

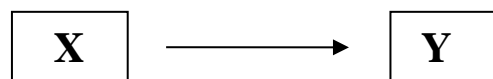
CHAPTER III

RESEARCH METHOD

This chapter discusses: (1) research design, (2) research variable, (3) operational definition, (4) population and sample, (5) data collection, (6) validity and reliability, (7) data analysis and (8) hypothesis testing.

3.1 Research Design

In this study, correlational research was conducted. Correlational research is quantitative method of research to determine whether or not there is a relationship between two or more variables. Creswell (2012) mentions “correlational designs gave an opportunity for researcher to predict score and explain the relationship among variables” (p.338). In this study, the learners’ autonomy is identifying by using questionnaire. Then, listening test was used to find out the students’ listening comprehension. And at least, I was found the correlation and influence between variables was analyzed through Statistical Package for Social and Sciences (SPSS) version 23. The design of correlational research is illustrated in the following figure:



Figur 1: ressearch design

X : Learners’ Autonomy

Y : Students Listening Comprehension

3.2 Research Variables

Creswell (2012) states “variable is a characteristic or attribute of an individual or organization that (1) researchers can measure or observe and (2) varies among individuals or organization studied” (p.112). There are two kind of variable, predictor and criterion variables. Predictor variable is to study in order to assess their possible effect(s) on one or more other variable. Furthermore, criterion variable is the variable that is hypothesises as being influence by the predictor variable.

In this study, the predictor is learners’ autonomy, while the criterion is listening comprehension of the eleventh grade students of MAN 2 Palembang.

3.3 Operational Definitions

To avoid the possibility of misinterpretation about some terms in this study, especially those used in this title, the definition is provided. There are terms that need to be defined in this study.

First, *correlation* is statistical measurement to determine the tendency of two or more variable, they are autonomy and listening comprehension of the students at MAN 2 Palembang.

Second, *autonomy* refers to the ability of the students at MAN 2 Palembang in taking responsibility for their own learning. In this study, the learners’ autonomy was found out by using the questionnaire.

And the last, *listening comprehension* refers to the process to understand the speaker’s meaning. In order to know listening comprehension of the eleventh

grade students of MAN 2 Palembang, a listening comprehension test was given to the students.

3.4 Population and Sample

3.4.1 Population

Frankel, Wallen, and Hyun states “population is area generalization which consisting of object or subject which has certain quality and characteristic to be decided by researcher to be studied and also concluded” (as cited in Herlina, 2016, p. 58). Furthermore, population is a group of individuals who have the same characteristics. The population of this study all of the eleventh grade students of MAN 2 Palembang. The total number of the student was 342 students. It consists of 9 classes. The classes were XI MIA 1, XI MIA 2, XI MIA 3, XI MIA 4, XI MIA 5, XI IIS 1, XI IIS 2, XI IIS 3, XI IIS 4. The distribution of population of the study as follow in table 2 below:

Table 2: Distribution of Population

No	Classes	Numbers of students
1	XI MIA 1	38
2	XI MIA 2	38
3	XI MIA 3	41
4	XI MIA 4	37
5	XI MIA 5	38
6	XI IIS 1	40
7	XI IIS 2	38
8	XI IIS 3	36
8	XI IIS 4	36
Total poupulation		342

Note: MAN 2 Palembang 2018/2019

3.4.2 Sample

Creswell states “sample is the group of participants in a study selected from the target population” (as cited in Lestari and Hollandyah, 2016, p. 49). In this study, I used convenience sampling, since the English teachers permitted me to take only 2 classes as the sample. Creswell states “in this sampling technique, the researcher selects the participant because that are willing and available to be studied” (as cited in Saputra and Marzulina, 2015, p. 8). This study, involved of 342 eleventh grade students at MAN 2 Palembang as the population. The only available samples were students of XI MIA 3 and XI IIS 1.

