

### **III. RESEARCH METHOD**

This chapter includes the research design, the population and sample, step in collecting data, data collection, data analysis, scores and hypotheses testing.

#### **3.1 Research Design**

This research is a quantitative research based on the experimental class. Quantitative research is a kind of research in which the data used to tend to use statistic measurement in deciding the conclusion (Hatch and Farhady, 1982:22). It is conducted using one group pretest posttest design. It means that the researcher find out the improvement by comparing the pretest with the posttest result. Referring to Setiyadi (2000:40), the design can be presented as follows:

**T1 X T2**

**T1** : Pre test

**T2** : Post test

**X** : Treatment by using series pictures

A pretest is the activity to find out students' speaking performance before treatment. Afterward, the researcher gave three treatments to the students by using series pictures. Finally, a posttest is administering to find out the students' speaking performance after treatments.

### **3.2 Population and sample**

The population of this research was the seventh grade of SMP Negeri 14 Bandar Lampung. The class consists of 30 students. The researcher took one class to be treated. The researcher chose VII A because they had potential to be observed in this research. The population selected by using random simply technique sample.

### **3.3 Data Collection**

#### **3.3.3 Research Instruments**

This research used three instruments namely pre-test, post-test and interview in order to answer the research questions. Sugiyono (2008) states instrument is a media used to collect the data. The three instruments were described as follows:

##### **3.3.3.1 Pre-test**

The researcher used the pretest just 90 minutes. The purpose of this test was to know the students speaking performance before they were given treatment. In this case the researcher would give the topic to the students and let them to perform the monologue based on the topic and situation first then they should prepare and

perform it in front of the class, the test was done in individual. The last, teacher recorded their monologue.

### **3.3.3.2 Post-test**

After conducting the treatment, the researcher gave post-test which take 90 minutes. The purpose of this test was to know the result of their speaking performance improves or not. The researcher gave the test would be similar to the pre-test and will score the result of this test. The last, the researcher knew the student improvement when using series pictures technique.

### **3.3.3.3 Interview**

Interview was done after finding the data from pre-test and post-test. The researcher interview the sample to get students' opinion concerning series pictures acitivity. So, the researcher got the opinion whether series pictures is good or not for the students to improve their speaking performance

## **3.4 Step in Collecting Data**

### **3.4.1 Preparing the Lesson Plan**

The lesson plan was designed to be implemented during treatment to the experimental group. The researcher designed the lesson plan for five meetings. The first and the last meeting were allocated to conduct the pretest and posttest, while the rest three meetings were allocated to execute the treatment. The lesson plan was designed based

on the National curriculum of English for seventh grade students which consists of Competence Standard, Basic Competence, Indicator, Instructional Objective, and Lesson Materials. In addition, Method/ technique, Steps of the activity, Source Lesson, and the evaluation are also involved.

### **3.4.2 Preparing the Material**

The materials given to the experimental group are taken from several English textbooks; Contextual Teaching and Learning Bahasa Inggris Sekolah Menengah Pertama Kelas VII, English in Focus for Grade VII Junior High School and Exploring How texts work. The materials included some procedure texts about doing something. It is in line with the competence standard of VII grade junior high school in number 10 that students must be able to expressing meaning on spoken functional text and short monologue in descriptive and procedure forms to interact with their close environment. In detail, those texts involves several terms; how to turn on the television, how to tie a bow tie, how to make a glass of avocado juice, how to jog effectively, how to be a good swimmer and how to remove the sim card from handphone.

### **3.4.3 Administering Pre-test**

Pretest was given before the researcher started the treatment (teaching procedure text through series pictures). The test was speaking test in form monologue. The test was held for 90 minutes. The form of the test was subjective test since there is no exact answer.

#### **3.4.4 Conducting Treatment**

The researcher presented the material for treatment through series pictures. There was three times treatment in this research. Each treatment was held for 90 minutes. In selecting the speaking material the researcher used the syllabus of the first year of junior high school

#### **3.4.5 Administering Post-test**

The researcher gave posttest after the treatment, which last 90 minutes. It aimed to know the progress of the students' speaking performance after being given the treatment through series pictures. In conducting the posttest the researcher provided some topics and let them to make a short monologue individually based on the topic provided. The test was done orally and directly, the teacher called each student one by one in front of class to perform their monologue. The researcher asked the students to speak clearly since the students' voices were recorded during the test.

