

3. METHOD

This chapter discusses about design, population and sample, research procedure, instruments, validity and reliability of instruments, data analysis, and hypothesis testing.

3.1. Design

This research applied quantitative design. The writer used pretest-posttest design.

The design was as follows:

T₁ X T₂

Where :

T₁ : Pretest

X : Treatment

T₂ : Posttest

(Setiyadi, 2006: 131)

This research consisted of two variables, i.e. independent and dependent variable.

The independent variable was the students' personality, i.e. extrovert and introvert. The dependent variable was the students' speaking achievement. The independent variable would influence the dependent variable. It meant that the students' personality, i.e. extrovert and introvert, would influence their speaking

achievement in this research. From the explanation above, the writer determined the variables as follows:

1. The introvert students were as independent variable. (x_1)
2. The extrovert students were as independent variable. (x_2)
3. The introvert students' speaking achievements were as dependent variable. (y_1)
4. The extrovert students' speaking achievements were as dependent variable. (y_2)

This research was a comparative study. It compared the scores from two different groups of the independent variable that were obtained from the pretest and posttest. In order to categorize students who belonged to extrovert or introvert, the researcher gave questionnaire to the students. Based on the result of the questionnaire, the researcher classified the students into three groups: introvert, ambivert, and extrovert. The ambivert group was not taken as the sample because it was out of the scope of the research. The introvert and extrovert were the independent variable. Meanwhile, the students' result of speaking test was the dependent variable of the research. There were pre-test before teaching speaking and post-test after teaching speaking to see the gain of speaking test.

3.2. Population and Sample

The population of this research were the second year students of SMKN 1 Bandar Lampung. The researcher chose vocational high school as the place to conduct the research because the researcher considers that most of vocational school students

are possibly projected to be workers after graduation and role-play technique is probably matched with their needs of practicing situational dialog. The researcher took one class as the sample. They were the 11th grade students of office administration major of SMKN 1 Bandar Lampung. The students were classified as extrovert and introvert students. The introvert students were paired with introvert students, and vice versa with the extrovert students.

3.3 Research Procedures

In collecting the data, the researcher used:

1. Determining population and selecting samples

The population of this research were the students of SMKN 1 Bandar Lampung. The researcher took one class as the sample. They were the 11th grade students of office administration major. The students were classified as extrovert and introvert students. The introvert students were paired with introvert students, and vice versa with the extrovert students.

2. Determining the Instruments of the Research

The instruments in this research were questionnaire of personality, speaking test, and questionnaire of the students' responses. The questionnaire of personality was used to classify the students into introvert and extrovert personality as the independent variable of the research that would influence the dependent variable: speaking test. There were speaking tests for the pre-test and post-test, those were aimed at finding the gain of the data of speaking ability before and after treatment in

performing role-play activity. The questionnaire of the students' responses was used to get information from the students about what they felt which were related to role play technique and their speaking ability.

3. Selecting Speaking Material

The researcher used the syllabus of the second semester of the 11th grade of vocational high school. The researcher chose transactional dialogue for the material. The topics were about invitation, opinion, and permission.

4. Distributing Questionnaire of Personality

The researcher gave questionnaire of personality to the students. The result of the questionnaire was used to classify the students' personality type.

5. Conducting Pre-Test

Pre-test was given before the researcher started the treatment (teaching speaking through role-play technique). It was a speaking test in form of dialogue. The test was held in 90 minutes. Students worked in pair based on their personality and they performed dialogue according to the situation that provided by the researcher on the role card. The students' utterance was recorded using voice recorder.

6. Treatment (Teaching Speaking)

The researcher presented the material through role play technique. Students got instruction from the researcher, then they practiced the dialogue based on the situation provided on the role card.

7. Conducting Post-test

After the researcher gave the treatment, the post-test was conducted. It was aimed to find out the progress of the students' speaking ability after being given the treatment using role-play technique. It was speaking test in form of dialogue. The test was held in 90 minutes. Students worked in pair which was based on their personality and the researcher provided the role card with some situations of dialogue and they performed it. Voice recorder recorded the students' utterance.

8. Distributing Questionnaire of the Students' Responses

The researcher gave questionnaire of role play activity to the students. The aim of giving the questionnaires was to get information from the students about what they felt related to role play technique and their speaking ability.

