CHAPTER III
RESEARCH METHOD

In this chapter, the researcher presents research design, population and sample, research instrument, data collection, and data analysis.

3.1 Research Design

The research design in this study used quantitative correlation. According to Latief (2014), “Correlational research designs are used to measure the relationship between two or more continuous variables, like students’ IQ scores and their academic achievement, students’ reading skills and their writing skills.” It concludes that correlational research designs are the design to predict what the result of the research about the relationship between two variables. A correlational research relates to how the researcher identifies two variables to see how the relationship. The researcher uses the correlation because it investigates the relationship between grammar mastery and writing ability. Thus, the researcher knows how learning well in grammar can relate to the ability in writing.

According to Latief (in Charles, S.M. 1995:29), a variable is defined as “Characteristics that tend to differ from individual to individual, though any two or more individuals may have some variable trait or measure.” Based on that statement, the variable must also be measurable because it will get difficult to be objective in taking scoring of how the relationship between two variables.

In this research, there are two variables; $x$ and $y$. Variable $x$ is grammar mastery. Meanwhile, variable $y$ is writing ability.
3.2 Research Object

This section deals with the population, sample, and the sampling of the present study.

3.2.1 Population

According to Mcmillan (1996), “A population is a group of elements or cases, whether individuals, objects, or events, that conform to specific criteria and to which we intend to generalize the results of the research.” It concludes that a population is a group of individuals that have similar characteristics. Moreover, the population of this research is the eighth grade of students at MTsN 3 Jembrana in The Academic Year of 2016/2017. There are 188 students of eighth class at MTsN 3 Jembrana as the population.

Target population which is in the eighth grade of MTsN 3 Jembrana, are too large. Latief (2014) stated that “Target population is usually too large to reach, so the researchers usually limit the sources of the data into the accessible population, the sources of data that the researchers have access to get the data from.” It means the target population is usually the target that has a lot of individuals to be the data of research. That is why the accessible population must be thought in the process of collecting the data. Based on that statement, the target population that the researcher takes must be limited. The population in this research is 188 students.

3.2.2 Sample

According to McMillan (1996), “The sample is the group of elements, or a single element, from which data are obtained.” It concludes that sample is the data that is generated from population. For example, there is the seventh class of eighth
grade. In this research, the researcher only takes one class to be a sample to collect the data.

Therefore, the researcher chooses the eighth grade of students at MTsN 3 Jembrana in The Academic Year of 2016/2017 from class C of the eight-grade as a sample. The number of the sample is 36 students.

3.2.3 Sampling

In this research, the researcher uses cluster sampling to decide a sample. Latief (2014) (in Charles, C.M. 1993:98 et al) stated, “Cluster sampling technique involves the random selection of groups that already exists. Instead of selecting a sample of 50 students of 4th grade from the school population, we can just select the 4th grade classes.” Based on that statement, cluster sample is used when the population is large and widely dispersed. Moreover, cluster sampling is the technique to determine a sample that helps the researcher to choose a sample by involving the random selection of groups. From the population in the MTsN 3 Jembrana that consist 188 students, by using cluster sampling, the researcher chooses VIII C as a sample, they are 36 students.

3.3 Data Collection

In this activity, the researcher collects the data by using two instruments. They are the score of testing grammar and documentation score of eighth-grade students in the subject of writing.

3.3.1 Technique and Instrument
In this subtopic, the research uses a test to take a score of grammar and writing.

### 3.3.1.1 Test

According to McNamara (2000), “What is true of testing in general is true also of language testing, not a topic likely to quicken the pulse or excite much immediate interest.” Based on that statement, testing is the activities to assess the skill or ability in order to know how the competence those participants have.

In this research, the data of scoring in writing test is used to look for the correlation coefficient by using the Pearson Product Moment formula after testing a grammar to the students. Therefore, the researcher can describe the finding and the conclusion. Moreover, in the test of grammar, the researcher does try out the test material to other class that has almost same characteristics to the participants, such as age, the learning background, general proficiency level, etc.