#### **3.4.6 Administering Interview**

Interview was conducted to reveal the students' perception toward the use of series pictures as a teaching method after conducting pre-test and post-test. Interview is 'a set of questions for obtaining statistically useful or personal information from individuals' (Meriam-Webster Online Dictionary: 2008). This instrument provides students' point of view about treatment that they have done as description of additional information concerning with the methodology of using series picture.

### **3.5 Data Analysis**

Data analysis needs careful thinking because data analysis is aimed at organizing the data. It makes the readers able to understand the result of the research. Data analysis is the process of organizing the data in order to gain the regularity of the pattern and form of the research. Data analysis is done to create understanding for the data after following certain procedure final of result of the students can be presented by the researcher to the readers (Setiyadi, 2001).

After collecting the data that was students' recording utterance in performing the activity, students' opinion about series pictures, the data were analyzed by referring the speaking score based on aspects of speaking.

Scoring for pretest – posttest was tabulating the result of the test and calculating the mean of the pretest and the posttest. Repeated Measure T – test used to draw the conclusion. The data computed through SPSS version 17. The hypothesis analyzed at the significance level of 0.05 in which hypothesis will approve if  $\text{sig} < \alpha$ .

#### **3.5.1 Evaluating the Students' Speaking**

The researcher used inter-rater to give score of students' performance. The rater gave the students' score by listening to the record. The rater is the researcher himself and the English teacher in school. The record helped the rater to evaluate more objectively. The test of speaking is measure based on two principles: reliability and validity.

## 1. Reliability of The Test

Reliability refers to extend to which the test is consistent in its score and gives us indication of how accurate the test score are (Hatch and Farhady, 1982:224). In achieving the reliability of the pretest and posttest of speaking, inter rater reliability was used in this research. It meant that there are two raters to judge students' speaking performance. The first rater was the researcher himself and the second rater was the English teacher at the class. Both of them discussed and put in mind of the speaking criteria in order to obtain reliable result of the test.

Inter-rater reliability of the pretest and posttest was examined by using statistical measurement:

$$R= 1 - \frac{6 \cdot \sum d^2}{N (N^2 - 1)}$$

Notes:

R : Reliability of the test

N : Number of students

$d^1$  : The different between R1 and R2

$d^2$  : The Square of  $d^1$

1-6 : Constant number

(Shohamy, 1985:213)

The standard of reliability

- |    |                         |                           |
|----|-------------------------|---------------------------|
| A. | a very low reliability  | ranges from 0.00 to 0.19  |
| B. | a low reliability       | ranges from 0.20 to 0.39  |
| C. | an average reliability  | ranges from 0.40 to 0.59  |
| D. | a high reliability      | ranges from 0.60 to 0.79  |
| E. | a very high reliability | ranges from 0.80 to 0.100 |

Slameto (1998:147) in Susan (2001:10)

## 2. **Validity of The Test**

Meizaliana (2009:82) states that the data is valid if the instruments used are also valid, and a test is reliable if it is constant, or it is reliable if the results of test show their constancy.

Hatch and Farhady (1982:250) defined validity as “the extent to which the result of the procedure serves the uses for which they were intended”.

Content validity, the test is a good reflection of what is thinking and the knowledge which the students to know. Shoamy (1985) states that is construct validity to measure the test will be examining to reflect what language.

Based on that quotation, validity refers to the extent which the test measures what it is intend to measure. This means that relates to the purpose of the test. The test measured based on the indicator.



### 3.6 Scores

In evaluating the students' speaking scores, the researcher, used the Oral English Rating sheet proposed by David P. Haris (1974: 84). Based on the Oral English Rating sheet, there are five components that are going to be tested to the students, namely: pronunciation, fluency, grammar, vocabulary and comprehension.

