CHAPTER III

RESEARCH METHODOLOGY

This chapter will present the methodology of the study, the principles, and procedure of the conducted study. Chapter three covers: (1) Formulation of problem, (2) hypothesis, (3) key terms, (4) research design, (5) subject, (6) Instrument (data collection and data analysis), (7) materials, (8) research procedure.

3.1 Formulation of the Problems

In this research, the formulations of the problems are:

1. Is role play more effective than the conventional technique in teaching speaking skill?

2. Does role play make learning more meaningful for the students?

3.2 Hypothesis

In this research the hypothesis is stated as follows:

H_o : There is no significant difference between teaching Speaking Skill using role play and conventional technique.

3.3 Key Terms

In order to avoid unnecessary misunderstanding, some terms are clarified as follows:

1. Role play : Role play is any speaking activity in which someone pretend they are in a various social contexts and have a variety of social roles (Kayi, 2006)

2. Speaking : Speaking is the process of building and sharing meaning through the use of verbal and non-verbal symbols, in a variety of contexts (Chaney, 1998, p. 13).

3. Teaching Speaking : Teaching the ESL learners to select appropriate words and sentences according to the proper social setting, audience, situation and subject matter. (Nunan, 2003)

3.4 The Research Design

3.4.1 The Experimental Design

This research used quasi-experimental design. Quasi-experimental design is a form of experimetal research, which involves selecting groups, upon which a variable is tested, without any random pre-selection processes. (http:// www.experiment-resources. com). It is the only type of research that directly attempts to influence a particular variable, and it is the only type that can really test hypotheses about cause-and-effect relationship. (Jack R.F and Norman, 1990: p. 231). The diagram of this design is shown as follow:

Table 3.1
The Experimental Design

Group	Pretest	Treatment	Postest
Experimental	O1E	X	O2E

| Control | O1C | - | O2C |

In which

O$_1$E   = Pretest for experimental group

O$_1$C   = Pretest for control group

X   = Treatments

O$_2$E   = Postest for experimental group

O$_2$C   = Pretest for control group

The data of the research is gained from post test, pretest, questionnaire and interview.

3.4.2 The Variable

In this research, the variables were classified into dependent and independent variable.

1. Dependent variable in this study was students' speaking score. This variable is the outcome of the independent variable.

2. Independent variable chosen was role play. Role play became the treatment or manipulated variable. The purpose was to investigate the effect of role play on the dependent variable.

3.5 Subject

3.5.1 Population and Sample

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The population in this study was the eleven grade students of one SMK in Bandung, which consisted of twelve classes. From the twelve classes, only two classes were chosen randomly as sample. The two classes chosen were also randomized to determine the experimental group, in which the students were treated by role play and the control group, in which the students were treated by the conventional technique.

3.6 Instrument

3.6.1 Data collection

In this research, the instruments used are pre-test, post-test, questionnaire and interview. Pre-test is conducted in the first meeting to check whether the experimental group and control group have the same ability in speaking. Post-test is conducted in the last program after the experimental group has been given some treatments, in this study role play, in a certain period of time, in order to know whether teaching speaking using role play is more effective than the conventional technique.

3.6.1.1 Test

In this research, the tests used are pre-test and post-test. Pre-test is conducted in the first meeting to check that control group and experimental group speaking ability are not significantly different and to know students' initial ability in speaking. Post test is conducted in the last program of this research, after providing some treatments and exercises in a certain period of time and it aims to

know whether teaching speaking by using role play is better than teaching speaking by using conventional technique.

3.6.1.2 Role for Role Play

The main instrument in this research was roles for role play. The roles were made by the researcher based on the topics of people's job, past event and future plans.

3.6.1.3 Questionnaire

In this research, the types of questionnaire used is attitude scale. All students are given several statements of preferences and they are asked to response to each statement by giving a check list in the range given. The range scale of the questionnaire are 1) Strongly Agree, which means the students have a strong agreement to the statement 2) Agree, which means the students are agree to the statement 3) No comment, which means the students are doubt or uncertain to the statement 4) Disagree, which means the students are disagree to the statement and the last 5) Strongly Disagree, which means the students have a strong disagreement to the statement. This questionnaire is administered after the students have been given some treatments, in this study using role play in order to know the students' response of using role play.

3.6.1.4 Interview

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In this study, the interview was done after the questionnaires have been given to students in order to clarify any statement which is unclear and to explore students' important answer based on the questionnaire.

