Chapter III

Methodology of Research

In this chapter methodology of research, the researcher will be discuss about methodology of research, population and sample, variable of research, research design, technique of collecting the data, technique of analyzing the data, normality testing and hypothesis verification.

Method of Research

This research, the researcher was use quantitative namely experimental method. Sugiyono (2012, p.111-113) describes that experimental consist of three design, they are 1) the one shot case study. 2) the one pre-test and post-test. 3) the statistic group comparison. In this research, the researcher would like to make the pre-test and post-test. The pre-test would give before the instrument and the post-test is given the treatment by using presentation, practice and production (PPP) method.

Population and Sample

Population.

The population of this research was the whole students of the tenth grade of MAN Batudaa that consist of 103 students. It can be seen in the table as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Class</th>
<th>The Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X^A</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>X^B</td>
<td>27</td>
</tr>
<tr>
<td>3</td>
<td>X^C</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>X^D</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>103 students</td>
</tr>
</tbody>
</table>

The school’s data of MAN Batudaa 2012/2013 Academic Years
Sample.

In this research, the researcher took purposive sampling as the method in taking the sample. The researcher took only one class of the 10th grade namely class D as the sample of this research, which consist of 24 students. The researcher choose this class because they already study English especially in speaking, the students ability in this class are various, the students still not want to speak English and they afraid to do mistake when the teacher give questions.

Variable of research

The variable of this research are:

Variable X : PPP method as the independent variable.
Indicator : the application of PPP method.
Variable Y : Students’ speaking ability as dependent variable.
Indicator : the students’ ability in speaking.

Research Design

This research, the researcher would be using experimental designs. There are:

Pre-test.

Pre-test was giving to the students before treatment. The researcher used an oral test. It was used to know the basic of students speaking ability before the application of PPP method. In this case the researcher gives some topics to the students about describe things. After that, the researcher asks them to report one by one in front of the class.
Treatment.

In this step, the researcher was applying the PPP method in teaching and learning process of English speaking skills. The researcher was conducted the treatment in 3 meetings. The process of presenting the lesson focuses on teacher giving information to the students. The goal of presentation stage is to introduce the new material to the learners. The practice process is focused on teacher and students working and interacting together to put the new material into practice. Production focuses on students demonstrating their ability to the teacher so the teacher can observe what the individual students have learned and which students need additional support. In this case, the students have to describe by choosing one thing that the researcher prepared before and the students arrange sentences related to their ideas. After that the students report one by one in front of the class. And the researcher pays attention to the students’ pronunciation, grammar, vocabulary, fluency and comprehension.

Post-test.

Post–test is the last step. The researcher wants to find the influences applying of PPP method in increasing the students’ speaking ability. It was measured like in pre-test.

Here is the design of pre-experimental:

\[
O_1 \quad \times \quad O_2
\]
Where:

\[ O_1 = \text{Pre-test} \]
\[ X = \text{Treatment} \]
\[ O_2 = \text{Post-test} \]

(Sugiyono, 2012, p.112)

**Technique of Collecting Data**

The data of this research was collected by using oral test. The students are asking to speak and explore their ideas about the material that the researcher offers them. And it was collecting by using audio record. The oral test is use in order to evaluate the students’ speaking ability, there are: pronunciation, vocabulary, grammar, fluency and comprehension. The type of the test was oral test by using the scoring rubric of speaking.

Oral proficiency scoring categories (Brown, 2004, p.172-173), there are follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Name of Students</th>
<th>Aspects of Speaking</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pronunciation (1-5)</td>
<td>Vocabulary (1-5)</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The maximal score in this rubric is 25 score. So that the result of this research used the formula:

\[ \bar{X} = \frac{\sum x_i}{n} \]

Arikunto, (2007, p.275)

Where:
\( \bar{X} \): The average of total score
\( \sum X_i \): The total number of students’ score
\( n \): The number of sample

**Technique of Analyzing the Data**

The data of this research will analyze by quantitatively. The researcher was using statistical analysis, in analyzing the data the researcher using T-Testing.

Verification test using t-test:

\[ t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N - 1)}}} \]

Where:
\( Md \): the different mean score between pre-test and post-test.
\( xd \): deviation of each sample (d - Md)
\( \Sigma x^2 d \): the total of square deviation
\( N \): the number of samples
\( d.b. \): \( N - 1 \)
\( t \): calculation of t-testing

(Arikunto 2010, p.350)
\[ S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \]

\( \bar{X}_1 \): The average value of Pre-Test

\( \bar{X}_2 \): The average value of Post-Test

\( n_1 \): The number of sample of Pre-Test

\( n_2 \): The number of sample of Post-Test

\( S_1 \): Standard of deviation of Pre-Test

\( S_2 \): Standard of deviation of Post-Test

\( S \): Standard deviation of pre-test and post-test

(Sudjana, 2002, p.239)

**Normality testing.**

Normality testing is the prerequisite for using \(-t\) testing. The normality testing also is to know whether the data are normal or not. In analyzing the data, the researcher will use procedures of the Liliefors method with the real stage \( \alpha = 0.05 \) by using procedure as follows:

Observations \( X_1, X_2, X_3, \ldots, X_n \) is become deviation

\( Z_1, Z_2, Z_3, \ldots, Z_n \)

By using the formula as follows:

\[ Zi = \frac{Xi - \bar{X}}{S} \]
Where $Z_i$ = Standard of value

$\bar{X}$ = The average of total score

$S$ = Total of deviation score

Distribution of normal and then counted the deviation by using the formula as follows:

$$F(Z_i) = P(Z \leq Z_i)$$

Counting proportion $Z_1, Z_2, Z_3, ... Z_n$ which is small or similar with $Z_i$. If this proportion is $S(Z_i)$

$$S(Z_i) = \frac{\text{Amount } Z_1, Z_2, Z_3, ..., Z_n \leq Z_i}{N}$$

Count the deviation of $F(Z_i) - S(Z_i)$ and then set the absolute value.

Take the big value among the absolute value deviation, which is called as $Lo$

The criterion of analysis, the data is normal distribute if $Lo \leq L_{list}$

(Sudjana, 2002, p. 466-467)
Hypothesis verification.

In verifying the hypothesis of this research, the researcher will be use the level of significance $\alpha = 0.05$ with the criteria as follows:

a. The hypothesis ($H_0$) will be received if

$$= -t\left(1 - \frac{1}{2\alpha}\right) < t < t\left(1 - \frac{1}{2\alpha}\right)$$

b. The hypothesis ($H_0$) will be rejected if

$$= -t\left(1 - \frac{1}{2\alpha}\right) > t > t\left(1 - \frac{1}{2\alpha}\right)$$

Specifically, the hypothesis of this research, the formulation previous could be elaborate in the following points:

a. The hypothesis ($H_0$) will be received if $t_{count} < t_{list}$. It is mean the application of presentation, practice and production method could not increase students’ speaking ability.

b. The hypothesis ($H_0$) will be rejected if $t_{count} > t_{list}$. It is mean the application of presentation, practice and production method could increase students’ speaking ability.

Also, we can use verifying the hypothesis of hypothesis alternative:

$$H_0 : \mu_{o1} = \mu_{o2} \quad \text{It means rejected}$$

$$H_1 : \mu_{o1} \neq \mu_{o2} \quad \text{It means received}$$