

## CHAPTER III

### RESEARCH METHODOLOGY

This chapter discussed the following points, which were method of the research, operational definition, teaching procedures, research variable, population and sample, technique for collecting the data, validity and reliability, and technique for analyzing the data.

#### A. Method of the Research

In this research, the researcher used quantitative method. Creswell (2014, p. 23) states that quantitative methods involve the processes of collecting, analyzing, interpreting and writing the result of the study in a manner consistent with a survey or experimental study. In this research, an experimental design was used in which attitudes were assessed both before and after an experimental treatment. There are three kinds of experimental design, namely pre-experimental design, quasi-experimental design and true-experimental design.

In this research, the researcher chooses pre-experimental design. Creswell explains that with pre-experimental designs, the researcher studies a single group and provides an intervention during the experimental. This design does not have a control group to compare with the experimental group. That was the pre-test and post-test one group design. So, in this research shows in diagram below:

Group A O1 \_\_\_\_\_ X \_\_\_\_\_ O2

Where:

O1 : Pre-test

X : Treatment

O2 : Post-test

*(Source: Creswell, 2014, p. 220)*

## **B. Operational Definition**

There were two major terms which were needed to be defined operationally for the purposed study, they were:

### **a. Speaking**

Speaking is the one of the four basic competence in English learning that be tested in this research

### **b. Information Gap Technique**

Information Gap Technique is one of technique in teaching speaking that chooses by the researcher in teaching speaking at SMK N 02 OKU majoring Hotels' Accomodation class.

## **C. Teaching Procedures**

In this research, there were eight meeting in teaching consisted of once pre-test and post-test and six times of giving a treatment. There were several steps that used by the researcher in teaching speaking English or give a treatment using Information Gap Technique, they were:

### **a) Pre-activity (10 minutes)**

- Praying
- Checking the attendance
- Informing the learning objective and learning activities

### **b) Whilst activity (40 minutes)**

- Teacher explain the material in about Guest Handling
- Teacher introduce the Information Gap Technique to the students
- Teacher divided the students to group in pairs

- One student is given a picture that prepared by the teacher before about Guest Handling, then the other student is guessing what his friend means
- One by one group in pair is speak in front of the class

c) Post-activity (10 minutes)

- Together with the teacher, students summarizes the lesson
- Doing reflection on what they have got from the lesson
- Getting feedback for the learning process
- Getting homework and information of the next meeting's lesson
- Praying

#### **D. Research Variable**

The title of this research was “Using Information Gap Technique to Improve the Tenth Grade Students’ Speaking Ability at SMK N 02 OKU.” So, there were two variables in this study, they were independent variable and dependent variable. According to Creswell (2014, p. 217), independent variables are those that (probably) cause, influence, or affect outcomes. They are also called treatment, manipulated, antecedent or predictor variables. Although dependent variables are the response or the criterion variable presumed to be caused by or influenced by the independent treatment conditions and any other independent variables. In this research, the independent variable was Information Gap Technique than the dependent variables was speaking ability of the students.

## **E. Population and Sample**

### **1. Population of the Research**

Fraenkel and Wallen (2008, p. 91) explains that a population is the group of interest to the researcher, the group to whom the researcher would like to generalize the result of the research. So, the researcher concludes that population is a group of individuals or items that have some characteristics from which data can be gathered and analyze. The population of this research was all of the tenth grade students at SMK N 02 OKU in Academic Year 2021/2022. The population can be seen in table 1 below:

**Table 1 Population of the Research**

| <b>No</b>    | <b>Class</b>             | <b>Number of Students</b> |
|--------------|--------------------------|---------------------------|
| <b>1</b>     | X Cullinary              | 30                        |
| <b>2</b>     | X Fashion 1              | 30                        |
| <b>3</b>     | X Fashion 2              | 34                        |
| <b>4</b>     | X Beauty                 | 26                        |
| <b>5</b>     | X Computer and Network 1 | 34                        |
| <b>6</b>     | X Computer and Network 2 | 34                        |
| <b>7</b>     | X Hotel's Accomodation   | 23                        |
| <b>8</b>     | X Accounting 1           | 24                        |
| <b>9</b>     | X Accounting 2           | 27                        |
| <b>Total</b> |                          | <b>262</b>                |