Total numbers of the students (XI MIA 3 and XI IIS 1) were 81 students, but there were only 75 students becoming the sample because some of them were absent at the day and joined outside school activities. The distribution of the sample is showed in the table 3 below:

Table 3. Sample of the Study

No	Classes	Number of Students
1	XI MIA 3	37
2	XI IIS 1	38
Total		75

3.5 Data Collection

In this study, there were two kinds of instruments that used to collect the data; learners’ autonomy questionnaire, and listening comprehension test.

3.5.1 Questionnaire

Johnson and Christensen explain “questionnaire as a self – report data collection instrument that each research participants fill out as part of the research study” (as cited in Habibi, Wchyuni and Husni, 2017, p. 99). To get the information about learners’ autonomy. Learners’ autonomy questionnaire was use which was ready made by Spratt, Humphreys, and Chan (2002). The aims to examine the learners’ autonomy and the items were answer on five-point Likert scale agreement (“strongly disagree” to “strongly agree”).

This questionnaire consists of 20 items based on four sources of autonomy and the time to answer the questionnaire was 20 minutes. Participants was asked to choose the option that best represents their opinions. The questionnaire items were classified into four terms based on the factor influence of learners’ autonomy. The classification of the questionnaire can be seen in the table 4.

Table 4: Learners’ Autonomy Questionnaire specifications

Autonomy Causes	Item numbers	Total Item
Awareness	2, 3, 16, 17, 20	5
Responsibility	4, 6, 7, 8, 11	5
Role of the teacher	1, 5, 9, 10, 19	5
Language strategies	12, 13, 14, 15, 18	5
Total		20

3.5.2 Listening Comprehension Test

In this study, listening test was used as the second instrument to gain the information about the students listening comprehension. I used a test to measure

students listening comprehension. Listening test was distributed for all samples. I used two types of question items (fill in the blank and multiple choice) based on syllabus. The listening test consists of 30 items, and this test was last in 45 minutes. The test was taken from English books for the eleventh grade students. Listening comprehension test has two sections. First section has 10 questions, and second section has 20 questions.

3.6 Research Instruments Analysis

3.6.1 Validity Test

Before distributing the instruments, the instruments should be valid. Fraenkel et al (2012) argue 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.

In this study, for the first instrument, I used ready-made questionnaire (Learners' Autonomy). Since I used a ready-made questionnaire, the construct validity were done. Then, the questionnaire was valid. The questionnaire consists of 20 items with five likert scale agreement ("strongly disagree" to "strongly agree"). For the second instrument, I used listening comprehension test. The test consists of 30 items with two types of question items (fill in the blank and multiple choice). In this instrument, I used all of the validity items, they are construct validity, validity of each question item, and content validity.

3.6.1.1 Questionnaire

In this study, I used a ready-made questionnaire. Meanwhile, it does not need to be tried out. I used construct validity to clarify the translation. There were some characteristics for expert judgments or validators, such as (1) English educational background, (2) English lecturer, and (3) minimum score TOEFL is 500.

Further, first, the questionnaire was translated into Bahasa Indonesia since the sample was non-English major students. To ensure the questionnaire had a good content, I asked from two English lecturers as validators to check the questionnaire translation appropriate or not.

As the results, all validators accepted the questionnaire with little revision based on EYD (Indonesian spelling).

3.6.1.2 Listening Comprehension Test

Validity test refers to consider when preparing or selecting an instrument for use. In this study, to know whether the test items are valid or not, I was done the tryout and then I analyze by using Pearson Product Moment in SPSS (Statistical Package for the Sosial Science) version 23 software to calculate the validity of the test was used. There were three kinds of validity was used. They were as follows construct validity test, validity test of each question item, and content validity test. cont

3.6.1.2.1 Construct Validity

Construct validity refers to judge or measure whether or not a test instrument well to measure students' ability. Hair argues "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, it was consulted to achieve some expert judgments from at least two validators to evaluate whether the components of the instrument are valid or not to be applied in research activities. There are some characteristics for expert judgments or validators, such as (1) English educational background, (2) English lecturer, and (3) minimum score TOEFL is 500.

