

### III. METHOD

In this research, the writer discusses about design, data source, instruments, procedure, data analysis, and hypothesis testing as follows:

#### 3.1 Design

The objective of this research was to find out whether there was any improvement or not of students' speaking ability after being taught through Talking Chips Technique. So, the researcher would use *One-group pre-test posttest design* since there would be one class experiment which got treatments from the researcher and also got pre-test and posttest. The research design could be presented as follows:

$$T1 \quad X \quad T2$$

where:

T1: Pre-Test (Speaking test)

X : Treatment (Talking Chips Technique)

T2: Post-Test (Speaking test)

(Setiyadi, 2004: 40)

This was the design that would be used by the researcher to find out the result.

### **3.2 Population and Sample**

The population of this research was second grade students of SMA YP UNILA Bandar Lampung in 2014/2015 academic year. There were 11 classes of second grade in this school. These classes were classified into MIA class and ISOS class. There were 7 MIA classes and 4 ISOS classes. Their ages ranged from 16-17 years old.

From the population above, there would be one class as experimental class that would get treatments (teaching speaking through Talking Chips Technique) that was ISOS 3. This class consisted of 32 students. In determining sample, the researcher used Random Sampling Technique by using a lottery so that all the second grade classes would get the same chance to be the sample in order to avoid subjectivity and to guarantee that every class has the same opportunity.

### **3.3 Data Collecting Technique**

In collecting the data, the researcher used:

1. Pre-test

The researcher administers pre-test before treatment. It aimed at knowing the students' speaking ability before being given the treatment using Talking Chips Technique. In administering the pre-test, the researcher provided some issues to the students and let them choose one issue. Then, the students would have a discussion group consists of 3-4 students. They had to prepare some arguments about the issue that they had chosen in 10 minutes before the researcher started scoring their performance. The form of the test was subjective test since there was no exact single answer. The

speaking aspects that would be scored are pronunciation, grammar, vocabulary, fluency, and comprehension. Pre-test was similar to the posttest. The researcher would record the oral test by using voice recording.

## 2. Treatment

This was done after pre-test to teach the students through Talking Chips Technique. There would be three times of treatment. The researcher would treat the students until they can reach the objectives.

## 3. Posttest

The researcher administered posttest after the treatments. It aimed at seeing the difference of students' speaking skill after they have taught by using Talking Chips Technique in speaking class. The form of the test was subjective test. The aspects of speaking that would be scored are pronunciation, grammar, vocabulary, fluency and comprehension. Posttest was similar to pre-test. In administered posttest, the researcher provided some issues to the students and let them choose one issue. Then, the students would have a discussion group consists of 3-4 students. They had to prepare some arguments about the issue that they have chosen in 10 minutes before the researcher start scoring their performance. During the test, researcher would record by using voice recording.

## 4. Recording

The researcher recorded the students' speaking ability during pre-test and posttest by using audio recorder as recording tool.

### 5. Transcribing

By listening the students' voice recording, the researcher transcribed the recording of every student both of pre-test and posttest.

### 6. Scoring

Since this research uses two raters to score the speaking test, the researcher who was as a teacher of this research filled the scoring sheet of first rater (R1). After that the researcher gave the students' voice recording with the scoring sheet also to the second rater (R2) to fill the score of R2 in the scoring sheet.

There were some steps of this research for gaining the data in this research. They were pre-test, treatment, posttest, and recording.

## 3.4 Instrument

In getting the data, the researcher used speaking test as the instrument.

### Speaking Test

In this research, the researcher used speaking test to find out the students' speaking ability. This oral test was in term of argumentative dialogue. The researcher gave a speaking test to the students by giving some instructions and topic that would be chosen by the students. The researcher asked the students to work in group consists of 3-4 students. And then, from some topics, every group had to choose one topic. After that, they had to make some arguments about the topic that they had chosen consists of agree and disagree arguments with a limited time. Then, in the end, the students had to record their argument by using their gadget and collect it through Bluetooth to the researcher's gadget. Since it was a

subjective test, there were two raters in judging. The two raters were the researcher and English teacher at SMA YP UNILA Bandar Lampung, Mr. Syauqi Wafa, S.Pd.. In the intention to increase the reliability of the test, the two raters worked collaboratively to judge the students' speaking ability and used the oral English Rating sheet proposed by Harris (1974: 84). Based on the oral rating sheet, there were five aspects will be scored; pronunciation, grammar, vocabulary, fluency, and comprehension. Here is the rating sheet.