*(Source of data: SMK N 02 OKU in Academic Year 2021/2022)*

### **2. Sample of the Research**

According to Fraenkel and Wallen (2008, p. 90), sample is a smaller group on which information obtained. In this research, the researcher used cluster random sampling. From this cluster random sampling, the researcher selected a specific number of the class. Fraenkel and Wallen (2008, p. 95) state that cluster random sampling is the selection of groups, or clusters, of subjects rather than

individuals. It means that cluster random sampling select the samples in a wide population based on the group of the class. The procedures of selecting the sample with using cluster random sampling were as follow: 1) Write all the names of the classes on a paper than rolling the paper, 2) Put the name of the classes into a glass, and 3) The researcher picked X of Hotel's Accomodation class as a sample of this research. The data of sample in this research could be seen in the following table below:

**Table 2 Sample of the Research**

| No    | Class                        | Gender | Number of Students |
|-------|------------------------------|--------|--------------------|
| 1     | X Hotel's Accomodation Class | Male   | 10                 |
|       |                              | Female | 13                 |
| Total |                              |        | 23                 |

*(Source of data: SMK N 02 OKU in Academic Year 2021/2022)*

#### **F. Technique for Collecting Data**

The data for this research was collected by using speaking test. The test was administered twice, a pre-test and post-test. The pre-test was given at the first time for students to measure their ability in speaking before treatment by using Information Gap Technique. Then, post-test was administered to find out the students' speaking achievement after the treatment. The result of pre-test was compared to post-test after teaching through Information Gap Technique.

## **G. Validity and Reliability**

### **1. Validity**

In giving the test to the students, the researcher considered about validity of the test. Cohen, et al (2007, p. 133) says that validity is an important key to effective research. Validity is thus a requirement for both quantitative and qualitative research. In this research, the researcher used Content Validity to measure the test is good or not. According to Sekaran and Bougie (2013, p. 139), content validity ensures that the measure includes an adequate and representative set of items that tap the concept. The test has a high content validity if the terms are representative of the population of possible task. To make the test has a high degree of content validity; the researcher devised the test item in accordance with the objective of the test that is to find out the students' ability in speaking English. In order to know if the contents of the test items given were appropriate or not, the researcher used the content validity. In order to make the test had a great content validity constructed the test of specification, the researcher constructed the test specification items as follows:

**Table 3 Specification of Test Item**

| <b>Objective</b>   | <b>Indicator</b>   | <b>Test Material</b> | <b>Test Format</b> | <b>Time</b> | <b>Number of Item</b> |
|--|--|----------------------|--------------------|-------------|-----------------------|
| To find out the tenth grade students' speaking ability at SMKN 02 OKU in majoring Hotel's Accomodation Class | <ul style="list-style-type: none"> <li>• The students are able to speak the sentences fluently</li> <li>• The students are able to pronounce words correctly</li> <li>• The students are able to choose the correct word</li> <li>• The students are able to speak clearly and easy to comprehend</li> <li>• The students are able to speak with good facial expression and communicative</li> </ul> | Describing picture   | Oral test          | 5-7 minutes | 1                     |

## **2. Reliability**

The reliability refers to the consistency of the test score. Sekaran and Bougie (2013, p. 141) states that, reliability is an indication of the stability and consistency with which the instrument measures the concept and helps to asses the “goodness” of a measure. It is concern with precision and accuracy. In this research, the researcher used inter-item correlation reliability. According to Cohen,. et al (2007, p. 148), inter-item correlation reliability is the correlation of each item with the sum of all items with the sum of all the scales. This is a measure of the internal consistency among the items. An alternative measure of reliability as internal consistency to as Cronbach’s Alpha, frequently referred to as alpha coefficient of reliability or simply the alpha.

