

### III. RESEARCH METHOD

This chapter discusses about the methods of research has be used in this study, such as: research design, subject of the research, data collecting procedure, data collecting technique, and data analysis.

#### 3.1 Research Design

This research is a quantitative research. Hatch and Farhady (1982) state that quantitative is a kind of research in which data used tend to use statistic as measurement in deciding the conclusion. The objective of this research is to find out whether there is a significant difference of using pair and small group work in students' speaking ability. In this research, the writer uses the Static Group Comparison Design.

The design is as follows:

$$\frac{G1 = T1 X1 T2}{G2 = T1 X2 T2}$$

In which:

G1 = Experimental group 1

G2 = Experimental group 2

T1 = Pre-test

T2 = Post-test

X1 = Treatment (applying pair group work)

X2 = Treatment (applying small group work)

The writer took two classes: one class as an experimental class 1 and other class as experimental class 2 where the students received pre-test before treatments and after treatments they received post-test. The pre-test was used to find out the students' preliminary ability and post-test was used to look how far the increase of students' speaking achievement after the treatments. The first treatment (X1-information gap task in pair work) was used in experimental class 1 (G1) and the second treatment (X2-information gap task in small group work) was used in experimental class 2 (G2). The research intended to find out whether there is a significant difference of students' speaking ability after being taught through information gap task in pair and small group work or not.

### **3.2 Population and Samples of the Research**

The population of this research was the second grade students of SMA N1 Seputih Raman, Lampung Tengah in the year of 2012/2013. The writer chose this school because it provided certain days to hold speaking class where the students were given some materials that required them to show their capability in English skill, especially speaking. There were seven classes of the second grade students in the science class. Each class was in same level. The writer took two classes as

samples of her research by using lottery; one class is as an experimental class 1 and other as an experimental class 2.

### **3.3 Data Collecting Procedure**

The data of this research uses several procedures in collecting the data. They are:

1. Determining the population and sample of the research

The writer did the previous research in SMA N1 Seputih Raman and had chosen two classes of second grade of science class as the subject of the research. One class is as an experimental class 1 and other as an experimental class 2.

2. Conducting the pre-test

The pre-test had been conducted to measure students' basic ability. This test was administered before the implementation.

3. Giving the treatment

The writer gave two times of treatments. The first treatment (X1- information gap task in pair work) was used in experimental class 1 (G1) and the second treatment (X2- information gap task in small group work) was used in experimental class 2 (G2). The materials of treatments were based on the English syllabus of second grade senior high school students.

4. Conducting the post-test

After treatments, the writer gave the students post-test in order to measure whether there was increase of students' speaking ability after treatments.

#### 5. Recording

In order to make the data more valid, the writer also recorded the conversation in the class using handycam. This recording was used to recheck the note of observation. All of the data had been recorded by the writer.

#### 6. Transcription

The writer had transcript of the recorded data in order to make it easier for the writer to analyze the data.

#### 7. Analyzing

The data of the pre-test and post-test were put into a score table. The data were analyzed by using T-Test. It was used to know whether information gap task in pair work and small group work were able to increase students' speaking ability or not.

#### 8. Making report on the finding

### **3.4 Instrument of The Research**

Generally, Syakur (1987, 3) mentions at least five components of speaking skill recognized in analyses of speech process that are pronunciation, grammar, vocabulary, fluency (the ease and speed of the flow of the speech) and comprehension (an understanding of what both the tester and the tests) are talking about or the ability to respond to speech as well as to initiate it.

The instrument was speaking test. The researcher used the oral ability scale proposed by Heaton (1991) as guidance for scoring the students' speaking ability.

The researcher had chosen Heaton's guidance because it was simpler than the others. In scoring the test, she implemented the analytical scoring which covered pronunciation, fluency, and comprehensibility. So, the researcher did not have to score those aspects separately but integrated. During the speaking test, she recorded the students' voice in handycam.

Table 1. Rubric of Grading System.

Range	Pronunciation	Fluency	Comprehensibility
81-90	Pronunciation only very slightly influenced by mother-tongue	Speak without too great effort with a fairly wide range of expression. Searches for words occasionally but only one or two unnatural pauses	Easy for listener to understand the speaker's intention and general meaning.
71-80	Pronunciation is slightly influenced by the mother tongue. Most utterances are correct	Has to make an effort at times to search for words. Nevertheless very smooth delivery on the whole and only a few unnatural pauses.	The speaker's intension and general meaning are fairly clear. A few interruptions by listener for the sake of clarification are necessary.

61-70	Pronunciation still moderately influenced by the mother tongue but no serious phonological errors	Although she/he has made an efforts and search for words, there are not too many unnatural pauses. Fairly smooth delivery mostly.	Most of the speakers say is easy to follow. His intention is always clear but several interruptions are necessary to help him to convey the message or to see the clarification.
51-60	Pronunciation is influenced by the mother tongue but only few serious phonological errors	Has to make effort for much of the time. Often has to search for the desired meaning. Rather halting delivery and fragmentary.	The listener can understand a lot of what is said, but he must constantly seek clarification. Cannot understand of the speaker's more longer or complex sentence.
41-50	Pronunciation is influent by the mother tongue with errors causing a breakdown in	Long pauses while he/she searches for desired meaning. Frequently halting delivery and fragmentary. Almost gives up for making	Only small bits (usually short sentences and phrases) can be understood and

	communication	the effort at times	then with considerable effort by someone used to listening the speaker.
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(Heaton, 1991)

The interpretation of grading system is as follows:

81-89: excellent

71-80: very good

61-70: good

51-60: enough

41-50: poor

The data were analyzed by using independent groups T-test in order to know the increasing of pronunciation, fluency, and comprehensibility.