**Table 1. Aspects of Speaking which is Scored**

Aspects	Score	Qualifications
Pronunciation	5	If speech is fluent and effortless as that of native speaker.
	4	Denote that if it is always intelligible though one is conscious of a definite accent.
	3	Refers to pronunciation problem necessitate concentrated listening and occasionally lead to misunderstanding.
	2	Indicate that it is very hard to understand because of pronunciation problem most frequently asked to repeat.
	1	Shows that pronunciation problem so serve as to make conversation unintelligible.
Grammar	5	Make 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	Refers to that speed and fluency are rather strongly affected by language problem.
	2	Means that a student usually doubt and often forces into silence by language problem.
	1	Means that speech is so halting and fragmentary as to make conversation virtually impossible.
Vocabulary	5	The use of vocabulary and idiom virtually that is of native speaker.
	4	Indicates that sometimes a student uses inappropriate terms and or must rephrase ideas because inadequate vocabulary.
	3	Refers to using frequently the wrong word, conversation somewhat limited because of inadequate vocabulary.
	2	Denotes that misutilizing of word and very limited vocabulary make conversation quite difficult.
	1	Means that vocabulary limitation so extreme as to make conversation virtually impossible.
Fluency	5	If that speech is fluent and effortless as that native speaker.
	4	Refers to speech speed rather strongly affected by language problem.
	3	Make frequent errors of grammar or order, which obscure meaning.
	2	Grammar and word order make comprehension difficult must often rephrase sentence and/or restrict him to basic pattern.
	1	Errors in grammar and word order to reserve as to make speech

		virtually unintelligible.
Comprehension	5	Appear to comprehend everything without difficulty.
	4	Comprehend nearly everything at normal speed although occasionally repetition may be necessary.
	3	Comprehend most of what is said at lower than normal speed with repetition.
	2	Has great difficulty following what is said.
	1	Cannot be said comprehend even simple conversation in English.

The score of speaking skill based on the four elements can be compared in percentage as follows:

a. Pronunciation .....	20%
b. Grammar.....	20%
c. Vocabulary.....	20%
d. Fluency.....	20%
e. Comprehension.....	20% +
	<hr/>
Total percentage.....	100%

The researcher uses this percentage because the researcher tried to find out the most improvement of speaking aspects. The score of each aspect was multiplied by four, so the total score is 100. Here is the identification score of students' speaking ability:

If the person got 5, so  $5 \times 4 = 20$

If the person got 4, so  $4 \times 4 = 16$

If the person got 3, so  $3 \times 4 = 12$

If the person got 2, so  $2 \times 4 = 8$

If the person got 1, so  $1 \times 4 = 4$



### 3.5 Criteria of Speaking Test

The form of the test was subjective test since there was no exact single answer. In this test the researcher would use inter-rater to assess the students' performances. The performances would be recorded and then given score by the researcher. The rater gave the score by recording the students' performances. The researcher recorded the students' utterances because it helped the raters to evaluate more objective.

#### Validity

Validity of the test is the degree to which it measures what is intended to measure (Kingsbury, 1980: 111). And a test is valid if it measures what it has 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 objective in syllabus of KTSP curriculum. The materials that are taught based on the students' handbook for Senior High School. While, the construct validity focuses on the kind of the test that use to measure the students' ability.

#### Reliability

Reliability of the test is consistency which a test yields the same result in measuring whatever it does measure. So a test cannot measure anything well unless it measures consistently (Haris, 1974; 14). And the reliability of language test is concerned with the degree to which it can be trusted to produce the same



result upon repeated administration to the same value of a learning variable being measured. Reliability of the speaking test is examined by using statistical measurement proposed by Shohamy (1985: 213).

### **3.6 Procedure**

The procedures of the research were as follows:

#### **1. Determining Problem**

This research came from some problems which happened in learning process. Some students were difficult to speak English very well and could not produce some words in English because they did not know how to say. This could be seen when the teacher spoke English to the students and they only kept silent without any response. And then, some students had less self-confidence because they did not know how to use grammar effectively in speaking. Besides, the students did not have motivation to speak English in front of the class because they did not get opportunities to train their speaking ability.

