists of 21 yes or no question items. Moreover, the sample students were instructed to choose yes or no answers based on their belief, because there is no false or true answer. From the result of the questionnaire we can see the type of locus of control.

3.5.2. Reading Test

In this study, reading test was used as the second instrument to gain the information about reading achievement. I gave some multiple choice questions item from 3 type reading text (descriptive, recount & narrative text) based on syllabus. This test was last in 60 minutes. The test was taken from some English test books for tenth grade students.

3.5.3. Reasearch Instrument Analysis

3.5.3.1. Validity of the Questionnaire

Fraenkel et al. (2012) state "the term validity "refers to the appropriateness, correctness, meaningfulness, and usefulness of the specific inferences researchers make based on the data they collect" (p. 148). It means that validity test is used to measure whether the instruments are used valid or not. In this study, I used a ready-made questionnaire Nowicki and Strickland (1973). This questionnaire consist of 40 items (the instrument can be seen appendix B)that have been revised to be two scale, primary and secondary groups, so I used the secondary grup that made for seventh through twelfth grade student. It consist 21 yes no questions items. Moreover, this questionnaire has been validated by Nowicki and Strickland (1973), so it does not need to be tried out, because it was valid. But I translated the questionnaire in Bahasa Indonesia, so I have done construct validity.

3.5.3.2. Reliability of the Questionnaire

Creswell (2005) argues "reliability means that scores from an instrument are stable and consistent" (p. 162). Johnson and Christensen (2012) state the score is considered reliable if the score of significance is at least or preferably higher than 0.70. Reliability of the N-SLOC by Nowicki and Strickland (1973) was used Test-retest reliability technique which was brought out by using SPSS to find out the internal consistency reliability of the questionnaire. Internal consistency estimates for N-SLOC is 0.74. Test-retest reliability estimates for N-SLOC is 0.71. It means that this questionnaire was reliable.

3.5.3.3. Validity of the Test

Fraenkel and Wallen (2012) state validity refers to the appropriateness, meaningfulness, and usefulness of any inferences of researcher draws based on the data obtained through the use of an instrument. It means that validity test is used to measure whether the instruments are used valid or not. In this study, to know the test items are valid or not, I have done the tryout. There were three kinds of validity that used. They were as follows:

3.5.3.3.1. Construct Validity

Hair *et al* argue "Construct validity is the extent to which a set of items actually reflect the theoretical latent construct those items are designed to measure" (as cited in Ghazali, Rabi, Wahab, & Rohaizad, 2017, p. 42). After constructing the instruments related to the syllabus, then it was consulted to achieve some expert judgments from at least three validators to evaluate whether

the components of the instrument were valid or not to be applied in research activities. There were some characteristics for expert judgments or validators, such as: (1) English educational background, (2) English lecturer, and (3) minimum score TOEFL 550.

Based on explanation above, I asked the lecturers of English Education Study Program at UIN Raden Fatah Palembang as validators in this study. There were three validators to validate the research instruments. The validators was measure including such as size type, appropriateness of language and so on. After measuring the format all instruments were appropriate to used for this study.

3.5.3.3.2. Validity of Each Question Item

Validity test of each question item was used to indicate whether the test item of the instruments in each question is valid or not. To know the validity of each question items, the tryout was done.

The result of the test was analyzed by using Pearson Product Moment (Statistical Package for Social Science) SPSS 20. The tryout of the test was on Wednesday, 22th November 2017 at 08.15 a.m – 09.15 a.m. The instruments of the test consist of 50 item (the instrument can be seen appendix C) reading test were tested to 27 students (X MIA 1) to the tenth grade students at MAN 3 Palembang.

To know whether it was valid or not, the score of significance (r-output) was compared with the score of "r-table" product moment. If the result of the test showed that r_{output} was higher than r_{table} (0.380) with sample (N) was 27

students, it means that the item was valid. The r-table of product moment for a certain number of samples. It was found that there were 10 questions were considered invalid. It means that 10 items test could not be used as the instrument since the scores of significance were lower than 0.380. Then, 40 questions item were considered valid. It means that 40 items test could be used as the instrument since the scores of significance were higher than 0.380. (see appendix D).

