# III. RESEARCH METHOD

3.1. Research Design

The writer used *Ex Post Facto* research design non *correlational study*. There was no treatment done in this research, but collecting the data to identify communication strategies used by second year students of SMK N 4 Bandar Lampung and to see whether there was a significant different between communication strategies used by the students with different levels in speaking. There were three variables in this research: communication strategies *(based on oral communication strategy)* as independent variable (X), speaking ability of the students as dependent variable (Y), and level of students as intervening variable (Z), with the formula as follow:

$$X \longrightarrow Y$$
$$\downarrow$$
$$\frac{Z1}{Z2}$$
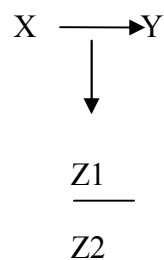
X: Questionnaire *(Oral communication strategy inventory)*

Y: Test of speaking ability.

Z1: high speaking achiever.

Z2: low speaking achiever.

3.2 Population and Sample

The research was done at SMK N 4 Bandar Lampung. The population of this research was all of accounting class students, especially second year semester 1 (2010). There were three accounting classes at this school that consisted of 106 students but only 68 students are chosen as the sample. According to Guy and Stanley (1992: 104), sample is some part or portion of the population. It is smaller number of elements that have been selected for study from the total number of elements contained in the population. Purposive sampling was used in taking the sample because there was no favorite class in this school, so the writer assumed that students have equal competence.

3.3 Data

This research deals with three variables, they are as follow:

1. Communication strategies as an Independent Variable (X) Independent variable are the variable which functions are to influence the dependent variable. The independent variable in this research was the communications strategies which were influenced the dependent variable (students' speaking ability).

2. Students' speaking ability as a dependent Variable (Y) Sedlack and Stanley (1992: 35), a dependent variable is the variable that is presumed to have been caused by independent variable. The dependent variable in this research was the speaking ability of the students.

3. The level of students (Z) was intervening variable; it was the third variable. The students were divided into three categories, with criteria as bellow:

a. Low speaking achievers were the students with score of below 70.0

b. Middle speaking achievers were the student with score ranging from 76 to 80

c. High speaking achievers were the students with the score ranging from 81 to 100.

3.4. Research Procedure

The procedures of the research were as follow:

1. Determining the sample

   The writer used purposive random sampling in determining the sample. There were three accounting classes but the writer two classes only with assumption there no grading in classifying the students

2. Administering the questionnaire, it was administered to know the communication strategies used by the students.

3. Administering the speaking test, the purpose of the test is to know the students' speaking ability.

4. Analyzing the data, the writer used Factor analysis, Anova and Post Hoc Test in analyzing the data.

3.5. Instrument of the Research

The researcher used some instruments in collecting the data, they were:

3.5.1 Questionnaire

The researcher gave a questionnaire which consists of 32 items in order to know the students' communications strategies. The researcher used the

questionnaire of Oral Communication Strategy Inventory which is developed by Yasuo Nakatani (see table 1). The result of the questionnaire was scored from (1) never or almost never true of me to (5) always or almost always true of me (see table 2).

Table 1. Factors for copying speaking strategies

No.	Factors for copying speaking Strategies	Number of items
1.	Social Affective strategies	23, 25, 26, 27, 28, 29
2.	Fluency-oriented strategies	9, 10, 11, 12, 13,14
3.	Negotiation for meaning While speaking	19, 20, 21, 11
4.	Accuracy-oriented Strategies	7, 8, 17, 18, 30
5.	Message Reduction and alteration strategies	4, 3, 5
6.	Nonverbal strategies while speaking	15, 16
7.	Message abandonment strategies	6, 24, 31, 32
8.	Attempt to think in English	1, 2

Table 2. Option score

No	Options	Score
1.	Never or almost never true of me	1
2.	Usually not true of me	2
3.	Somewhat true of me	3
4.	Usually true of me	4
5.	Always or almost always true of me	5

3.5.2 Speaking Test

The researcher administered the speaking test to know the level of students speaking ability. The test was done as follow:

1. The researcher provided the topic for the students.

2. The researcher divided the students into pairs.

3. The students created their own conversation based on the topic.

4. The researcher recorded the students' conversation.

5. The researcher gave the score based on Heaton criteria

3.6 Criteria for Evaluation Students' Speaking ability

In evaluating the students' speaking scores, the researcher and another rater listened to the students' record and used the Oral test of speaking (see the appendix 4) adopted from Heaton (1991:100).