3.6.2 Data Analysis

The collected data which used the instruments above would be analyzed. The oral test record would be transcribed and then would be analyzed by using scoring sheet, while test instrument would be analyzed by using validity and reliability analysis. The pre-test and post-test would be analyzed by using SPSS V16 for windows. The questionnaire would be analyzed by using Likert scale, and the interview would be analyzed by using inductive analytical approach.

3.6.2.1 Scoring Sheet for Speaking Test

Students' speaking would be analyzed by using speaking scoring guide adapted from Mega (2009) and Hughes Arthur (1989) as cited in Ida, 2011. The scoring guide covers fluency, pronunciation, grammar, dictation, organization of idea and comprehension. The maximum score for the speaking test is 100.

3.6.2.2 The Instrument Analysis

3.6.2.2.1 Validity Analysis

In this research, the researcher used the Pearson Product Measurement for analyzing the validity of the test. The formulation is described as follows:

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$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\left| (N \sum X^2 - (\sum X)^2)(N \sum Y^2 - (N \sum Y^2 - (\sum Y)^2)) \right|}}$$

In which:

r_{xy} = coefficient correlation between X and Y variables

X = the item tested

Y = total score of the samples

N = the number of participants

The criteria of the coefficient correlation are described as follows:

Table 3.2
The Criteria of the Coefficient Correlation

Coefficient interval	Interpretation
0.00-0.19	Very Low
0.20-0.39	Low
0.40-0.59	Fair
0.60-0.79	High
0.80-01.00	Very High

(Sugiyono, 1999:149 as cited in Aisah, 2008)

3.6.2.2.2 Reliability Analysis

In this research, the reliability of instrument would measured by using

Cronbach's Alpha formula in SPSS 16.0 *for windows*. The steps for analyzing are

as follows:

- Analyzing the data scores in Reliability Cronbach's Alpha formula

- Consulting the obtained reliability value with the criteria of reliability

Table 3.3
The Criteria of Discrimination Index

Coefficient interval	Interpretation
0.00-0.19	Very low
0.20-0.39	Low
0.40-0.59	Fair
0.60-0.79	High
0.80-01.00	Very High

(Aisah, 2008:44)

3.6.2.3 Data Analysis on Pretest and Posttest

The result of the experimental group and control group test are used to know that role play is more effective than conventional technique, it means that the writer want to find causative relationship between the independent and dependent variable.

3.6.2.3.1 The Normality Distribution

Kolmogorov-Smimov formula for SPSS 16.0 *for windows* is used to analyze the normality distribution. The steps of normality distribution are as follow:

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- Stating the hypothesis and setting the alpha level at 0.05 (two tailed test)

H_o= the scores of the experimental and the control group are normally   distributed

H_1= the scores of the experimental and the control group are not normally distributed

- Analyzing the normality distribution using Kolmogorov-Smimov formula in SPSS 16.0 *for windows*

- Comparing the Asymp Sig. (probability) with the level of significance to test the hypothesis. If the Asymp Sig. is more than the level of significance (0.05), the null hypothesis is accepted and the score are normally distributed.

3.6.2.3.2 Variance Homogeneity Test

Levence formula in SPSS 16.0 *for windows* is used to analyze the variance homogeneity. The steps of variance homogeneity are as follows:

- Stating the hypothesis and setting the alpha level at 0.05 (two tailed test)

H_o= the variance of the experimental and the control group are homogenous

H_1= the variance of the experimental and the control group are not homogenous

- Analyzing the variance homogeneity using Levence formula in SPSS 16.0 *for windows.*

- Comparing the Asymp Sig. (probability) with the level of significance (0.05), if the Asymp Sig is more than the level of significance (0.05), the null hypothesis is accepted and the variance of experimental group and the control group are homogenous.

3.6.2.3.3 t-test Computation

The steps of t-test computation are as follow:

- Stating the hypothesis and setting the alpha level at 0.05 (two tailed test)

H_o= the two samples are from the same population, there is no significant difference between pretest mean of experimental and control group

H_1= the two samples are from the same population, there is a significant difference between pretest mean of experimental and control group

- Finding the t value with the independent sample t-test formula *for windows.*

- Comparing the t_{obt} and the t_{crit}. If the t_{obt} is lower than t_{crit}, the result is not statistically significant at the 0.05 level, the null hypothesis is accepted. Whereas, if the t_{obt} is higher than t_{crit}, the result is statistically significant at the 0.05 level, the null hypothesis is rejected.

3.6.2.4 Data Analysis on the Experimental and the Control Group Scores

The pre-test and post-test scores of each group were analyzed by using the independent t-test to investigate whether or not the difference of pre-test and post-test means is significant.