In this research rank different correlation related the correlation between the students' score from the first rater (R1), the second rater (R2) and the third rater (R3). The English teacher of SMK N 02 OKU was the first rater (R1) and the second rater (R2), and the third rater (R3) was the researcher. To determine which number of item is reliable or not, compare the Cronbach's Alpha with the Criteria Point 0,70 (Sekaran and Bougie, 2013). The reliable item is the item which had Cronbach's Alpha more than Criteria point 0,70. So, the researcher concluded two hypotheses as follow:

- a) If Cronbach's Alpha is more than 0,70; it means that the items of instrument are reliable.
- b) If the Cronbach's Alpha is less than 0,70; it means that the items of instrument are not reliable.

Try out was administered on January, 25<sup>th</sup> 2022 to the non sample students of SMK N 02 OKU. The data were got from three raters. The first rater and the second rater were the English teacher at SMK N 02 OKU, they were Suryati, S.Pd and Ramayana, S.Pd., then the third rater of this research was the researcher herself. The data of distribution score in try out showed in table below.



**Table 4 The Result of the Try Out**

| No           | Name Code | Score      |            |            |               |            |            |            |            |            |            |            |            |             |            |            | Total       |             |             | Total        | Score         |
|--------------|-----------|------------|------------|------------|---------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|-------------|-------------|-------------|--------------|---------------|
|              |           | Fluency    |            |            | Pronunciation |            |            | Accuracy   |            |            | Clarity    |            |            | Performance |            |            |             |             |             |              |               |
|              |           | R1         | R2         | R3         | R1            | R2         | R3         | R1         | R2         | R3         | R1         | R2         | R3         | R1          | R2         | R3         |             |             |             |              |               |
| 1            | AA1       | 4          | 4          | 4          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 17          | 16,3         | 81,7          |
| 2            | AA2       | 4          | 4          | 4          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 17          | 16,3         | 81,7          |
| 3            | ARJ       | 3          | 4          | 3          | 2             | 3          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 3           | 3          | 3          | 12          | 16          | 12          | 13,3         | 66,7          |
| 4            | AA3       | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 3           | 3          | 3          | 12          | 15          | 12          | 13,0         | 65,0          |
| 5            | AM        | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 3           | 3          | 3          | 12          | 15          | 12          | 13,0         | 65,0          |
| 6            | BZ        | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 3           | 3          | 4          | 12          | 15          | 13          | 13,3         | 66,7          |
| 7            | CCN       | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 11          | 15          | 12          | 12,7         | 63,3          |
| 8            | DLPU      | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 11          | 15          | 12          | 12,7         | 63,3          |
| 9            | DJ        | 4          | 4          | 4          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 17          | 16,3         | 81,7          |
| 10           | FAVZ      | 4          | 4          | 4          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 17          | 16,3         | 81,7          |
| 11           | FNPJ      | 4          | 4          | 4          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 17          | 16,3         | 81,7          |
| 12           | IS        | 4          | 4          | 4          | 3             | 3          | 2          | 3          | 3          | 2          | 3          | 3          | 2          | 3           | 3          | 4          | 16          | 16          | 14          | 15,3         | 76,7          |
