III. RESEARCH METHOD

3.1 Research Design

This research was a quantitative research. It was carried out to see and find out does animation video have positive effect in improving students' speaking ability and to know how is the process of teaching speaking by using animation video. The design in this research was one group pretest-posttest design. It meant before the first teaching, pretest was carried out and after third teachings, a posttest conducted. The research design could be presented as follows:

T1 X T2

T1   : Pre-test

T2   : Post-test

X   : Treatment (teaching speaking using animation video)

(Hatch and Farhady, 1982:20) in Setiyadi (2006:44)

In conducting this research, the researcher used inter-rater reliability and computed the average score the oral test of the pre-test and post-test.

3.2 Population and Sample

The population of this research was the first grade of the SMA N 2 Kalianda. In determining the experimental class the researcher used the random sampling technique by using lottery. It meant that all in the first year class got the

same chances to be the sample. The sample of this research was class X 7 the pre

test and post test was administered in this class.

3.3 Data Collecting Technique

The research purpose to gain the data of students' speaking ability score before

the treatment (pretest) and after treatment (posttest). The learners' performance

was terms of interpersonal dialogue concern on five aspects of speaking namely

pronunciation, vocabulary, fluency, comprehension, and grammar. It based on the

rating scale by Harris (1978: 84). The score range from 20-100.

3.4 Research Procedures

3.4.1 Selecting Speaking Material

In selecting the speaking material, the researcher used the syllabus of the first year

of SMA student based on school based curriculum or KTSP, which is the newest

curriculum used by the school.

3.4.2 Determining the Instruments of the Research

The instrument in this research were speaking test to know the improvement of

students' speaking ability and observation table to find out the teaching learning

process of speaking through animation video. The researcher conducted the

speaking test for the pretest and posttest. The purpose these tests for gaining the

data. The data was 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 concerns 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 researcher himself and the second rater was the English class teacher self. Both of them discussed and putted 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 related to the content and the construct validity. The content validity refers to the materials which are based on the syllabus.

Construct validity concerns with whether the test is actually in line with the theory of what it means to know the language. It means that the test measured certain aspect based on the indicator. It is examined by referring the aspect that was measured with the theories of the aspect namely, pronunciation, vocabulary, fluency, comprehension, and grammar.

3.4.3 Determining Population and Sample

The population of this research was the first grade of the SMA N 2 Kalianda. One class was taken as the sample of this research. In determining the experimental class the researcher 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 is class X 7 the pre test and post test was administered in this class.

3.4.4 Conducting Pretest

Pretest was given before the treatment (teaching speaking by using animation video). The test was speaking test in the forms of interpersonal dialogue. The material that was tested related to KTSP curriculum which is suitable with their level. Pretest was given to know how far the competence of the students in speaking skill before the treatment. The test was held for 45 minutes. The scoring system based on the rating scale by Harris.

3.4.5 Giving the Treatment

The researcher presented the material for treatment in experimental group by using animation video. The students' was commanded by teacher to respond or answer the animation. There would be three times treatments in this research. Each treatment would be held for 90 minutes.

3.4.6 Conducting posttest

The posttest was administered after treatment, in 45 minutes. It was to know the progress of the students' speaking ability after being given the treatment using animation video. The scoring system would be based on the rating scale by Harris. In conducting the posttest the learners would be provided some topics to take a conversation in pairs. The test would be 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 would be asked to speak clearly since their voiced would be recorded during the test. The material for pretest and posttest was taken from the students'

handbook. The form of the test would subjective test since there was no exact answer.

3.4.7 Analyzing, interpreting and concluding the data

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

Tabulating the result of pretest and posttest and calculating the mean of the pretest and posttest for experimental class. Then, drawing the conclusion from the result of the pretest and post test, that used, *Repeated Measures T-Test of SPSS (statistical package for social science) version 13.0 for windows.* The data was gained from one group and the researcher intends to find out whether there was improvement of students speaking ability.

3.5 Research Instruments

3.5.1 Speaking Test

The instrument in this research in was *speaking test.* The researcher was conducted the speaking test for the pretest and posttest. The purposed these tests for gaining the data. The data was the students' speaking ability scores before and after the treatment in performing a conversation in terms of interpersonal dialogue in front of the class. The students chose some topics that were available on this

research. The test concerns on five aspects of speaking namely pronunciation,

vocabulary, fluency, comprehension and grammar.

3.5.2 Observation

To know the process of teaching learning of speaking using animation video the

researcher used observation table during teaching learning process.