### 3.5 Validity of the Test

Validity refers to appropriateness, meaningfulness, and useful of the inferences a researcher makes (Fraenkel and Wallen, 1990:126). It means that validity referred to the extent to which an instrument gives us the information that we want.

Validity is a matter of relevance; it means that the test measures what is claimed to measure. To measure whether the test has good validity, it has to be analyzed from content and construct validity. In the content validity, the material and the test are composed based on the indicators and objectives in syllabus of KTSP curriculum. The materials that are taught based on the students' handbook for first year of Senior High School. While, construct validity focuses on the kind of the test that is used to measure the students' ability.

To find out whether the speaking materials that had been given in treatment, pretest and posttest was suitable to the second grade of senior high school level the researcher provided the table below:

Standard Competence and Basic Competence of English Subject in SMA N1 Seputih Raman.

### **Class XI, Semester II**

<b>Standard Competence</b>	<b>Basic Competence</b>
<p><b>Speaking</b></p> <ol style="list-style-type: none"> <li>1. Understanding the meaning of transactional, interpersonal dialogue and sustained conversation in daily life context.</li> <li>2. Expressing the meaning of transactional and interpersonal dialogue explicitly to make an interaction in daily life context.</li> </ol>	<ol style="list-style-type: none"> <li>1. Expressing the idea a transactional, interpersonal, and sustained conversation accurately, fluently, and communicatively in daily life context involving the expression of asking and giving opinion.</li> <li>2. Responding the meaning of transactional (to get things done) and interpersonal (to socialize) dialogue by using spoken language accurately, fluently, and communicatively to interact and involve spoken language: making and accepting an invitation, asking and giving an information, accepting and cancelling the appointment in daily life context.</li> </ol>



In treatment the researcher had given two topics namely kitchen and crossword. In every topic, the expressions which were suitable for students' level had been provided. The standards and basic competences on that table were based on curriculum and syllabus of SMA N1 Seputih Raman.

### 3.6 Data Analysis

The writer analyzed the data using independent T-Test in order to know the differences between information gap task in pair and group work in students' speaking during the teaching learning activity. Ary (1979, p.146) says that the index uses to find the significance of difference between the means of the two samples is called T-test for independent sample. These samples are referred to as independent because they are drawn independently from a population without any pairing or relationship between the two groups.

Speaking's scores and calculating the means through mean formula as follows:

#### a. Calculating the Speaking's score

$$X1 = \frac{P + F + C}{3}$$

$$X2 = \frac{P + F + C}{3}$$

Where: X1: score pre-test

X2: score post test

P : Pronunciation

F : Fluency

C : Comprehensibility

### b. Calculating the Means

$$x = \frac{\sum x}{N}$$

Where:

X: mean

$\sum x$ : total score

N: number of students

In order to know whether the students get any progress, the following formula is used:

$$I = M2 - M1$$

Where:

I : the improvement of students' ability

M2: the average score of post - test

M1: the average score of pre - test

(Arikunto, 1997:68)

To measure the students' progress in speaking, the students' score are analyzed through this activity:

- a. Scoring the pre-test and post-test
- b. Finding the mean of the pre-test and post-test using this formula:

$$x = \frac{\sum x}{N}$$

Where:

X: mean                       $\sum x$ : total score                      N: number of students

- c. Drawing conclusion by comparing the means of the pre-test and post-test from pair and small group work

### 3.7 Data Treatment

The aim of data treatment was to determine whether the students' speaking ability was increased or not. The data of the research was examined by using independent group T-test, because the independent variable has more than one group, that is; small group work and pair work, which means that two different groups (experimental class 1 and experimental class 2) were compared. And the data is statically computed through the Statistical Package for Social Science (SPSS) version 20.0. In doing so, the researcher analyzed the data statistically by administering the normality test, homogeneity test, and hypothesis test.

#### 1. Normality Test

The normality test is used to measure whether the data in the experimental class 1 and experimental class 2 which are distributed normally or not. The hypothesis for the normality test is as follows:

$H_0$  = The data is not distributed normally

$H_1$  = The data is distributed normally

$H_1$  is accepted if significant two tailed  $(p) > \alpha$ . The writer uses the level of significant  $\alpha = 0.05$

## 2. Homogeneity Test

The homogeneity test is used to know whether the data in experimental class 1 and experimental class 2 are homogenous or not. In this research, the writer used independent sample test to know the homogeneity of the test.

$H_0$  = The data is not homogenous

$H_1$  = The data is homogenous

In this research, the criteria for the hypothesis are  $H_1$  is accepted if significant two tailed  $(p) > \alpha$ . The level of significant used is  $\alpha = 0.05$ .

### 3.8 Hypothesis Testing

The hypothesis is used to prove whether the hypothesis proposed in this research is accepted or not. The writer used SPSS 20 (Independent T-test). The hypothesis testing is which show that there is a significant difference of students speaking between students who taught through information gap task in pair and small group work. The hypothesis is statistically using independent T-Test that is used to draw conclusion in significant level of 0.05 in which  $\alpha < 0.05$  (Setiyadi, 2006:97).

To determine whether the first hypothesis is accepted or rejected, the following criteria acceptances are used:

H<sub>1</sub> : There is a significant difference of students' speaking ability between students who taught through information gap task in pair and small group work at second grade of SMA N1 Seputih Raman

H<sub>0</sub> : There is no significant difference of students' speaking ability between students who taught through information gap task in pair and small group work at second grade of SMA N1 Seputih Raman

The criteria are:

H<sub>1</sub> (alternative hypothesis) is accepted if *two tail of significant is* lower than 0.05 ( $p < 0.05$ ).

H<sub>0</sub> (null hypothesis) is accepted if *two tail of significant is* higher than 0.05 ( $p > 0.05$ ).