3.7 Reliability and Validity of the Instrument

Reliability can refer to the tendency toward consistency found in repeated measurements of the same phenomenon; it can also refer to stability of measurement over time, an approach which was not suited to the current investigation. According to Harris (1969:14), reliability means the stability of test scores. Test reliability is affected by a number of factors, chief among them being the adequacy of the sampling of tasks.

Brown (1988:101) states that test validity is the degree to which a test measures what it claims to be measuring. Mean while Gronlund (1982:126)

states that validity refers to the appropriateness of the interpretations of test result (typically with regard to some practical use of the test results). There are three ways to look at the validity of a test: 1). content validity, 2). construct validity, 3).criterion related validity.

3.7.1 Validity and Reliability of the Questionnaire

The questionnaire that was developed by Yasuo Nakatani (OCSI) was used in this research. It consists of 32 items (see the appendix 1). The reliability of the 32 items addressing strategies for copying with speaking problem, it was examined by Cronbach's alpha. Alpha for these 32 items was .86, which indicates a highly acceptable internal consistency. The mean of 32 items was 3.22, and the standard deviation was 0.97.

In order to determine the number of factor in strategies for copying with speaking problem, Nakatani perform factor analysis. By mean of a minimum – eigenvalue criterion of 1.0 (Kaisers' criterion). The total percentage of variance accounted by this eight factors was 58.%. it can be assumed that this factors are suitable for EFL learners. **Validity** is a matter of relevance; it means that the test measures what is claimed to measure. Heaton (p. 159) states that the validity of a test is the extent to which it measures what it supposed to measure and nothing else. Because this questionnaire measure speaking learning strategies for EFL learners; so the writer assumes that this questionnaire is valid.

Pearson correlation statistics were used by Nakatani to find the relationship between the results of the SILL and the OCSI in order to examine the validity of these two scales. Significant correlations were found between the total use of the strategies on the SILL and the total use of strategies for coping with speaking problems (r= .62) and listening problems (r = .57) on the OCSI (see the appendix). Students who reported frequent use of the SILL items also tended to report frequent use of the OCSI items. Therefore, the concurrent validity of the OCSI was generally recognized because the SILL has been regarded as an established scale for strategy use.

3.7.2 Validity and Reliability of Speaking Test

In this research, the writer used the scorer rater reliability. Gay (1987:141) states that scorer rater reliability refers to the situations for which reliability must be investigated, such as essay test, short answer test involving more than one word response, rating scale, and observation instrument. So, besides the researcher herself as the scorer, there will be another one that is the English teacher whose scores was used to see whether the scores were reliable or not.

Guy (1987:129) explains that logical validity includes content validity and it is so named because validity is determined primarily through judgment; they are item validity and sampling validity. Guy also insists that contents validity is determined by expert judgment. There is no formula which can be computed and there is no way to express it quantitatively. Therefore, in

this research the writer used the role of the expert that is the advisor of this research to judge the validity of this speaking test. Based on Guy's theory, it could be said that the speaking test in this research is valid.

3.8. Data analysis

3.8.1 Factor analysis

The data that was collected by questionnaire was computed by SPSS 16. Factor analysis was used in order to identify communication strategies that used by second year students of SMK N 4 Bandar Lampung. The Factor Analysis followed by means of a eiguinvalues over 1.0 (kaiser normalization), principal axis factoring, and varimax rotation,with the formula as follow:

$$V_{total} = V_{common} + V_{specific} + V_{error}$$

Hatch and Farhady (1982:253)

3.8.2 ANOVA and Post Hoc Test

Analysis of variance was used in this research to find whether any significant different in communication strategies used by the students with different level of speaking. Post Hoc Test was used in order to get more specific data

$$F_{obs} = \frac{S^2_{between}}{S^2_{within}}$$

3.8.3 Scoring System of Speaking Test

As stated on the above, the writer will use Oral English Rating Sheet, proposed by Heaton (1974:84). There are two steps will be done in calculating students speaking score:

a. Calculating the score from 1st and 2nd rater

$$X_1 = \frac{A + F + C}{3}$$

$$X_2 = \frac{A + F + C}{3}$$

b. Calculating the total score

$$X = \frac{X_1 + X_2}{2}$$

Note:

X: Total score   A: accuracy

X_1: Score from 1st rater   F: Fluency

X_2: Score from 2nd rater   C: Comprehensibility

3.9. Statistical Hypothesis

Hypothesis for research question 2

H_0= There is no significant difference in communication strategies used by

students with different levels of speaking ability.

H_1= There is a significant difference in communication strategies used

by students with different levels of speaking ability.