III. RESEARCH METHODS

3.1 Research Design

The writer selected one class as the experimental group using random sampling. The aim of this research was to find out whether there was significant increase of students' speaking achievement after being taught using Role Play at the second year of SMK PGRI 1 Kota Agung Tanggamus, Lampung. To answer the research questions, the writer used One Group Pre Test – Post Test Design. Here the writer used one class only. The design can be presented as follow:

T1	X	T2

T1 = Pre Test

T2 = Post Test

X = Treatments (Setiyadi, 2006:133)

This design consists of one pretest and one posttest. Treatment was given in five meetings. The pretest was given before the treatment and posttest was conducted after the treatment.

To know whether the technique can be used in teaching speaking, the writer saw from the increase of the students' score in pre-test and post-tests.

3.2 Population and Sample

The population of this research was the second year students of SMK PGRI 1 Kota Agung Tanggamus, Lampung that consists of six classes, and one class was taken as the sample. The sample was selected by using random sampling by using lottery. It meant that all classes got the same chance to be the sample. The sample of this research was class 2 P1 where the pre test and post test was administered in this class.

3.3 Data Collecting Technique

The data of the research was the students' speaking increase before and after the treatments. The instrument of the research was speaking test, where the writer gave pretest, treatment, and posttest to the experiment class in order to evaluate and measure the speaking achievement. The teachers saw the students' performance, recorded, and listened. The learners' performance was in terms of interpersonal dialogue and concern on five aspects of speaking namely pronunciation, vocabulary, fluency, comprehension, and grammar was based on the rating scale by Harris (1978: 84). The score range from 20-100.

3.4 Research Procedure

3.4.1 Selecting the Speaking Materials

The materials that were used in this research was taken from the students' handbook and based on the teaching and learning syllabus. The materials were

part of the integrated ones taught in normal classes, which were based on the School – Based Curriculum (KTSP).

3.4.2 Determining the Instruments of the Research

The instrument in this research was speaking test. The writer conducted the speaking test for the pretest and posttest. The purpose those tests for gaining the data. The data were the students' speaking ability score before and after the treatment in performing a conversation in terms of interpersonal dialogue in front of the class. The test concerned on five aspects of speaking namely pronunciation, vocabulary, fluency, comprehension and grammar.

In achieving the reliability of pretest and posttest of speaking, *inter rater reliability* used in this research. The first rater was the writer himself and the second rater was the English class teacher itself. Both of them discussed and put mind of the speaking criteria in order to obtain the reliable result of the test. Extend validity of the pretest and posttest in this research was related to the content and the construct validity. The content validity refers to the materials which were based on the syllabus.

3.4.3 Determining Population and Sample

The population of this research was the first grade of the SMK PGRI 1 Kota Agung Tanggamus Lampung. One class was taken as the sample of this research. In determining the experimental class the writer used the random sampling technique by using lottery. So that those all the second year class got the same

chance to be the sample. The sample of research was class 2 P1 the pre test and post test was administered in this class.

3.4.4 Conducting Pretest

Pretest was given before the treatment. The test was speaking test in the forms of interpersonal dialogue. The material that tested was in the forms of interpersonal dialogue. The material that tested was related to KTSP curriculum which was suitable with their level. In the activities of pretest, the teacher commanded to the students to divide into group and each group of them asked to perform dialogue in front of the class according to the topic given. Pretest was given to know how far the competence of the students in speaking skill before the treatment. The test was held for 2 x 45 minutes. The scoring system was based on the rating scale by Harris.

3.4.5 Giving the Treatment

In the treatment, which was given three times, the writer applied Role Play technique in order to increase students' speaking achievement. The treatment was held in 2 X 45 minutes per lesson. The materials that used in the treatment were based on the school's syllabus, they are; They were about interpersonal dialogue.

3.4.6 Conducting Posttest

The posttest was administered after treatment in 2 x 45 minutes. It was to know the progress of the students' speaking ability after being given the treatment using Role Play. The scoring system was based on the rating scale by Harris.
In conducting the posttest the learners was provided some topics to take a conversation in pairs or group. The test was oral test and directly the teacher called the group one by one to come in front of the class to perform their dialogue. The learners were asked to speak clearly since their voice was recorded during the test. The materials for pretest and posttest were taken from the students' handbook. The form of the test was subjective test since there was no exact answer.

3.4.7 Analyzing, Interpreting and Concluding the Data

After collecting the data that was the students' utterances in performing the dialogue, the recorded voices were listening carefully by the two raters. The data analyze refered to rating scale namely pronunciation, vocabulary, fluency, comprehension and grammar.

