III.   RESEARCH METHOD

This chapter explained about the method used in the research, points explained in this chapter are: the design of the research, population and sample taken by the researcher

3.1. Design

This research is aimed to know whether Clamshell technique can increase speaking ability of the student or not. Moreover, the research has an objective to identify the students' responses toward the use of Clamshell technique in teaching speaking. Sugiyono (2008:114) states that experimental design is a study which aims at finding out the influence of particular treatment.

This research uses quantitative research as the research design. 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. The result is gotten from the comparison of the two tests (pre-test and post-test). According to Setiyadi (2000:40), the design is described as follows:

T1 X T2

T1   **:** Pre-test   **X:** treatment   **T2:** Post-test

A pretest is an activity before treatment given from the pre-test we can know how far the ability of the students. After that, the researcher gave two treatments to the

students using Clamshell learning as the teaching method. Finally, a posttest is aimed to see the result of the research after the treatment conducted.

3.2. Population and sample

The population of this research was the second grade of SMAN 1 TALANGPADANG. The researcher used one experimental class to be treated. The researcher chose the class that has moderate score in English subject as sample.

3.3. Instruments

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

3.3.1. Pre-Test (Speaking Test)

Pretest conducted to find out whether they have relatively the same ability in speaking before treatment. The pre-test given is speaking test for assessing oral production.

3.3.2. Post-Test (Speaking Test)

Post-test is given to the students who have been included in the pretest. It is conducted in the end of the research. It is done after giving treatments and exercises to the experimental group. The result of the post-test is used to compare the data of the pre-test and making conclusion weather clamshell technique can increase students' speaking ability. The procedure of post-test is the same as pre-test.

3.4. Research Procedure

In this research, the researcher have procedure in collecting the data. The procedure is explained as follow

3.4.1. Preparing the Lesson Plan

The lesson plan is designed to be implemented during treatment to the experimental group. The researcher designed the lesson plan for three meetings of treatments. The lesson plan is designed based on the National curriculum of English for second grade students of senior high school which consists of Core Competence, Standard Competence, Basic Competence, Indicator, Learning 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 were made by the researcher based on the resources from some English book of senior high school. The issue for the real material was made by the researcher.

3.4.3. Administering Pre-Test

This test is aimed to obtain the data of the students' basic speaking skill and to ascertain that the students from the group has similar capability and the same English proficiency before they receive the treatment.

3.4.4. Conducting Treatment

This research is conducted to see the effect of using clamshell technique in teaching speaking in order to improve speaking ability. The treatment is designed

for three meetings to the experimental group. Time allocation for each meeting consists of two hours of instruction (one hour of instruction was forty minutes).

3.4.5. Administering Post-Test

The study employs the post test at the end of the research. It is used to measure the students' speaking skill after the treatments. The posttest has the same procedures as the pre-test.

3.5. Data Analysis

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, the researcher analyzed it 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. The hypothesis analyzed at the significance level of 0.05 in which hypothesis approve if sig <α.

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.

Inter-Rater Reliability

Nitko (1983: 395) states that a reliable measure in one that provides consistent and stable indication of the characteristic being investigated.

The researcher assumes that reliability refers to extend the test is consistent in score and gives us an indication of how accurate the test score.

The statistical formula for counting the reliability is as follow:

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

R   = Reliability

N   = Number of students

D   = Different of rank correlation

1-6 = Constant number

After find the coefficient between rates, researcher then 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

Reliability of Pretest

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

$$R = 1 - \frac{6.(184.2)}{32.(1024 - 1)}$$

$$R = 1 - \frac{1105.2}{32736}$$

$$R = 1 - 0.03376$$

$$R = 0.966239 \text{ (Very high reliability)}$$

Reliability of Posttest

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

$$R = 1 - \frac{6.(351)}{32.(1024 - 1)}$$

$$R = 1 - \frac{2106}{32736}$$

$$R = 1 - 0.0.064332$$

$$R = 0.935668 \text{ (Very High Reliability)}$$

Validity

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, 1985:74) states that is construct validity to measure the test 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 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 Oral rating Specification (Based on David Haris's Theory)

Table 3.1 Table of Specification

No	Aspects	Score	Criteria
1	**Pronunciation**	1	Pronunciation problems so severe as to make speech virtually unintelligible.
		2	Very hard to understand because of pronunciation problems. Must frequently be asked to repeat.
		3	Prununciation problems necessitate concerntrated listening and occsionally lead to misunderstanding.
		4	Always intelligible though one is conscious of a definite accent
		5	Has few traces of foreign accent
2	**Grammar**	1	Errors in grammar and word order so severe as to make speech virtually unintelligible
		2	Grammar and word orders make comprehension difficult. Must often rephrase sentences and / or restrict him basic pattern.
		3	Makes frequent errors of grammar and word order which obscure meaning.
		4	Occasionally makes grammatical and /or word order errors which do not, however, obscure meaning.
		5	Makes few (if any) noticeable errors of grammar or word order.

3	**Vocabulary**	1	Vocabulary limitation so extreme as to make conversation virtually impossible.
		2	Misuses of words and very limited vocabulary make comprehension quite difficult.
		3	Frequently use the wrong words: conversation somewhat limited because of inadequate vocabulary.
		4	Sometimes uses inappropriate terms and/or must rephrase ideas because of lexical inadequacies.
		5	Uses of vocabulary and idioms are virtually that of a native speaker.
4	**Fluency**	1	Speech as so halting and fragmentary as to make conversation virtually impossible.
		2	Usually hesitant, often forced into silence by language problems.
		3	Speed and fluency are rather strongly affected by language problems.
		4	Speed of speech seems to be slightly affected by language problems.
		5	Speech as fluent and effortless as that of a native speaker.
5	**Comprehensible**	1	Cannot be said to understand even simple conversation of English.
		2	Has great difficulty following what is said. Can comprehend only "social conversation" spoken with frequent repetition.
		3	Understand most of what is said at lower than normal speed with repetitions.
		4	Understands nearly everything at normal speed although occasional repetition may be necessary.
		5	Appears to understand everything without difficulty.

For further explanation, see Appendix I.

3.7. Hypothesis Testing

The hypothesis on this research is formulated as follows:

H^0 :Clamshell technique can improve students' speaking ability

H^1 : Clamshell technique cannot improve students' speaking ability