Here is the sample of the Oral rating sheet :

#### Pronunciation

- 5 Has few traces of foreign accent
- 4 Always intelligible though one is conscious of a definite accent
- 3 Pronunciation problems necessitate concentrated listening and occasionally lead to misunderstanding
- 2 Very hard to understand because of pronunciation problems. Must frequently be asked to repeat.
- 1 Pronunciation problems so severe as to make speech virtually unintelligible

#### Fluency

- 5 Speech as fluent and effortless as that of a native speaker.
- 4 Speed of speech seems to be slightly affected by language problems
- 3 Speed and fluency are rather strongly affected by language problems.
- 2 Usually hesitant, often forced into silence by language problems.
- 1 Speech as so halting and fragmentary as to make conversation virtually impossible

#### Grammar

- 5 Makes few (if any) noticeable errors of grammar or word order.
- 4 Occasionally makes grammatical and /or word order errors which do not, however, obscure meaning.
- 3 Makes frequent errors of grammar and word order which obscure meaning.
- 2 Grammar and word orders make comprehension difficult. Must often rephrase sentences and / or restrict himself basic pattern.

- 1 Errors in grammar and word order so severe as to make speech virtually unintelligible

#### Vocabulary

- 5 Uses of vocabulary and idioms is virtually that of a native speaker.
- 4 Sometimes uses inappropriate terms and/or must rephrase ideas because of lexical inadequacies.
- 3 Frequently uses the wrong words: conversation somewhat limited because of inadequate vocabulary.
- 2 Misuses of words and very limited vocabulary make comprehension quite difficult.
- 1 Vocabulary limitation so extreme as to make conversation virtually impossible.

#### Comprehensible

- 5 Appears to understand everything without difficulty
- 4 Understands nearly everything at normal speed although occasional repetition may be necessary
- 3 Understand most of what is said at lower than normal speed with repetitions.
- 2 Has great difficulty following what is said. Can comprehend only “social conversation” spoken with frequent repetition.
- 1 Cannot be said to understand even simple conversation of English.

In this case, the researcher makes an equation of making students’ oral tests. The score if each is multiplied by four, so, the highest score is 100. For example, the score of students’ grammar is four. The researcher multiplies four by four, so, the score of students’ grammar is 16.

Here is the identification of the scores:

If a student gets 5, so  $5 \times 4 = 20$

If a student gets 4, so  $4 \times 4 = 16$

If a student gets 3, so  $3 \times 4 = 12$

If a student gets 2, so  $2 \times 4 = 8$

If a student gets 1, so  $1 \times 4 = 4$

For example: A student gets 4 in grammar, 4 in vocabulary, 3 in fluency , 2 in comprehension and 2 in pronunciation. So, the student's total score will be:

Grammar	$4 \times 4 = 16$
Vocabulary	$4 \times 4 = 16$
Fluency	$3 \times 4 = 12$
Comprehension	$2 \times 4 = 8$
Pronunciation	$2 \times 4 = 8$
<hr/>	
	Total = 60

It means he/she gets 60 in speaking.

The score of speaking based on the five components can be compared in the presentage as follows:

Grammar	20%
Vocabulary	20%
Fluency	20%
Comprehension	20%
Pronunciation	20%
<hr/>	
	Total = 100

**Table 3. 1 of Rating Sheet Score**

<b>S's Codes</b>	<b>Pron. (1-20)</b>	<b>Fluen. (1-20)</b>	<b>Gram. (1-20)</b>	<b>Voc. (1-20)</b>	<b>Compr. (1-20)</b>	<b>Total (1-100)</b>
<b>1.</b>						
<b>2.</b>						
<b>3.</b>						
<b>4.</b>						
<b>5.</b>						

### **3.7 Hypothesis Testing**

The researcher used t-test in order to find out the significant effects of treatment effect. The hypothesis was analyzed at significant level pf 0.005 in which the hypothesis is approved if sign  $< \alpha$ . The result of t-test was shown in the following table:

The hypothesis on this research is formulated as follows:

Ho : There are no significant differences of students' speaking performance before and after pretest and posttest through series pictures.

H1 : There are significant differences of students' speaking performance before and after pretest and posttest through series pictures.

The researcher used t-test in order to find out the significance of treatment effect. The hypothesis was analyzed at significant level of 0.05. It means that the probability of error in the hypothesis is only 5% from 100% and the hypothesis was approved if  $p < 0.05$ .