#### **2. Selecting and Determining the Population and Sample.**

The population of this research would take second grade students of SMA YP UNILA Bandar Lampung in 2014/2015 academic year. The sample would be 32 students of ISOS 3 class of second grade in SMA YP UNILA Bandar Lampung 2014. They have different ability in speaking. They will be divided into some groups while the researcher was applying Talking Chips Technique.

### 3. Selecting Speaking Materials

In selecting the speaking material the researcher would use syllabus of class XI of SMA student based on school based curriculum or KTSP which is the newest curriculum used by the school. The topics were giving and asking opinion and responding opinion. Based on this topic, the researcher would teach argumentative dialogue.

### 4. Administering Pre-test

Pre-test would be given to the students before the treatment (teaching through Talking Chips Technique). In the beginning of this research, the researcher would give pre-test to the students to find out students' speaking ability before being taught through Talking Chips Technique.

### 5. Conducting Treatment

After giving pre-test to the students, the researcher would give treatment. That was Talking Chips Technique. The researcher would teach speaking through Talking Chips Technique to make all the students had the opportunities to speak. By applying this technique, the teacher would encourage the students to speak and also motivate them.

### 6. Administering Posttest

This test would be tested when the students are studying through Talking Chips Technique. So, this test would be on going. While teacher was teaching speaking through this technique, the researcher also would record

the students' conversation. This recording was the data that will be scored by the researcher and the rater since this test was subjective test.

These are the procedures of this research that would be used by the researcher to find out the data of this research.

### **3.7 Data Treatment**

According to Setiyadi (2006: 168), using T-Test for hypothesis testing has 3 basic assumptions, there are:

1. The data is interval or ratio.
2. The data is taken random sample in population.
3. The data is distributed normally.

Therefore, the researcher would use the following procedures:

#### **1. Random Test**

This is to make sure that the data is random. The researcher would use SPSS version 16 to help processing the data. The researcher used mean as the cut point. And the hypothesis would be formulated as follows:

Ho: the data was random

H<sub>1</sub>: the data was not random

H is accepted if sign > @. In this research, the researcher would use the level of significance 0.05.

**Table 3. Random Test of Pre-test**

Runs Test	
	PRETEST
Test Value <sup>a</sup>	59.9375
Cases < Test Value	16
Cases >= Test Value	16
Total Cases	32
Number of Runs	22
Z	1.617
Asymp. Sig. (2-tailed)	.106

a. Mean

From the table above, the researcher found that in pre-test  $H_0 > L_{table}$ . That is  $0.106 > 0.05$ . This result means that  $H_0$  is accepted in pre-test so that it can be concluded that the data in pre-test was random.

**Table 4. Random Test of Posttest**

Runs Test	
	POSTTEST
Test Value <sup>a</sup>	73.3125
Cases < Test Value	19
Cases >= Test Value	13
Total Cases	32
Number of Runs	16
Z	.000
Asymp. Sig. (2-tailed)	1.000

a. Mean

From the table of posttest above, the researcher found that  $H_0 > L_{table}$ . That is  $1.0 > 0.05$ . This result means that  $H_0$  in posttest is accepted so that it can be concluded that the data in posttest was random.

## 2. Normally Test

The researcher would use normality test to know whether the data was distributed normally or not. The hypothesis was formulated as follows:

$H_0$ : the data was distributed normally

$H_1$ : the data was not distributed normally

In this research, the criteria for the hypothesis was that  $H_0$  is accepted if significance (2-tailed)  $> L_{table}$  (significant level) and  $H_1$  is accepted if significance (2-tailed)  $< L_{table}$  (significance level). In this research, the researcher would use the level of significance 0.05.

**Table 5. Normality Test of Pre-test**

One-Sample Kolmogorov-Smirnov Test		
		PRETEST
N		32
Normal Parameters <sup>a</sup>	Mean	59.938
	Std. Deviation	6.8436
Most Extreme Differences	Absolute	.153
	Positive	.153
	Negative	-.099
Kolmogorov-Smirnov Z		.863
Asymp. Sig. (2-tailed)		.445

a. Test distribution is Normal.

From the table above, the researcher found that  $H_0 > L_{table}$ . That is  $0.445 > 0.05$ . This result means that  $H_0$  is accepted so that it can be concluded that the data was distributed normally.