3.5.3.3.3. Content Validity

According to Hughes, "a test is said to have content validity if its content constitutes a representative sample of the language skills, structures, etc" (as cited in Putra & Marzulina, 2015, p. 193). Which it is meant to be concerned".In order to judge whether or not a test is content validity, a specification of the skills or structures has made based on the curriculum and syllabus. The instrument focused on narrative, recount and descriptive text. The specification of the test was described in table 4 below:

Table 4.
Specification of Test

Basic Competences	Test Materials	Indicators	Number of Items	Type of Test	Total
	Descriptive text				
Analyzed social function, structure texts, and linguistic element in the simple descriptive text about person, tourism site, and famous archaeological site, in accordance with the context of users.	1. Hydroponics : Farming without soil 2. Making Handicraft 3. Tourist sites	The students able to understand : 1. Identify text type 2. Main idea	1, 9, 16, 23, 29, 37, 45 2, 10, 17, 24, 30, 38, 46	Multiple Choice	14

	Recount text				
Analyzed social function, structure texts, and linguistic element in the simple recount text about, experience or events, in accordance with the context of users.	1. Bus was flowing right behind me 2.The near death of sally the salamander	3. Specific Information	3, 4, 5, 7, 11, 13, 18, 19, 21, 26, 27, 31, 32, 35, 36, 39, 40, 43, 44, 49	Multiple Choice	20
	Narrative text				
Analyzed social function, structure texts, and linguistic element in the simple narrative text about legend in accordance with the context of users.	1. Malin kundang . Yvette's daydream	4. Identifying referent	6, 8, 12, 15, 20, 28, 33, 41, 48, 50	Multiple Choice	16
		5. Guessing word meaning from context	14, 22, 25, 34, 42, 47		
Total					50

3.5.3.4. Reliability of the Test

To know the reliability of the test, internal consistency reliability in Split half reliability coefficient with Spearman-Brown formula was used. The calculation was done by using SPSS 20 program. The scores of reliability was obtained from tryout. Fraenkle et al. (2012, p. 157) state that the test score is considered reliable whenever the reliability coefficient of test score should be at least 0.70 and preferably higher.

To measure the reliability test using split half method, it was found that the p-output of Gutman Split-Half Coefficient was 0.760 which was higher than 0.70. It can be stated that the reliability of reading test items was reliable since the poutput of Gutman Split-half Coefficient was higher than 0.70. The result analysis of reliability test is described in table 5 below:

Table 5.
Reliability Statistics

Cronbach's Alpha	Part 1	Value	.046
		N of Items	20[a]
	Part 2	Value	.351
		N of Items	20[b]
	Total N of Items		40
Correlation Between Forms			.618
Spearman-Brown Coefficient	Equal Length		.764
	Unequal Length		.764
Guttman Split-Half Coefficient			.760

a. The items are: item1, item2, item3, item4, item5, item6, item7, item8, item9, item10, item11, item12, item13, item14, item15, item16, item17, item18, item19, item20.
b. The items are: item21, item22, item23, item24, item25, item26, item27, item28, item29, item30, item31, item32, item33, item34, item35, item36, item37, item38, item39, item40.

3.5.3.5. Readability of the Test

Readability test was used to know the level of reading text if it is appropriate for students' class level in comprehending the reading texts. The

readability test was used readability formula which measures using online readability test from www.readabilityformula.com. In this study readability test used to reading test instrument.

There are some categories of flesch reading ease score and flesch reading grade level (Fielding, 2006, p. 205), it can be seen in the following table 6 below:

Table 6.
Reading Ease Score and Flesch Reading Grade Level

Reading Ease Score	Interpretation	Grade
90-100	Very easy	5th grade students of elementry school
80-89	Easy	6th grade of elementry school
70-79	Fairly easy	7th grade of juniot high school
60-69	Standard	8th grade of junior high school
50-59	Fairly difficult	10th-11th grade of senior high school
30-49	Difficult	Post school / college
0-30	Very difficult	University graduate

Source: http/www.readabilityonline.com

In this study, readability test was done to research instrument text. it can be seen in the table 7 below :

Table 7.
Readability of Reading Text

No	Text Tittle	Easy Score	Text Category	Grade Lavel
1.	**Making Handicraft**	54.4	Fairly difficult	Ten and eleven
2.	**William Shakespeare (1564-1616)**	51.1	Fairly difficult	Ten and eleven
3.	**Bus Was Flowing Right Behind Me**	56.1	Fairly difficult	Ten and eleven
4.	**Tourist Sites**	52.2	Fairly difficult	Ten and eleven
5.	**Malin Kundang**	56.7	Fairly difficult	Ten and eleven
6.	**Beauty and the Beast**	55.9	Fairly difficult	Ten and eleven
7.	**Emily Morgan, My Aunt**	53.2	Fairly difficult	Ten and eleven
8.	**The Near Death of Sally the Salamander**	58.7	Fairly difficult	Ten and eleven
9.	**Jakarta Bay**	56.1	Fairly difficult	Ten and eleven
10	**Newspaper Reporters**	56.5	Fairly difficult	Ten and eleven

