CHAPTER III

METHODOLOGY OF THE RESEARCH

A. The Method of Research

This is very important to know and use the right method in order to get a good understanding about the problem being researched. And research is equally important for social scientists in studying social relationships and in seeking answers to various social problems and in seeking answers to various social problem.¹

The writer must know about explaining the definition of experimental research, Nunan said that “Experiment is a procedure for testing a hypothesis by setting up a situation in which the strength of the relationship between variables can be stated”.² Then the writer use quasi experiment, in which the research give certain treatment to experimental class to find whether or not there are significant of difference of

students’ speaking skill after being treated by using diorama media.

**Table 3.2 The Design of the Research**

<table>
<thead>
<tr>
<th>group</th>
<th>independent variable</th>
<th>dependent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>experimental</td>
<td>diorama model</td>
<td>students’ speaking ability</td>
</tr>
<tr>
<td>group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>control group</td>
<td>conventional techniques</td>
<td>students’ speaking ability</td>
</tr>
</tbody>
</table>

**B. Placed and Time**

To examine the effect of using diorama activities in students’ speaking skill, in this research the researcher took the location SMKN 1 Malingping. It is located at Jl. Beyeh-Simpang KM, Lebak, Banten.

This research will conduct on the second semester in the academic year 2018/2019.
C. Population

According to Suharsimi Arikunto, a population is a set (or collection of all elements processing one or more attributes of interest.\(^3\) So the population is taken of whole subject or person in study to get required data. The population of these study students of second grade of SMKN 1 Malingping in the class X with 380 students.

Table 3.3 The table of population of the research

<table>
<thead>
<tr>
<th>No.</th>
<th>CLASS</th>
<th>STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X AP</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>X AK</td>
<td>35</td>
</tr>
<tr>
<td>3</td>
<td>X AK 2</td>
<td>35</td>
</tr>
<tr>
<td>4</td>
<td>X TO 1</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>X TO 2</td>
<td>31</td>
</tr>
<tr>
<td>6</td>
<td>X TE 1</td>
<td>27</td>
</tr>
<tr>
<td>7</td>
<td>X TE 2</td>
<td>35</td>
</tr>
<tr>
<td>8</td>
<td>X TM 1</td>
<td>34</td>
</tr>
</tbody>
</table>

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D. Sample

Sample is collecting data with small amount of population that tested at the research. Nunan stated that “sample is a subject of individual or cases from within the population”.

In taking sample the researcher use no random technique, because it is one of the characteristic from quasi-experiment.

The researcher took two classes as the samples of research; they are students in class X PJP 1 as control class which consists of 27 Students and they were taught without diorama activities. While students in class X PJP 2 as

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>X TM 2</td>
<td>28</td>
</tr>
<tr>
<td>10</td>
<td>X PJP 1</td>
<td>27</td>
</tr>
<tr>
<td>11</td>
<td>X PJP 2</td>
<td>28</td>
</tr>
<tr>
<td>12</td>
<td>X KL</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>380</td>
</tr>
</tbody>
</table>

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4 Nunan, *research method in language learning*, 231
experimental class that consists of 28 students, they were taught using diorama activities.

E. The Research Instrument

An instrument is needed to collect the data collection. Instrument of the research played an important role in research project. The instruments were used to achieve the accuracy of the data and can indicate that researcher was successful in his research. The researcher used an oral test as instrument to get the data. To collect the data, The researcher gave students twice tests, those are pre-test and post-test. The pre-test was aimed at measuring the students’ preliminary their speaking knowledge and achievement before they entered the experimental circle. The post-test was aimed at finding out the data needed to evaluate after got the experiment.

The form of speaking test was to express of students’ performance. The student discussed in group using media dioramas that have been given with their own word. Then, the
researcher got the score from Grammar, Vocabulary, Comprehension, Fluency, and Pronunciation.

The researcher gave two minutes to student’s group to speak use media dioramas with their own word in front of the class. In giving the score, the researcher used oral proficiency scoring categories from Jack C. Richards and Willy A. Renandya.