| 13           | JAG       | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 11          | 15          | 12          | 12,7         | 63,3          |
| 14           | JF        | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 11          | 15          | 12          | 12,7         | 63,3          |
| 15           | JA        | 3          | 4          | 3          | 2             | 2          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 3           | 3          | 3          | 12          | 15          | 12          | 13,0         | 65,0          |
| 16           | JIZ       | 4          | 4          | 3          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 16          | 16,0         | 80,0          |
| 17           | MY        | 4          | 4          | 3          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 16          | 16,0         | 80,0          |
| 18           | M1        | 4          | 4          | 3          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 16          | 16,0         | 80,0          |
| 19           | M2        | 3          | 4          | 3          | 2             | 3          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 11          | 16          | 12          | 13,0         | 65,0          |
| 20           | NMT       | 3          | 4          | 3          | 2             | 3          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 11          | 16          | 12          | 13,0         | 65,0          |
| 21           | NM        | 4          | 4          | 4          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 2          | 3           | 3          | 4          | 16          | 16          | 16          | 16,0         | 80,0          |
| 22           | RDA       | 4          | 4          | 4          | 3             | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3           | 3          | 4          | 16          | 16          | 17          | 16,3         | 81,7          |
| 23           | RIP       | 4          | 4          | 4          | 3             | 2          | 2          | 3          | 3          | 2          | 3          | 3          | 2          | 3           | 3          | 4          | 16          | 15          | 14          | 15,0         | 75,0          |
| 24           | RAD       | 3          | 4          | 4          | 2             | 3          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 11          | 16          | 13          | 13,3         | 66,7          |
| 25           | SIS       | 2          | 4          | 4          | 2             | 3          | 2          | 3          | 2          | 2          | 3          | 2          | 2          | 3           | 3          | 3          | 10          | 16          | 14          | 13,3         | 66,7          |
| 26           | SW        | 2          | 4          | 4          | 2             | 3          | 3          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 10          | 16          | 14          | 13,3         | 66,7          |
| 27           | VN        | 2          | 4          | 4          | 2             | 3          | 2          | 2          | 3          | 2          | 2          | 3          | 2          | 2           | 3          | 3          | 10          | 16          | 13          | 13,0         | 65,0          |
| 28           | YF        | 3          | 4          | 4          | 3             | 3          | 3          | 2          | 3          | 2          | 2          | 3          | 3          | 3           | 2          | 3          | 13          | 15          | 15          | 14,3         | 71,7          |
| 29           | YI        | 2          | 4          | 4          | 2             | 3          | 2          | 3          | 3          | 2          | 2          | 3          | 3          | 2           | 3          | 3          | 11          | 16          | 14          | 13,7         | 68,3          |
| <b>Total</b> |           | <b>95</b>  | <b>116</b> | <b>102</b> | <b>71</b>     | <b>78</b>  | <b>71</b>  | <b>71</b>  | <b>87</b>  | <b>68</b>  | <b>70</b>  | <b>87</b>  | <b>69</b>  | <b>76</b>   | <b>86</b>  | <b>100</b> | <b>383</b>  | <b>454</b>  | <b>410</b>  | <b>415,7</b> | <b>2078,3</b> |
| <b>Mean</b>  |           | <b>3,3</b> | <b>4,0</b> | <b>3,5</b> | <b>2,4</b>    | <b>2,7</b> | <b>2,4</b> | <b>2,4</b> | <b>3,0</b> | <b>2,3</b> | <b>2,4</b> | <b>3,0</b> | <b>2,4</b> | <b>2,6</b>  | <b>3,0</b> | <b>3,4</b> | <b>13,2</b> | <b>15,7</b> | <b>14,1</b> | <b>14,3</b>  | <b>71,7</b>   |