3.6. Data Analysis

3.6.1. Instrument Analysis

After the data of students' locus of control and reading achievement had been collected, and formed as a data description, the scores of the two tests was analyzed by using SPSS. The analysis was done as follow:

3.6.1.1. Analysis of the Questionnaire

N-SLOC was made by Nowicky & Strickland (1973). Scoring process will check in each statement item with determinate in the table 8 below:

Table 8.
Questionnaire Orientation

Number Item	Orientation	Number Item	Orientation
1	Yes	12	Yes
2	Yes	13	No
3	Yes	14	Yes
4	No	15	Yes
5	Yes	16	No
6	Yes	17	Yes
7	Yes	18	Yes
8	Yes	19	Yes
9	Yes	20	Yes
10	Yes	21	Yes
11	Yes		

Source: Nowicki S and Strickland B,(1973)

In each answer that match with the orientation was penalized the 1 and 0 for each answer not match. A higher score means high external locus of control and a low score means high internal locus of control, it can be seen in the table 9 below:

Table 9.
The Dimension of LOC

Dimension	**Score**	**Description**
Internal	0-10	They belive that every events in their live are happen based on their own action or their own control
External	11-21	They believe that they can't control their life

Source:Nowicki S and Strickland B, (1973)

From the result of the questionnaire, the score formed into description statistic, it was contained the highest score and lowest score, and also show the data frequesi.

3.6.1.2. Analysis of the Reading Test

According to Thissen and Wainer (2001), "the test score is summary of evidence contained in an examinee's responses to the items of a test that are related to the construct or constructs being measured" (p. 1). In reading test, students' achievement was scored by calculating each correct answer. The correct answer was scored 1 and the incorrect one was 0. The result of the test was taken

from the numbers of the right answers divided to the total number of the test times 100.

$$\text{GRADE} = \frac{\text{Total correct items}}{\text{Total number of items}} \times 100\%$$

The highest score was 100 points if students answer all questions correctly and the lowest one was 0 points if student answer all questions incorrectly. The data was analyzed by using t test. It was run in SPSS 20. The score category was took based on the standard score in the school, it can be seen in the table 10 below:

Table 10.
Range of Students Reading Achievement

No	Percentage Range	Qualification
1	86-100	Very good
2	71-85	Good
3	56-70	Average
4	41-55	Poor
5	0-40	Very poor

Source: MAN 2 Palembang

From the result of the test, the score formed into description statistic, it was

contained the highest score and lowest score, and also show the data frequesi.

3.6.2. Pre-requisite Analysis

In terms of correlation and regression, it was necessary to know whether the data was normal for each variable and linear between two variables.

3.6.2.1. Normality Test

In this study, normality test is use to find out whether the data of N-SLOC questionnaire and reading achievement are normal or not. The researcher will use I-Sample Kolmogorov-Smirnov in SPSS. If p-value is higher than .05 then it is normal.

3.6.2.2. Linearity Test

In this study, linearity test was conducted to know whether the data of N-SLOC questionnaire and reading achievement was linear or not use test for linearity from SPSS. Linearity test in SPSS was used to see if the data is linear or not. If the score is higher than 0.05, the two variables are linear.

3.6.3. Hypothesis Testing

3.6.3.1. Measuring Significant Correlation between Locus of Control and Reading Achievement

After all of data find normal and linier, the analysis was done. The result from the instruments of both questionnaire and reading achievement score was calculated to find any potential correlation between variables through Pearson Product Moment Coefficient in SPSS 20. The criteria in this testing was If *p* -

value is higher than 0.05 ($p>0.05$), the level of significance is 5%, H_o is rejected and H_a is accepted and If *p*- value is less than 0.05 ($p<0.05$), the level significance is 5%, H_o is accepted and H_a is rejected.

3.6.3.2. Measuring Significant Influence between Locus of Control and Reading Achievement

Regression Analysis was used to find out whether or not locus of control influenced students' raeding achievement. Simple regression analysis was used to measure two variables. The score of locus of control as independent variable and students' reading achievement as dependent variable was calculated by SPSS 20. This analysis was run if there was correlation between the two variables. And the creteria of this testing was if R^2 is equal to 0.49, H_o is rejected and H_a is accepted and if R^2 is not equal to 0.49, H_o is accepted and H_a is rejected.