9. Transcribing, Analyzing, and Concluding the Data

After collecting the data of students' utterance, the researcher transcribed the students' utterance from the voice recording. Then, the researcher analyzed it by referring the rating scale of speaking aspects: pronunciation,

fluency, comprehensibility, vocabulary, and grammar. The students' scores of pre-test and post-test were tabulated and calculated using *Independent Groups T-Test of SPSS (Statistical Package for Social Science)* version 16.0 for windows. After that, the researcher interpreted the result of the T-Test, analyzed it, and drew the conclusion.

3.4. Instruments

The instruments for collecting the data were as follows:

1. Questionnaire of Personality

Questionnaire is an instrument which is very effective to measure aspects and variables in associated with personality, psychology aspect or sociology (Setiyadi, 2006). The questionnaire for personality type was adapted from Eysenck's theory of introvert and extrovert personality characteristics.

Table 3.1. Specification of the Personality Questionnaire Based on Eysenck's Theory.

Items number	Introvert	Items number	Extrovert
1	Thoughtful	9	Sociable
2	Passive	10	Leadership
3	Controlled	11	Carefree
4	Calm	12	Talkative
5	Careful	13	Lively
6	Reliable	14	Outgoing

7	Peaceful	15	Responsive
8	Even-tempered	16	Easygoing

Table 3.3. Specification of the Questionnaire Items.

Items number	Personality		Items	Percentage
	Introvert	Extrovert		
1, 2, 3, 4, 5, 6, 7, 8.	X		8	50%
9, 10, 11, 12, 13, 14, 15, 16.		X	8	50%
Total			16	100%

The questionnaire consists of 16 items with 4 options in each question, i.e. *Sangat Setuju*, *Setuju*, *Tidak Setuju*, and *Sangat Tidak Setuju*.

Table 3.2. Options and Scores in the Personality Questionnaire

Options	Score
<i>Sangat Setuju</i>	4
<i>Setuju</i>	3
<i>Tidak Setuju</i>	2
<i>Sangat Tidak Setuju</i>	1

The maximum score was 32 and the minimum score was 8. Since the items of introvert were 8 and the items of extrovert were 8, the scores were compared. If the score of introvert items were higher than the score of extrovert items, the students were classified as introvert group. If the score of the extrovert items were higher than the introvert items, the students were classified as extrovert group. However, if the score of introvert items were as high as extrovert items or they had equal score, the students were classified as ambivert group, a personality trait that is the combination of both introvert and extrovert, and it was not involved as the samples.

For example:

Student	Extrovert Score	Introvert Score	Result
A	27	24	Extrovert
B	24	27	Introvert
C	24	24	Ambivert

2. Speaking Test

The researcher held pre-test and post-test in the speaking test. The pre-test was held before the students were taught by using role-play technique. After the treatment, the post-test was conducted. It was aimed to find out the progress of the students' speaking ability after being given the treatment by using role-play technique. It was speaking test in form of dialogue. The test was held in 90 minutes. Students worked in pair which was based on their personality and they performed dialogue according to

the situation that was provided by the researcher on the role card. The students' utterance was recorded by using voice recorder.

In evaluating the students' speaking score, the researcher used the Oral English Rating sheet by Harris (1974: 84). Based on it, there are five components for the test to the students. They are pronunciation, fluency, grammar, vocabulary, and comprehensibility.

Here is the sample of the oral rating sheet:

Pronunciation

Score	Description
5	has few traces of foreign accent
4	always intelligible though one is conscious of a definite accent
3	Pronunciation problems necessitate concentrated listening and occasionally lead to misunderstanding
2	very hard to understand because of pronunciation problems. Most frequently is asked to repeat
1	Pronunciation problems so severe as to make speech virtually unintelligible

Grammar

Score	Description
5	make few (if any) noticeable errors of grammar or word order
4	occasionally makes grammatical and /or word order errors

	which do not, however, obscure meaning
3	make frequent errors of grammar and word order which obscure meaning
2	grammar and word orders make comprehension difficult. Must often rephrase sentence and /or restrict him basic pattern
1	errors in grammar and word order so severe as to make speech virtually unintelligible