In relation to the explanation above, I asked two lecturers of English Education Study Program at UIN Raden Fatah Palembang as validator in this study. Basen on the result carried out by validators I and II, the instruments could be used with liite revision. The first and the second validators gave B for both instruments. The result from the validators, it could be assumed that the instrument were appropriate to appllied in this study. After measuring the format of the instrument test, it was continue to do tryout to the eleventh grade student. The tryout was conduct in order to know the validity of insrument.

The construct validity measure instruction, time allocation, language structure, arrangement. If the test is considered valid by the validators, then it can be used in this study for measuring the listening comprehension of the students at MAN 2 Palembang.

3.6.1.2.2 Validity Test of Each Question Item

Validity test of each question item is used to indicate whether the test item of the instruments in each question is valid or not. In this study, to know the validity of each question items, I tried out to the eleventh grade students of MAN 2 Palembang on Friday, September 14th 2018 at 08.30 a.m – 09.30 a.m. The instrument of the test was tested to 33 students of the eleventh grade students, but only 31 students present at the day. The class was XI MIA 1, because this class was suggested by English teacher of MAN 2 Palembang. However, Basrowi and Soenyono state “a question item is considered valid if “r-output” is higher than “r-table” (as cited in Holandiyah, 2014, p. 33).

The score of the test was analyzed by using SPSS (Statistical Package for the Sosial Sience) version 23. To know whether it is valid or not, the score of significance (r-output) should be compared with the score of “r-table” product moment. If the result of the test shows that r_{output} is higher than r_{table} (with $N=31$) 0.355 with sample (N) is 31, it means that the item is valid.

As the result, there were 20 items fill in the blank, and 30 multiple choice items were given to 31 students at MAN 2 Palembang. It was found that there were 19 questions were considered invalid. It means that 19 items test could not be used as the intrument since the score of significance were lower than 0.355. Then 31 questions items were used as the instrument since the score of significance were higher than 0.355. there were only 30 valid questions items to be intruments. The further result analysis of validity in each question items.

3.6.1.2.3 Content Validity

The content and format must be consistent with the definition of the variable and sample of subject to be measured. 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). In this study, I was taken the instruments from the senior high school English book for the eleventh grade students written by Sudarwati and Grace (2014). In order to judge whether or not a test had content validity, a specification of the skill or structure has been made based on the curriculum and syllabus. The specification of the test is described in table 5 below:

Table 5: Test of Specification table

Objective	Test Mateial	Indicator	Number Items	Type of Test
1. The student are able to respond the written meaning of conversation such as expression of opinion and analytical exposition test	1. Expressions of Opinion 2. Analytical Exposition text	1. The student are able to find the detail factual information in conversation such as expression of opinion and analytical exposition text.	11, 12, 13, 14, 17, 18, 19, 20, 21, 22 <hr/> 15, 16, 23, 24	
2. The students are able to identify a variety of information in the text monologues; report, narrative,	3. Hortatory Exposition Text	2 Indentify a variety of information in the text monologues; report, narrative, analytical exposition,	25, 26, 27, 28, 29, 30	Multiple

analytical,
exposition
test and
expression
of opinion

hortatory
exposition
text

choice

3 Identify a
variety of
information
in the text
monologues;
expression of
opinion and
report text. 1, 2, 3, 4, 5, 6,
7, 8, 9, 10

Fill in the
blank

3.6.2 Reliability Test

3.6.2.1 Reliability of Learners' Autonomy Questionnaire

Before distributing the instruments, the instruments must be reliable. However, Johnson and Christensen (2012) state the score is considered reliable if the score of significance is at least or preferably higher than 0.70. In this study, for the first instrument I used ready-made questionnaire that has been reliable from Spratt, Humphreys, and Chan (2002) by using test-retest reliability technique with cronbach alpha 0.72 higher than 0.70, it means questionnaire was reliable.

Moreover, it was proved by some research study. Arcoc (2008) has done tried out learners' autonomy questionnaire to the eleventh grade students and he found reliability score was 0.78. Therefore, if the score is 0.70 or higher than 0.70 it means questionnaire reliable.

