# III. THE RESEARCH METHODOLOGY

The writer elaborates this chapter into seven topics. They are research design, population and sample, research instruments, reliability and validity of the instruments, research procedure, data treatment, hypothesis testing.

3.1 Research Design

This research is quantitative research. The researcher used *expost-facto design* because there is no treatment done, but collecting the data to see the effect of students' attitude towards their speaking ability. This research has two variables, they are attitude (positif and negatif) as independent variable (formulated as X1 and X2), and the second is students' ability as dependent variable (Y). Those data then was analyzed to find out the effect of attitude towards speaking ability.

X1

Y

X2
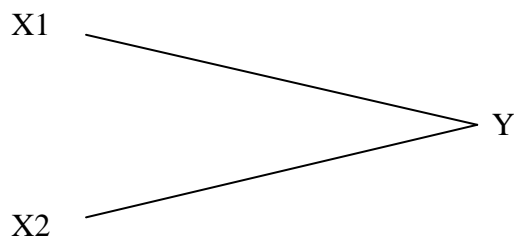
Explanation: Variable X1 (positive attitude), variable X2 (negative attitude), and how those two variables give the effect to variable Y (speaking ability).

3.2 Population and Sample

Population means the entire mass of observations, which is the parent group from which a sample is to be formed. Population also means the characteristics of a group (Singh, 2006:82). In doing a research, all students in grade XI of SMA N 1 Kalirejo were used as population. However, it needed extra time, energy, and money to do it. Therefore, to overcome this problem, the concept of sample was used. According to Tayie (2005:32), a sample is the subset of the population that is taken to be the representative of the entire population. While, Dawson (2002: 47) defines the sample is as a smaller, more manageable number of people who take part in the research. From the definition above, it is concluded that sample means a smaller unit of the population that represents the whole characteristics of the population. For that reason, the researcher chose one class from class XI as the sample by using random technique through lottery.

3.3 Research Instruments

In collecting the data of variables X and Y (attitude and speaking ability), the writer used questionnaire to know the student's attitude (variable X), while for measuring student's ability in speaking the writer applied a test by asking the students to make a conversation with their chairmate (variable Y). And for technique, the writer implemented pair work technique because the writer assumed that the students will be more enjoy in making their conversation with their chairmate.

3.3.1 Test of Attitude

As mentioned previously, the measurement of attitude (X) was carried out through questionnaire. The questionnaire was used to get information about students' attitude towards English. The questionnaire instruments consisted of 23 items. The students only answer yes or no from the question given by the researcher.

3.3.1.1 Design of Questionnaire

The researcher designed the questionnaire from Setiyadi (2006:73-75), that includes two components of attitude in learning English:

    a. Attitude to English as a foreign language

    b. Attitude to English teaching learning

Table 1. Component of Questionnaire

Number of Questionnaire	Component
1 – 10	Attitude to English as a foreign language
11 – 23	Attitude to English teaching learning

The researcher took the questionnaire from Setiyadi (2006: 73-75), because it is suitable for the second year students of senior high school that learn English as a second / foreign language.

3.3.2 Speaking Test

In gathering students' speaking data, the writer matched the test with the syllabus of the second year of SMA students based on school curriculum or KTSP (an English operational curriculum which was arranged and applied by each education unit) which the newest curriculum used by the school. The writer conducted speaking test, which last for 90 minutes. In conducting the test the learners were provided a topic and guided to make a short dialogue in pair. The topic is accepting and refusing an invitation. The test was done orally, and directly the teacher called the group one by one in front of the class to perform the dialogue.

The learners were asked to speak clearly since their voice was recorded during the test. The materials of the test were taken *From Person to Person* book which is appropriate for the students in the second grade. The form of the test is subjective test since there is no exact answer. The score of the students' speaking ability were given based on the oral rating sheet provided. Since, this research applied Heaton (1991) as a guidance in measuring students' speaking ability, the teacher and the writer assessed the students concerned on 3 aspects namely pronunciation, fluency, and comprehension. As stated previously, in this test inter rater was applied; the first rater is the writer himself and the English teacher as the second rater.

3.3.2.1 Speaking Topic

The speaking topic was taken from the material that they have learnt before so that the students already have the background knowledge about the topic. The

topic is accepting and refusing an invitation. It also can be considered that students who have good attitude will not forget the material they have learnt before because the writer believes that they will use it in their daily activity with their friends.

Pair work technique was used to assess English speaking ability of the students. The writer asked the students to work in pairs so that they can learn several things when working with a partner. Students learn to clarify, confirm, and comprehend information; students learn to assist each other in language learning and pronounce words correctly; and students learn what they need to work on the most.

3.3.2.2 Speaking Scoring System

The writer applied the oral ability scale proposed by Heaton (1991) as guidance for scoring the students' speaking test that implements holistic scoring which covers pronunciation, fluency, and comprehensibility. The materials were dialogue and the students worked in pair. Each pair has 3 minutes to speak. During the speaking test the writer recorded the students' conversation in recording tools (hand phone) so that it can be transferred into compact disk while the teachers see the process. The writer gave the copy of data that had transferred into compact disk to the teacher in order that data can be measured by her. Furthermore, the recorded data was scored to measure the English speaking ability of the students individually then the writer accumulated the result of the test with

the English teacher to fulfill the reliability of the test. The table below is the speaking scoring system proposed by Heaton (1991):