#### a. Test of Grammar

The researcher conducts the grammar test to VIII C students. In the most of questions, the researcher focuses in simple present tense because the subject of writing in VIII class is Descriptive Text which uses Simple Present Tense in conducting the text. Moreover, the students also have learned about this material because the teacher has already given the material about Descriptive Text which also learns about Simple Present Tense. The researcher gives a multiple choice, fill in the blank, making a Simple Present
Tense sentences test. It consists of 10 multiple choices, 5 fill in the blank, and 5 making sentences test. The total numbers of the test are 20 questions.

b. Test of Writing

In collecting data of writing, the researcher also uses the test. The researcher asks students to make a simple Descriptive Text. For the topic of the text, the researcher has already prepared 6 pictures that students can choose to be the topic to describe; they are the pictures of bedroom, school, rabbit, roses, people, and cat. The researcher checks the score of text and the grammar whether it correlates in their score of writing. The table of writing assessment rubric to give score (Heaton, 1988) is in Appendix.

Test trial is done for checking the validity in the reliability of the test. The researcher consults to the advisor about the instrument that has finished. Furthermore, the researcher does try out the instrument. 36 students of VIII C are taken as the subject of the test takers.

1. Validity

According to Carmines and Zeller (1979), “Validity as the extent to which any measuring instrument measures what it is intended to measure.” Based on that statement, validity is considering the purpose of the test, the construct, the test content, test method, and domain. Moreover, validity is measuring what is supposed to measure.

In validating the test in this research, the researcher uses ANATES V4. The test contained 10 numbers of multiple choices and 10 numbers of essays. In multiple choices, it is found that 2 number items of test are very
significant, 4 number items are significant, and 4 number items are insignificant.

2. **Reliability**

According to Carmines and Zeller (1979), “Reliability concerns the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials.” Based on that statement, reliability is ensuring whether the result of the experiment is similar in repeated trials. In this research, the reliability of the test is measured using ANATES V4. The reliability in the test measures about the mean, the standard deviation, the correlation, and the reliability of the test.

In reliability of the test for multiple choices, it is found:

- Mean: 6.65
- Standard deviation: 2.64
- Correlation: .77
- Reliability of tests: .87

A test which has reliability coefficient among .81 – 1.00 has been very reliable.

**Table 3.1**

**Category of Reliability** (Zainal Arifin, 2009)
3.4. Procedures

The procedures of collecting the data as follows:

1. Making questions of the test based on the syllabus of Curriculum 2013.
2. Deciding the class to be researched by using cluster sampling technique.
   Cluster sampling is the technique to determine a sample that helps the researcher to choose a sample by involving the random selection of groups.
3. Do the try out to find the validity and reliability of the test in VIII E class.
4. Do the test of grammar and writing to the VIII C class.
5. Counting and analyze the result of the test.

3.5 Data Analysis

In analyzing the data, the research uses Pearson Product Moment’s Correlation which developed by Carl Pearson. According to Chee, 2015 (in Cramer, 1998), “Pearson’s r is a measure of the linear relationship between two interval or

<table>
<thead>
<tr>
<th>Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00 – .20</td>
<td>Unreliable</td>
</tr>
<tr>
<td>.21 – .40</td>
<td>Less Reliable</td>
</tr>
<tr>
<td>.41 – .60</td>
<td>Sufficient</td>
</tr>
<tr>
<td>.61 – .80</td>
<td>Reliable</td>
</tr>
<tr>
<td>.81 – 1.00</td>
<td>Very Reliable</td>
</tr>
</tbody>
</table>
ratio variables, and can have a value between -1 and 1.” It concludes that it has a variable X and Y.

a. Interpreting the index scores of r correlation, product moment (r_{xy}), usually uses the interpretation such as bellow (Beldjazia, 2016 (in Evans (1996)):

<table>
<thead>
<tr>
<th>The score of “r” product moment (r_{xy})</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00-.19</td>
<td>Very week (no significant correlation)</td>
</tr>
<tr>
<td>.20-.39</td>
<td>Weak (the correlation is little or weak)</td>
</tr>
<tr>
<td>.40-.59</td>
<td>Moderate (the correlation is medium)</td>
</tr>
<tr>
<td>.60-.79</td>
<td>Strong (high correlation)</td>
</tr>
<tr>
<td>.80-.1.0</td>
<td>Very strong (very high correlation)</td>
</tr>
</tbody>
</table>