First, scoring the pretest and posttest, and then tabulating the result of the test, calculating the mean of the pretest and posttest for experimental class. Finally, drawing the conclusion from the result of the pretest and post test, that was used, *repeated Measures T-Test of SPSS (Statistical Package for Social Science) version 17.0 for Windows.* The data was gained from one class and the writer intended to find out whether there was increase of students speaking ability.

3.5 Validity

A test was considered valid if the test measure the object to be measured and suitable with the criteria (Hatch and Farhady, 1982; 250). According to the Hatch and Farhady (1982; 281) there are two basic types of validity; content validity and construct validity. Extend validity of the pretest and posttest in this research related to the content and the construct validity of the test.

3.5.1 Content Validity

To get the content validity of the test, the writer adopted the test based on the students' handbook and the curriculum used. Content validity was concerned with the test which was sufficiently representative and comprehensive. In the content validity and the material were given suitable related to the curriculum. It meant that the materials were suitable to the students. Content validity is the extent to which a test measures a representative sample of the subject meter content, the focus of content validity is adequacy of the sample and simply on the appearance of the test (Hatch and Farhady, 1982).

3.5.2. Construct Validity

Construct Validity was concerned with whether the test was actually in line with the theory of what it meant to know the language that was being measured, it would be examined whether the test actually reflect what it means to know a language. In this research the writer focused on speaking ability in forms of interpersonal conversation. It meant that the pretest and posttest measured by the

certain aspects (pronunciation, vocabulary, fluency, comprehension, and grammar). A table of specification was an instrument that helped the writer planed the test.

3.1. Table of Specification

Aspects	Theories
1. Pronunciation	It refers to the ability to produce easily comprehensible articulation. (Brown 1977:4) Pronunciation refers to the intonation patterns (Harris 1974:81).
2. Vocabulary	Vocabulary means the appropriate diction which is used in communication (Brown 1977:4) Vocabulary refers to the selection of words that suitable with content (Harris 1974: 68-69).
3. Fluency	Fluency to the ease and speed of the flow of the speech (Harris 1974:81) Fluency can be defined as the ability to speak fluently and accurately. Signs of fluency include a reasonably fast speed of speaking and only a small numbers of pause (Brown 1977:4)
4. Comprehension	It defines that comprehension for oral communication that requires a subject to respond to speech as well as to initiate it (Brown 1977:4)
5. Grammar	It is needed for students to arrange a correct sentence in conversation (Harris 1974). It is students' ability to manipulate and to distinguish appropriate grammatical from inappropriate ones (Heaton 1978:5)

3.5.3 Reliability of the Test

Besides validity, reliability was another essential characteristic of a good test. Reliability was important to know whether or not the test as an instrument for collecting data is consistent or stable. Reliability refers to extend to which the test

is consistent in its score and gives us an indication of how accurate the test score are (Shohamy, 1985:70). In achieving the reliability of the pretest and posttest of speaking, inter rater reliability was used in this research. The first rater was the writer himself and the second rater was the English teacher. Both of them discussed and put mind of the speaking criteria in order to obtain the reliable result of the test.

The writer also used the statistical formula for counting the reliability score between first and second raters.

The statistical formula of reliability is as follow:

R= $1-\left(\frac{6(\Sigma d^2}{N(N^2-1)}\right)$ (see appendices)

R = Reliability

N = Number of students

D = the different of rank correlation

1-6 = Constant number

After finding the coefficient between raters, writer analyzed the coefficient of reliability with the standard of reliability below:

a) A very low reliability (range from 0.00 to 0.19)
b) A low reliability (range from 0.20 to 0.39)
c) An average reliability (range from 0.40 to 0.59)
d) A high reliability (range from 0.60 to 0.79)
e) A very high reliability (range from 0.80 to 0.100)

Slameto (1998: 147).

3.6 Criteria for Evaluating Students' Speaking Ability

The consideration of criteria for evaluating students' speaking ability was based on the oral rating sheet from Harris (1974; 48). There were five aspects to be tested; pronunciation, vocabulary, fluency, comprehension, and grammar.