Table 2. Speaking Scoring System

Range	Pronunciation	Fluency	Comprehensibility
81-90	Pronunciation on ly very slightly influenced by mother tongue.	Speak without too great an effort with a fairly wide range of expression. Search for words occasionally but only one or two unnatural pauses.	Easy for listener to understand the speakers' intention and general meaning
71-80	Pronunciation is still moderately influenced by the mother tongue with errors causing a breakdown in communication.	Has to make an effort at times to search for words. Nevertheless smooth very delivery on the whole and only a few unnatural pauses.	The speaker's intention and general meaning are fairly clear. A few interruptions by listener for the sake of clarification are necessary.
61-70	Pronunciation is still moderately influenced by the mother tongue but no serious phonological errors.	Although she/he has made an effort and search for words, there aren't too many unnatural pauses. Fairly smooth delivery mostly.	Most of the speakers say is easy to follow. His/her intention is always clear but several interruptions are necessary to help him to convey the message or to see the clarification
51-60	Pronunciation is influenced by the mother tongue but only a few serious phonological errors	Has to make an effort for much of the time. Often has to look for the desired meaning. Rather halting delivery and fragmentary	The listener can understand a lot of things being said. But he must constantly seek clarification. Cannot understand many of speakers' more complex or longer sentences
41-50	Pronunciation is influenced by the mother tongue with errors causing a	Long pauses while he/she searches for the desired meaning. Frequently halting delivery and	Only a little bit (usually short sentences and phrases) can be

	breakdown in communicating/global errors	fragmentary almost gives up for making the effort at times	understood and then with considerable effort by someone who is used to listening to the speaker
31-40	Serious pronunciation errors. No evidence of having mastered any of the language skills and areas practiced in course	Full of long and unnatural pauses. Very halting and fragmentary delivery. At times gives up making the effort	Hardly anything of what being said can be understood. Even when the listener makes a great effort or interrupts the speaker is unable to clarify anything being said

The criteria of scoring:

81-90 : excellent

71-80 : very good

61-70 : good

51-60 : fair

41-50 : moderate

3.4 Reliability and Validity of the Instruments

Every research including social science and language research always use the reliable and valid instrument in order for the result to be more meaningful and believable. Therefore, the writer tries to define the definition of reliability, and validity as well as what kinds of tests that can be said valid and reliable.

3.4.1 Reliability of the Instruments

The researcher analyzed the reliability to know whether or not the questionnaire is reliable. According to Arikunto (1998: 260), the standard of reliability of the instrument can be described as follows:

a. Between 0,80 to 1,0 = very high reliability

b. Between 0,60 to 0,79 = high reliability

c. Between 0,40 to 0,59 = moderate reliability

d. Between 0,20 to 0,39 = low reliability

e. Between 0,0 to 0,19 = very low reliability

The researcher administered the questionnaire for the purpose of estimating the students' attitude towards English. The questionnaire used in this research consists of 23 items. Those questionnaire items measure about students' attitude to English as a subject, attitude to learning English. The questionnaire that was used by the researcher was taken from Setiyadi (2006: 73-75)

For speaking test, to ensure the reliability of scores and to keep away from the subjectively of the research, the writer used inter-rater-reliability. It is used when scores of the test are independently estimated by two or more judges or raters. It means that there will be another person who gives score besides the writer himself.

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

$$R = 1 - \frac{6.\sum 5^2}{32(32^2-1)}$$

$$R = 1 - \frac{6.25}{32.1023}$$

$$R = 1 - \frac{150}{23529}$$

$$R = 1 - 0.006375$$
$$R = 0,99$$

3.4.2 Validity of the Instrument

Validity is a matter of relevance. It means that the test measures what is claimed to measure. To measure whether the test has a good validity, it has to be analyzed from content validity and construct validity. Content validity is concerned with whether good or not the content of the test is sufficiently representative and comprehensive for the test to be valid measure. While construct validity focused on the kind of test that is used to measure the ability. Since the purpose of the test is to measure as well as to know the students' attitudes in learning English, so the researcher applied a test that deal with attitude taken from Setiyadi (2006: 73-75).

For the speaking test, the writer adapted the topic that was discussed in the class. The writer also applied the oral ability scale proposed by Heaton (1991) as

guidance for scoring the students' speaking test that implemented holistic scoring which covers fluency, Pronunciation and comprehensibility.

3.5 Research Procedure

In conducting this research, the writer used the steps as follows:

1. Administrating attitude test

   The writer provided a questionnaire of attitude to the students.

2. Administrating English Speaking Test

   The writer conducted English speaking test by recording the result. The recorded result was rated by two raters.

3. Collecting data

   The writer gathered those data after the test by giving score.

4. Analyzing the data

   The data were examined by using ANOVA. The data was statistically computed through the statistical package for social science (SPSS). It was tested to find out whether there was a significant difference both of the two attitude to English speaking ability.

3.6 Data Treatment

The data of the research were examined by using ANOVA. The data were statistically computed through the Statistical Package for Social Science (SPSS).

According to Hatch and Farhay (1982), using ANOVA for the hypothesis testing had underlying assumptions, they was dependent and independent variable. The writer categorized speaking skill as a dependent variable since this ability is influenced by attitude while attitude as an independent variable. The writer assumes that attitude has an influence toward the language Ability.

3.7 Hypothesis Testing

In administering hypothesis test, ANOVA is used. Its function is to know the difference among the groups is significant or not. The data were analyzed by using ANOVA. This test was used when we want to compare the means of three or more different groups.

The criteria are:

Non-directional two tailed hypothesis, the hypothesis are:

H_0 = there is no significant difference of students' speaking ability between positive and negative attitude.

H_1 = there is a significant difference of students' speaking ability between positive and negative attitude.