Table of Lesson Observation

Appendix

CLASS OBSERVATION SHEET

Topic :   Day/Date   :
Class :   Observer   :

| No | Students' Activities | Students' code | | | | | | | | | | | | % ss involved |
		ai	aif	ats	ak	as	cg	ds	dh	da	dwa	dr	ep	
1	Pre- Activity • Being interested in the opening class • Respomdng to teacher's question about topic enthusiastically													
2	While activity • Listening teacher explanation about responding animation • Participating in responding animation video together • Doing practice before coming front • Taking a part in peer correction to help their friend													
3	Post activity • Reflection													
Precentage of students' Activity (%)														

Additional notes:

In the table observation there were seven points of students' activities. Researcher

took checklist of students' activity during teaching learning process.

3.5.3 Validity

A test can be 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 relate to the content and the construct validity of the test.

3.5.3.1 Content Validity

Content validity is concerned with whether the test is sufficiently representative and comprehensive for the test. In the content validity, the material was given suitable with the curriculum. Content validity is the extend 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; 251).

Content validity in this research was referred to the materials which based on the syllabus. It means in pretest and posttest the material suitable with their level in first grade senior high school.

3.5.3.2 Construct Validity

Construct Validity is concerned with whether the test is actually in line with the theory of what it means to know the language that is being measured, it would be examined whether the test actually reflect what it means to know a language. In this research the researcher focused on speaking ability in forms of interpersonal

dialogue. It means that the pretest and posttest measured certain aspect based on the indicator. It was examined by referring the aspect that measured with the theories of the aspect namely, pronunciation, vocabulary, fluency, comprehension, and grammar. A table of specification is an instrument that helps the raters plan the test.

The table of specification

Aspect	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)

3.5.4 Reliability

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 study. The first rater was the researcher himself and the second rater was the English teacher.

In achieving the reliability of pretest and posttest of speaking test, first and second raters discussed and putted mind of the speaking criteria in order to obtain the reliable result of the test.

Figure of Interaction in Performance Assessment of Speaking Skills

Raters

Scale/Criteria   **Score**

Performance

Task

Students
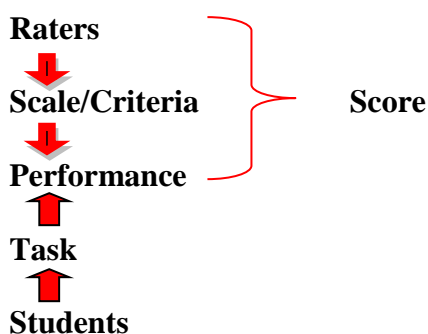
McNamara (1995)

Besides inter rater reliability that used in this research. The researcher also used the statistical formula for counting the reliability score between first and second raters.

The statistical formula of reliability is as follow:

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

R   = Reliability

N   = Number of students

D   = the different of rank correlation

1-6   = Constant number

After finding the coefficient between raters, researcher 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 researcher and the second rater

listened to the students' record voice. The students' utterance was recorded

because it can help the raters to evaluate more objectively. Based on the oral

rating sheet from Harris (1974:84), there were five aspects to be tested.

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 be 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 right pattern sentence during the dialogue.

The scores of each point are multiplied by four;

Hence, the highest score was 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, 3 in Vocabulary, and 3 in Fluency, 2 in

comprehension and 2 in grammar. Therefore, the student's total score will be:

Pronunciation   4 X 4 = 16

Vocabulary   3 X 4 = 12

Fluency   3 X 4 = 12

Comprehension   4 X 4 = 16

Grammar   3 X 4 = 12

Total   68

It means he or she got 68 for speaking.

3.7 Data Analysis

To analyze the data of the students' score in the pretest and posttest the researcher 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 compared to the mean of post-test to see whether Animation Video has positive effect toward students' speaking ability. In order to know whether the students get an improvement, the researcher used the following formula.

I=M2-M1

Notes:

I   = the improvement of students' speaking achievement.

M2   = the average score of post-test

M1   = the average score of pre-test

After the data collected, the researcher treated the data by using the following

procedures:

Putting the data of score of pretest (T1) and posttest (T2) on table below:

S' code	Pronunciation		Vocabulary		Fluency		Comprehension		Grammar		Total	
1	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
2												
3												

Row data of oral test

No	Students' code	Rater 1		Rater2	
		Pre-test	Post-test	Pre-test	Post-test
1	A				
2	B				
3	C				
....					

3.8 Data treatment

In order to find out the increasing of students' speaking ability after being taught

by using animation video, the researcher used statistically analyzed the data using

the statistical computation i.e. repeated measures T – Test of SPSS version 17.

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 (not absolute)

3. The data is distributed normally

3.9 Hypothesis Testing

The hypothesis testing stated as follow:

H_1 : Animation Videos have positive effect in improving students speaking ability.

H_0 : Animation Videos have no positive effect in improving students speaking ability.