The scoring consists of five items: Grammar, Vocabulary, Comprehension, Fluency, and Pronunciation. It is shown as follows:

**The rating sheet of speaking test**

Name : ………………

Class : ………………

**Table 3.4 The Criteria of Students’ Score**

<table>
<thead>
<tr>
<th>Proficiency Description</th>
<th>-&gt;</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accent</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammar</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
<td>30</td>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conversational English Proficiency Weighting Table

<table>
<thead>
<tr>
<th>Vocabulary</th>
<th>4</th>
<th>8</th>
<th>12</th>
<th>16</th>
<th>20</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluency</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Comprehension</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>15</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conversational English Proficiency Weighting Table

<table>
<thead>
<tr>
<th>Letter</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>83 – 99</td>
<td>Very Good</td>
</tr>
<tr>
<td>B</td>
<td>63 – 82</td>
<td>Good</td>
</tr>
<tr>
<td>C</td>
<td>43 – 62</td>
<td>Enough</td>
</tr>
<tr>
<td>D</td>
<td>26 – 42</td>
<td>Less</td>
</tr>
<tr>
<td>E</td>
<td>16 – 25</td>
<td>Low</td>
</tr>
</tbody>
</table>

1. Tape Recorder

Recording was used to record the students’ voice when they speak during the test. The researcher used a tape recorder like hand phone. The purpose this recording is to analyzing the scoring rubric of speaking.
F. Technique of Data Collecting

The writer use technique of data collecting in this research is test. In order to get the valid information that will support the researcher. She uses test to for knowing the result study of speaking before and after using chain pictures. The data collection process is nothing other than doubling of primary data for research purposes. In accordance with the necessary data in this study, the technique data collection in this study includes:

1. Test

   Test is an instrument or procedure designed to elicit performance from learners with the purpose of measuring their attainment of specifies criteria.

   a. Pre-test

   The writer use pre-test for knowing the skill of the students before use diorama activities, the students have to make their daily activities and the students practice in front of the class.
b. Post-test

Both experiment and control class will face the post-test after giving the treatment for experimental class. It will be used to measure the effect of diorama activities toward students’ speaking ability.

G. The Technique Of Analysis Data

The technique of analysis data in this research uses Test-t. According to Anas Sudijono Test-t is used for testing the null hypothesis of the mean differences of two samples. Because the quasi experiment use pre-test and post-test then the writer uses this test to measure the final test between experiment class and control class.

The steps for statistic analyze that are:

1. Determining mean of variable X1 with formula:

$$M_1 = \frac{\sum X_1}{N_1}$$

2. Determining mean of variable X2 with formula:

$$M_2 = \frac{\sum X_2}{N_2}$$

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6 Anas Sudijono, *PengantarStatistikPendidikan*. P. 314
3. Determining derivation score variable $x_1$ with formula:

$$x_1 = x_{1-M_1}$$

4. Determining derivation score variable $x_2$ with formula:

$$x_2 = x_{2-M_2}$$

After collecting the data from pre-test and post-test, the researcher analyze it by using statistic calculation of t-test by using fisher formula with significance degree 5% and 1%.

The formula is as follow:

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\right) \left(\frac{N_1 + N_2}{N_1 \cdot N_2}\right)}}$$

Notes:

- $M_1$ = Mean score of the experiment class
- $M_2$ = Mean score of the control class
- $\sum x_1^2$ = Sum of square deviation score in experiment class
- $\sum x_2^2$ = Sum of square deviation score in control class
- $N_1$ = Number of students of experiment class
- $N_2$ = Number of students of control class
\[
\begin{align*}
2 & = \text{Constant number} \\
\text{df} & = \text{Degree of Freedom} \ (df = N_1 + N_2 - 2)
\end{align*}
\]

H. Research Procedure

In general, the procedure of this research can be described as follows:

1. Provide pre-test of the experimental class and control class.

2. Provide treatment to the experimental class using diorama activity (about kitchen and room) control class without diorama activity as follow:

   a. **Experimental Class**
      
      1) Preparation
         
         a) Preparing the lesson plan
         
         b) Preparing the material
         
         c) Preparing media diorama (about kitchen and room)
      
      2) Implementation
         
         a) Teacher explain the material
         
         b) Teacher gives the example
c) Teacher guide students to make group and discuss the material and give the diorama activity
d) Teacher guide students to speak the result of discussion.

b. Controlled Class

1) Preparation
   a) Preparing the lesson plan
   b) Preparing the material

2) Implementation
   a) Teacher explain the material
   b) Teacher gives the example
   c) Teacher ask the students to speak in front of class

3. Provide post-test of the experimental class and control class.

4. Analyzing the data from pre-test and post-test

5. Drawing the interpretation based on the result of test and making conclusion.