Vocabulary

Score	Description
5	uses of vocabulary and idioms are virtually that of a native speaker
4	sometimes use inappropriate terms and /or must rephrase ideas because of lexical inadequacies
3	frequently use the wrong words: conversation somewhat limited because of inadequate vocabulary
2	misuses of words and very limited vocabulary make comprehension quite difficult
1	vocabulary limitation so extreme as to make conversation virtually impossible

Fluency

Score	Description
5	speeches as fluent and effortless as that of a native speaker

- 4 speed of speech seems to be slightly 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 as so halting and fragmentary as to make conversation virtually impossible

Comprehensibility

Score	Description
5	appears to understand everything without difficulty
4	understand nearly everything at normal speed although occasional repetition may be necessary
3	understand most of what is said at lower than normal speed with repetitions
2	have great difficulty following what is said. Can comprehend only "social conversation" spoken with frequent repetition
1	cannot be said to understand even simple conversation of English

Here, the researcher makes an equation of making students' oral test. Each score will multiply by four, thus the highest score is 100. For example, the

score of students' grammar is four. The researcher will multiply it by four so, the score of students' grammar is 16

Here is the identification of the scores:

If a student gets 5, so $5 \times 4 = 20$

If a student gets 4, so $4 \times 4 = 16$

If a student gets 3, so $3 \times 4 = 12$

If a student gets 2, so $2 \times 4 = 8$

If a student gets 1, so $1 \times 4 = 4$

For example: Student A gets 3 in grammar, 3 in vocabulary, 2 in fluency, 3 in comprehension, and 2 in pronunciation.

Grammar $3 \times 4 = 12$

Vocabulary $3 \times 4 = 12$

Fluency $2 \times 4 = 8$

Comprehension $3 \times 4 = 12$

Pronunciation $2 \times 4 = 8$

Total = 52

It means he/she gets 52 for the speaking test.

Table 3.4. Rating Sheet Score

Ss' Code	Pron. (1-5)	Fluency (1-5)	Grammar (1-5)	Voc. (1-5)	Comp. (1-5)	Total x 4 (1-100)
1						
2						

3. Questionnaire of the Students' Responses

The researcher used questionnaire of the students' responses to get information from the students about what they felt related to role play technique and their speaking ability. From the result of the questionnaire, the researcher made conclusions about the extrovert and introvert students' feeling in doing speaking activity through role play technique.

3.5. Validity and Reliability of the Instruments

3.5.1. Validity of the Instrument

- **Validity of Personality Questionnaire**

Since the purpose of the test was to investigate students' personality, the researcher applied a test that dealt with the students' personality, that was developed by Eysenck (1961), a famous British psychiatrist, namely Eysenck Personality Inventory (EPI). The researcher made the questionnaire by adapting from the theory of Eysenck. This was used to classify the respondents to the type of extrovert and introvert. From the theory of Eysenck, the characteristics of introvert are passive, thoughtful, careful, peaceful, controlled, reliable, even-tempered, and calm. Meanwhile, the characteristics of extrovert are sociable, outgoing, easy going, carefree, talkative, responsive, lively, and leadership.

This is the following table of specification of the questionnaire item numbers based on the characteristics of extrovert and introvert personality.

Table 3.5. Specification of the Questionnaire Item Numbers

Items number	Introvert	Items number	Extrovert
1	Thoughtful	9	Sociable
2	Passive	10	Leadership
3	Controlled	11	Carefree
4	Calm	12	Talkative
5	Careful	13	Lively
6	Reliable	14	Outgoing
7	Peaceful	15	Responsive
8	Even-tempered	16	Easygoing

- **Validity of Speaking Test**

To support the interpretation of the data and to draw correct conclusions, the researcher used content validity, face validity and construct validity in this research. Fraenkel and Wallen (2007) defines that content validity refers to the content and format of the instrument. It relates to the appropriateness, comprehension, and adequacy of the sample of items which represent the content to be assessed. The materials that were brought in this speaking test were synchronized with the syllabus of *KTSP (Kurikulum Satuan Tingkat Pendidikan)*, that is used in the school

of the research's population and sample. The topics were about giving invitation, asking permission, and expressing opinion.