In evaluating the students' speaking scores, the writer and the second rater listened to the students' record voice in judging the score. The students' utterances were recorded because it helped the raters to evaluate more objectively. Based on the oral rating sheet from Harris (1974:84), there were five aspects to be tested. Bellow is the table rating scales;

3.2 Table of rating Scale

Aspects of speaking	Rating scales	Description
Pronunciation	5	Speech is fluent and effortless as that native speaker.
	4	Always intelligible though one is conscious of a definite accent.
	3	Pronunciation problems necessitate concentrated listening and Occasionally lead to understanding.
	2	Very hard to understand because of pronunciation problem most Frequently asked to repeat.
	1	Pronunciation problem so severe as to make speech unintelligible.
Vocabulary	5	Use of vocabulary and idiom virtually that is of native speaker.
	4	Sometimes use inappropriate terms and must rephrase ideas, because of inadequate vocabulary.
	3	Frequently use the wrong word, conversation somewhat limited because of inadequate vocabulary.
	2	Misuse of words and very limited vocabulary make comprehension quite difficult.
	1	Vocabulary limitations so extreme as to

		make conversation virtually impossible.
Fluency	5	Speech is fluent and effortless as that of native speaker.
	4	Speed of speech seems rather strongly 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 is so halting and fragmentary as to make conversation virtually impossible.
Comprehension	5	Appear to understand everything without difficulty.
	4	Understand nearly everything at normal speed although occasionally repetition may be necessary.
	3	Understand most of what is said at slower that normal speed with repetition.
	2	Has great difficulty following what is said can comprehend only" social conversation" spoken slowly and with frequent repetition.
	1	Can not be said to understand even simple conversation in English.
Grammar	5	Grammar almost entirely in accurate phrases.
	4	Constant errors control of very few major patterns and frequently preventing communication.
	3	Frequent errors showing some major patterns uncontrolled and causing occasional irritation and misunderstanding.
	2	Few errors, with no patterns of failure.
	1	No more than two errors during the dialogue.

The scores of each point are multiplied by four;

Hence, the highest score is 100

Here the identification of the scores

If the students get 5, so5 X 4 = 20

4, so 4 X 4 = 16

3, so 3 X 4 = 12

2, so 2 X 4 = 8

1, so 1 X 4 = 4

For instance:

A student got 5 in Pronunciation, 4 in Vocabulary, and 3 in Fluency, 2 in comprehension and 1 in grammar. Therefore, the student's total score will be:

Pronunciation	5 X 4 = 20
Vocabulary	4 X 4 = 16
Fluency	3 X 4 = 12
Comprehension	2 X 4 = 8
Grammar	1 X 4 = 4
Total	= 60

It means he or she got 60 for speaking.

3.7 Data Analysis

After conducting pretest and posttest, the writer analyzed the data. It was used to know whether there was significant increase of the student's speaking ability. The writer computed them by using the formula as follows:

$$M = \frac{X}{N}$$

Notes:

M = Mean (the average score)

X = Students score

N = Total number of students

(Arikunto, 1997:68)

Then the mean of pre-test was compared to the mean of post-test to see whether Role Play has positive increase to students' speaking ability. In order to know whether the students get an increase, the writer used the following formula.

I=M2-M1

Notes:

I = the increase of students' speaking achievement.

M2 = the average score of post-test

M1 = the average score of pre-test

After the data collected, the writer treated the data by using the following procedures:

3.3 Table of the data of score of pretest (T1) and posttest (T2)

Pretest

No	Student Code	Pronunciation	Vocabulary	Fluency	Comprehension	Grammar	Jumlah
1	AB	8	8	8	8	8	40
2	AM	12	8	12	8	4	44
3	BC	12	12	16	8	8	54
4	BI	12	12	16	12	12	64
5	BJ	12	8	12	8	8	48
6	...	....	....	....	....	....	...

Posttest

No	Student Code	Pronunciation	Vocabulary	Fluency	Comprehension	Grammar	Jumlah
1	AI	12	12	12	12	12	60
2	AIF	12	12	12	16	12	64
3	ATS	12	16	12	12	12	64
4	AK	12	12	16	16	16	72
5	AS	16	16	12	12	12	68
6	....	....	....	....	....	....	....

3.4 Table of row data of oral test

(see appendices page 56).

3.8 Data treatment

According to Setiyadi (2006:168-169), using Repeated Measures T-Test for hypothesis testing has 3 basic assumptions, namely:

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

And the writer took the data by using random sample in population.

3.9 Hypothesis Testing

The hypothesis testing was used to prove whether the hypothesis propose in this research is accepted or not. The hypothesis analyzes by using *Repeated Measure T–Test* through computing with *Statistical Package for Social Science (SPSS). Version 17.0 for Windows.* The hypothesis was formulated as follows:

Ho : There was no significant increase of students' speaking ability after taught using Role Play at SMK PGRI 1 Kota Agung Tanggamus Lampung.

Hα : There was significant increase of students' speaking ability after taught using Role Play at SMK PGRI 1 Kota Agung Tanggamus Lampung.