3.6.2.5 Data Analysis on Questionnaire

The data which obtained from the questionnaire would be analyzed by using likert scale. In analyzing the data, each option has their own score, the score are as follows:

SS   = Sangat Setuju   score 5

S	= Setuju	score 4
R	= Ragu	score 3
TS	= Tidak Setuju	score 2
STS	= Sangat Tidak Setuju	score 1

The result of the students' response are changed into percentages, then it is conferred into table form.

Table 3.4
R % (Percentage of the Respondent) Criterion

No.	R %	Criterion
1.	0	None
2.	1-25	Small numbers of
3.	26-40	Nearly half numbers of
4.	50	Half of
5.	51-75	More than half of
6.	76-99	Almost of
7.	100	All of

(Kuntjaraningrat in Aisah, 2008)

The formula for analyzing the questionnaire is as follow:

$$P = \frac{Fo}{n} \times 100\%$$

In which:

P   = Percentage

Fo   = Frequency

N   = items

3.6.2.6 Data Analysis on Interview

The interview would be analyzed by transcribing it into written transcript and then clasify it based on the interview questions' indicators, the result of the interview would be described in form of paragraphs and persentage. The interview covers some categories, they are:

1. Students' experience in learning speaking by using role play.

2. Students' positive response in learning speaking by using role play.

3. Students' negative response in learning speaking by using role play.

3.7 Research Procedure

3.7.1 The Research Preparation

In this research, the researcher prepared the lesson plan, decided and collected the material needed and prepared the instruments.

3.7.1.1 Preparing Lesson Plan

The researcher designed the lesson plan for experimental group. The lesson plan was proposed for seven meetings. The first and the last meeting were allocated to conduct the pre-test and post-test, while the rest meetings were

allocated to applied the treatment using role play. The lesson plan was designed based on the National curriculum of English for eleventh grade students which consists of Competence Standard, Basic Competence, Indicator, Instructional Objective, Lesson Materials, Method/technique, Steps of the activity, Source Lesson and the assessment or evaluation. Whereas the lesson plan for control group was designed by the teacher.

3.7.1.2 Preparing the Material

The materials given to the experimental group were the material about people's job, past event and future plans.

3.7.2 Research Implementation

3.7.2.1 Administering Pilot Test

Pilot test was the first procedure in conducting the research to find out the validity and the reliability of the instrument before using it in the research. The researcher consulted the instrument with the English teacher of the Vocational School. The purpose was to adjust the test with the students' knowledge background. The test was in the oral form, which required students to answer several questions. The pilot test was conducted on November, 04, 2011.

3.7.2.2 Administering Pretest

After finding out the validity and the reliability of the pilot test, the researcher administered the pretest to the experimental group and the control

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group. The pretest was conducted in the first meeting to check the students' initial ability and to check that control group and experimental group have relatively the same ability in speaking. The pretest was conducted twice, first was on November, 11, 2011 to the experimental group and second on November, 16, 2011 to the control group.

3.7.2.3 Conducting treatment

After administering the pretest, the researcher conducted the treatment to the experimental group. In conducting the treatment, the researcher used role play to improve students' speaking ability. The treatment was conducted in four meetings.

3.7.2.4 Administering Posttest

Posttest was conducted in the end of the meeting to both group, experimental and control group to find out the result of the treatment. It means to measure the influence of role play to the students' speaking ability. The procedure of the posttest similar to pretest in which, the students have to answer several questions in oral. The posttest was conducted twice, first was held on 25th November 2011 to experimental group and second was held on 30th November 2011 to the control group.

For details, the general schedule of the research is shown in the following table:

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Table 3.5
General Schedule of the Research

No.	Experimental Group		Control Group	
	Date	Material	Date	Material
1.	11th November 2011	Pretest	16th November 2011	Pretest
2.	11th November 2011	People's job 1st treatment	16th November 2011	People's job
3.	18th November 2011	People's job 2nd treatment	23rd November 2011	People's job
4.	18th November 2011	Past Event 3rd treatment	23rd November 2011	Past Event
5.	25th November 2011	Future Plan 4th treatment	30th November 2011	Future Plan
6.	25th November 2011	Posttest	30th November 2011	Posttest

3.7.2.5 Distributing the Questionnaire

Questionnaire was distributed after completing the treatment in order to know students' respond toward role play implementation in the classroom. The questionnaire was distributed on 20th December 2011.

3.7.2.6 Conducting the Interview

After distributing the questionnaire, the researcher did the interview in order to clarify students' answer toward the questionnaire and to explore students'

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respond toward the learning process. The interview was recorded by a cell phone

and was conducted on 20th December 2011.