Face validity measures whether the test "looks valid" to the examinees who take it. Face validity could easily be called surface validity or appearance validity since it is merely a subjective, superficial assessment of whether the measurement procedure you use in a study appears to be a valid measure of a given variable. In this research, the instruction and the whole content of the speaking test were measured whether it could be understood or not by the experts, lecturer and teacher. The measurement was also based on the grammar, vocabulary, and the comprehensibility.

Besides, construct validity concerns with whether the test is actually in line with the theory of what it means to the language (Shohamy, 1985:74) that is being measured. In this test, the researcher measured the students' speaking achievement based on the aspects of speaking that are adapted from Haris' theory (1974). They are pronunciation, fluency, grammar, vocabulary, and comprehensibility.

These were the following aspects of speaking measured in this test.

Table 3.6. Specification for Speaking Test

No.	Aspects of Speaking	Definition	Scale of Score	Percentage
1	Pronunciation	The students' way of producing clearer language when they speak.	1-5	20 %
2	Grammar	Students' ability to manipulate structure and to distinguish appropriate grammatical form in appropriate ones.	1-5	20 %
3	Vocabulary	The appropriate diction which is used in communication.	1-5	20 %
4	Fluency	The ability to speak fluently and accurately.	1-5	20 %
5	Comprehension	Comprehensibility for oral communication requires a subject to respond to speech as well as to initiate it.	1-5	20 %
Total				100%

The criteria of the score's scale have been explained in the sub-chapter of instrument. The researcher used Oral Rating Sheet by Haris. For the score of the speaking test, the researcher also used inter-rater to evaluate the validity of the score. There were two inter-raters. The first rater was the researcher herself and the second rater was the English teacher of the class.

Reliability of the Instrument

- **Reliability of Questionnaire**

The researcher used Cronbach Alpha Coefficient to measure the consistency of items in the questionnaire. The score of the

questionnaire's result was based on Likert scale with range of score 1 to 4. The alpha range was between 0 and 1.

- **Reliability of the Test**

The researcher used inter-rater reliability. It meant there were two raters to judge students' speaking performances. The first rater was the researcher herself and the second rater is the English teacher of the sample. Both of them discussed the speaking criteria in order to obtain reliable result of the test. The scores from both raters were divided by two.

Inter-rater reliability of the tests is examined by using statistical measurement:

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

Notes:

R : Reliability of the test

N : Number of students

d^1 : The difference between R1 and R2

d^2 : The square of d^1

1 – 6 : Constant number

(Shohamy, 1985: 213)

The standard of reliability

- | | |
|----------------------------|---------------------------|
| A. a very low reliability | ranges from 0.00 to 0.19 |
| B. a low reliability | ranges from 0.20 to 0.39 |
| C. an average reliability | ranges from 0.40 to 0.59 |
| D. a high reliability | ranges from 0.60 to 0.79 |
| E. a very high reliability | ranges from 0.80 to 0.100 |

3.6. Data Analysis

To see whether there is a difference between introvert and extrovert students in performing role play in term of speaking achievement, and also to draw conclusions from the questionnaire of role play activity, the researcher analyzed the data by using these following steps:

1. Scoring the pre-test and the post-test
2. After obtaining the scores of pre-test and post-test, the researcher tabulated the results and calculated the scores by using Statistical Package for Social Science (SPSS) for windows version 16. The researcher used SPSS to calculate the mean of pre-test and post-test. She used Independent Group T-Test to analyze the significance of difference between extrovert and introvert students' speaking achievement.
3. Interpreting and drawing the conclusion of T-Test data.
4. Interpreting and drawing the conclusion of role play activity questionnaire.

3.7. Hypotheses Testing

The hypotheses of this research are:

H_0 : The introvert students' and extrovert students' speaking achievement in performing role play are not significantly different.

H_1 : The extrovert students' speaking achievement is significantly greater than the introvert students' speaking achievement.

The hypotheses testing were used to prove whether the proposed hypotheses in this research were accepted or not. The hypotheses were tested by using independent group t-test of Statistical Package for Social Science (SPSS) for windows version 16. The researcher used the level of significance 0.05 in which the hypothesis is proved if $\text{sign} < p$. It means that the probability of error in the hypothesis is only 5%.

If $p < 0.05$ H_1 is accepted. If $p > 0.05$ H_0 is accepted.