3.6.2.2 Reliability of Listening comprehension Test

Second, to know the reliability of the listening comprehension test, internal consistency reliability in Split half reliability coefficient with Spearman – Brown formula was used. This method was appropriate for multiple choice and fill in the blank items the calculation was done by using SPSS version 23. It was used to obtain te score of try out analysis.

To know the reliability test using split half method, p-output must be higher than 0.70. Moreover, it was found that the p-output of *spearman-brown formula* was 0.790. It means, this instrument was considered reliable for this study. The result of reliability analysis could be seen in table 6. (See Table 6)

3.6.3 Data Analysis

In analyzing the data, there were two kinds of data under analysis. They were the data of learners' autonomy questionnaire and students listening comprehension test. All the data obtained from the questionnaire and test was calculated statistically by using SPSS version 23.

3.6.3.1 Instruments Analysis

3.6.3.1.1 Analysis of Questionnaire

Firstly, The data from questionnaire would be analyzed to determine the learners autonomy level. The total number of the questiontions were 20 items. After distributing the questionnaire to the students, the questionnaire would be calculateed based on the students answer. The respons option was avalue of 1 point strongly disagree, a value of 2 point for disagree, a value of 3 points for no idea, a value 4 points for agree, and a value 5 for strongly disagree. For the score, the highest score was 100 and the lowest score is 20.

For the students score of learners' autonomy questionnaire were divided into three categories, "low autonomy", "medium autonomy" and "high autonomy". The description of categories in learners' autonomy questionnaire would be described in table 7.

Table 7: Specification interval of learners' autonomy

Interval	Categori	Description
20 – 46	Low	The learners' need guidance
47 – 73	Medium	The learners somewhat autonomous but still needs guidance in certain respect.
74 – 100	High	The learners is mostly autonomous and knows how to be effective in his/her learning.

The score was described by percenting a number of te students who got a certain score and it's interval between point on the category.

3.6.3.1.2 Analysis of Listening Comprehension Test

Secondly, The listening comprehension test was taken from the senior high school English book for the eleventh grade students written by Sudarwati and Grace (2014) that consisted of 30 items. The time to answer the questions is 45minutes. After distributing the listening comprehension test, the score of students listening comprehension test would be calculated by using formula that usually used by the teacher in the school. The correct answer will score 1 and the incorrect score answer 0.

Furthermore, the score category would taken based on the standard score in the school, it could be seen in the table below, it would use the students' score. The score from listening comprehension test would be analyzed by using SPSS statistics program to get the result or frequency data and descriptive statistics.

3.7 Pre-requisite Analysis

Since the study is in the notion of parametric statistic, correlation and regression, it was necessary to do pre-requisite analysis. Thus, before analyzing the data, I was found out whether the data distribution between the variable is normal and linear or not.

3.7.1. Normality Test

In this study, normality test is used to find out whether the data of autonomy questionnaire and listening comprehension are normal or not. Before analyzing the data for further analysis, normality test was done to measure whether the result of the students were normal or not. The test was considered

normal whenever it is higher than 0.05. When the data were normal, the result of the normality test can be generalized of the population. In measuring normality test, nonparametric test should be used. Then, in analyzing the normality I – Sample *Kolmogorov-Smirnov* in SPSS 23 was applied. If p-value is higher than 0.05, the data were normal to distribute.

3.7.2. Linearity Test

In this study, linearity test is conducted to know whether the data of autonomy questionnaire and listening comprehension test is linear or not. In measuring linearity test, I applied *Linearity test* in SPSS 23 to see if the data linear or not. If p-value is higher than 0.05 the two variables was linear.

3.8. Hypothesis Testing

3.8.1. Measuring the Correlation between Learners' Autonomy and Listening Comprehension

To find out whether or not there was a correlation between learners' autonomy and listening comprehension, *Pearson Product Moment* correlation

coefficient was used. If the significance value (Sig. 2-tailed) was higher than 0.05, it means there was a significance correlation.

3.8.2. Measuring Significance Influence between Learners' Autonomy and Listening Comprehension

In order to know learners' autonomy influence their listening comprehension, regression analysis was used. Regression was found if there is a correlation between two variables.