Based on the table above, the researcher found that the students' mean score in try out of speaking test to the non sample students at SMK N 02 OKU was 72,4. Then, the researcher used SPSS 26 in finding the reliability of the test. The researcher related the result of computation with the criteria of reliability of the table below.

**Table 5 Score Range and Criteria of Reliability**

| Score  | Category   |
|--------|------------|
| < 0,60 | Poor       |
| 0,70   | Acceptable |
| 0,80   | Good       |

*Source by: Sekaran and Bougie (2013)*

The result of computation was presented on the following table.

**Table 6 Reliability**

| <b>Reliability Statistics</b> |            |
|-------------------------------|------------|
| Cronbach's Alpha              | N of Items |
| ,740                          | 3          |

The table showed that Cronbach's Alpha was 0,740, it was more than 0,70. So, it means that the items of the instruments were reliable and could be used as the instrument to get the data of the research. The reliability of this instrument can be categorized in acceptable reliability.

#### **H. Technique for Analyzing Data**

In evaluating the students' speaking score, the researcher and another rater listened to the student's record and use the oral English rating sheet. The first and the second raters were the English teacher at SMK N 02 OKU and the third rater was the researcher. Then, the researcher used SPSS 26 to analyze the quantitative data. The program was used to find out the mean scores of each speaking aspect. Thus, the result was used to find out the improvement of the students' speaking skill. The researcher used the oral English rating scale that use 1-4 points which adopted from Darma (2013). There were five components of speaking to be scores, namely fluency, pronunciation, accuracy, clarity and performance skill. The scale of retelling test was displayed in the table below.

**Table 7 Scoring Rubric**

| No | Components of Speaking | Scores | Indicators   |
|----|------------------------|--------|--|
| 1  | Fluency                | 4      | Speaking fluently  |
|    |                        | 3      | Speaking generally at normal speed   |
|    |                        | 2      | Speaking to slowly   |
|    |                        | 1      | Speaking with many pauses  |
| 2  | Pronunciation          | 4      | Speaking with correct pronunciation  |
|    |                        | 3      | Speaking with several incorrect pronunciation  |
|    |                        | 2      | Speaking with incorrect pronunciation but still understandable                                 |
|    |                        | 1      | Speaking words incomprehensibly  |
| 3  | Accuracy               | 4      | The errors present in speech are so minor so that the message would be easily comprehend       |
|    |                        | 3      | The speech is still understood although it consist of many errors                              |
|    |                        | 2      | The errors present in speech would frequently create confusion                                 |
|    |                        | 1      | The serious errors present in speech makes the message difficult to understand                 |
| 4  | Clarity                | 4      | Speak clearly and distinctly all the time, no mispronounced words                              |
|    |                        | 3      | Speak clearly and distinctly nearly all the time, no more than one mispronounced word          |
|    |                        | 2      | Speak clearly and distinctly most all the time, no more than one mispronounced word            |
|    |                        | 1      | Often mumbles or cannot be understood, more than one mispronounced word                        |
| 5  | Performance skill      | 4      | Speaking clearly and loudly, good facial expression and communicative                          |
|    |                        | 3      | Speaking in soft voice, but can be understood, good facial expression and communicative enough |
|    |                        | 2      | Mumbling flat facial expression and less communicative   |
|    |                        | 1      | Speaking in volume which is almost inaudible, no facial expression and not communicative       |

*(Source: Darma, 2013)*

Maximum Score = 100

Minimum Score = 25

In giving the students' individual score the researcher used the following formula below:

$$\text{score} = \frac{\text{total score}}{20} \times 100$$

Then, the researcher applied the conversion of percentage range, as the following:

| No | Score Range | Score Criteria |
|----|-------------|----------------|
| 1  | 85-100      | Very Good      |
| 2  | 70-84       | Good           |
| 3  | 55-69       | Fair           |
| 4  | 25-54       | Poor           |

*Source: Darma (2013)*

To get the mean score that have been taken by the R1, R2 and R3, the researcher used the following formula below:

$$\text{students' score} = \frac{R1 + R2 + R3}{3}$$

Where:

R1: The total score from the English teacher of SMK N 02 OKU

R2: The total score from the English teacher of SMK N 02 OKU

R3: The total score from the researcher

After collecting the data, to check the result of this research was normal distribution or not, the researcher analyzed the data with normality of the test through SPSS 26 by using Kolmogorov Smirnov. To determine that the data was normal or not, it compared the Asymp. Sig (2-tailed) with the significance level ( $\alpha$  -0,05). The normal data distribution got from the data distribution of the Sig. (2-tailed) point more than the significance level ( $\alpha$  -0,05).

The last, the researcher analyzed the data from result of pre-test and post-test to compared the data by using paired t-test through SPSS 26. There were two hypotheses of this analysis steps, namely  $H_a$  and  $H_o$ . If the value of Sig. (2-tailed) < significance level ( $\alpha$  -0,05), it means that  $H_a$  was acceptable. The hyphotheses were as follow.

$H_a$  : There was a significance improvement after treatment process

$H_0$  : There was no significance improvement after treatment proces