**Table 6. Normality Test of Posttest**

One-Sample Kolmogorov-Smirnov Test		
		POSTTEST
N		32
Normal Parameters <sup>a</sup>	Mean	73.3125
	Std. Deviation	5.07007
Most Extreme Differences	Absolute	.196
	Positive	.196
	Negative	-.085
Kolmogorov-Smirnov Z		1.108
Asymp. Sig. (2-tailed)		.171

a. Test distribution is Normal.

From the table above, the researcher found that  $H_0 > L_{\text{table}}$  in posttest. That is  $0.171 > 0.05$ . This result means that  $H_0$  is accepted so that it can be concluded that the data of posttest was distributed normally.

### 3.8 Data Analysis

Analyzing data, researcher would compute students' score in pre-test and posttest by using formula from Arikunto (1997: 68) as follows:

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

Where:

M = Mean (the average score)

x = Students' score

N = Total number of students

After that mean of pre-test would be compared to mean of posttest to see whether Talking Chips Technique gives any improvement in students' speaking ability or

not. In order to determine whether the students got an improvement, the researcher would use following formula.

$$I = M2 - M1$$

Where:

I = the improvement of students' speaking ability

M1 = the average score of prôt-test

M2 = the average score of posttest

After the data had been collected the researcher would treat the data by using the following procedures:

1. Put students' score in pretest (T1) and posttest (T2) on the table below:

**Table 7. Scoring Sheet of Speaking Aspect**

Ss' Code	Pronun.		Vocab.		Fluency		Comprehen.		Grammar		Total	
	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
APY	2	2	3	3	3	3	3	2	2	2	52	48
ACW	4	3	3	3	4	3	4	3	3	3	72	60
...												
Mean											X1=	X2=

Where:

R1 : Rater 1

R2 : Rater 2

XI :  $\sum R1$

X2 :  $\sum R2$

2. Found the reliability of pretest and posttest.

**Table 8. Scoring Sheet of the Raters**

No.	Students' Code	Pre-test		Rank 1	Rank 2	D	D <sup>2</sup>
		R1	R2				
1	APY	52	48	305	30	0.5	0.25
2	ACW	72	60	3	12.5	9.5	90.25
3	AKY	60	60	19	12.5	6.5	42.25
	...						

Note:

R1 : rater 1

R2 : rater 2

Rank 1 : Rank rater 1

Rank 2 : Rank rater 2

D : the difference rank correlation between R1 and R2

D<sup>2</sup> : the square of D

In order to find the reliability of pretest the researcher would use the following formula:

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

Shohamy (1985; 213).

Notes:

R : Reliability

N : Number of the students

d : The difference of the rank collection

1-6 : Constant number



### 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 1.00

(Slameto, 1998: 147)

### Reliability of Pre-test

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

$$R = 1 - \frac{6.(1047)}{32.(32^2 - 1)}$$

$$R = 1 - \frac{6282}{32736}$$

$$R = 1 - 0.191898$$

$$R = 0.80810R \text{ (Very high reliability)}$$

### Reliability of Posttest

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

$$R = 1 - \frac{6.(2666.5)}{32.(32^2 - 1)}$$

$$R = 1 - \frac{7999.5}{32736}$$

$$R = 1 - 0.2443$$

$$R = 0.75568 \text{ (High reliability)}$$

### 3.9 Hypothesis Testing

The hypothesis testing was used to prove whether the hypotheses propose in this research are accepted or not. The hypothesis would be analyzed by using Repeated Measures T-test of Statistical Package for Social Sciences (SPSS) windows version 16. The writer used the level of significance 0.05 in which the hypothesis was approved if  $\text{sign} < p$ . It meant that the probability of error in the hypothesis was only 5%.

$H_0$ : There is no improvement in students' speaking ability after being taught through Talking Chips Technique.

$H_1$ : There is a significant improvement in students' speaking ability after being taught through Taking Chips Technique.

(Hatch and Farhady, 1982: 111)

The criteria for accepting the hypothesis is as follows:

If  $T_{\text{value}} > T_{\text{table}}$   $H_1$  is accepted

If  $T_{\text{value}} < T_{\text{table}}$   $H_0$  is accepted

The researcher used SPSS to calculate the result whether it is significant or not based on the hypothesis.