CHAPTER III

RESEARCH METHOD

This section presents the methodology in conducting the study of the implementation of project-based learning (PBL) using video production in teaching speaking skill. It includes the research design, sample, instrumentation, procedural detail, internal validity, data analysis, and concluding remark.

3.1 Research Design

This current study used mixed method research design which were consisted of descriptive analysis and statistical analysis from test, questionnaire, and observation. According to Malik and Hamied (2014, p. 268), the mix method approach is the combination of qualitative and quantitative research design in order to have deeper information of the phenomenon under investigation. Moreover, the use of the two methods and three instruments are aimed to conduct a methodological triangulation of the data. The researcher would gain validated and enriched data by using methodological triangulation (Best & Kahn 2006, p. 271). Malik and Hamied (2014, p. 270) also believe that mix method design is the most common approach and could obtained different but complementary data on the same topic to best understand the research problem. In specific, this approach is aimed to get better and detail information about the implementation of video production as a project in teaching speaking skill.

In the quantitative design, true experimental design was used in analyzing students' speaking ability from two groups of first grade in one of private vocational school in Bandung which are randomly assigned. The study will be started with the null hypothesis, the two groups are considered similar in the beginning of the experiment.

$$H_0: \quad \mu_1 = \mu_2$$

Notes:

H0 : There is no significant difference between the experiment and control class in the mean adjustment level.

x1 : experiment class

x2 : control class

Kranzler and Moursund (1999) proposed that the meaning of null hypothesis is that both of experimental and control classes in the *mean* adjustment level are same. So that the null hypothesis in this research is "there is no difference between the two groups, experimental and control classes, in their speaking skill".

In order to determine whether the *means* of scores of the two groups are different to a statistically-significant degree (Kranzlerand & Moursund, 1999), **T-test** will be used in analyzing data in this study**.**

$$\left(\frac{G_1(experiment)}{G_2(control)} \middle| \frac{T_1 \; x \; T_2}{T_1 \; x \; T_2}\right)$$

Notes : G stands for class, T_1 stands for Pre-test and T_2 stands for Post-test

This study also collected data by distributing questionnaire to the students in experimental class in that school. The questionnaire was measured using Likert scale. The data analysis will use descriptive statistic (Percentage) to analyze the results of the questionnaires. Then the results was analyzed under each attribute which contain the information about the implementation of video production as a project in teaching speaking skill

Moreover, the qualitative data analysis that was used in this study is case study. As Yin (2003, p.13) says that case study investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. The process of promoting project based learning using technology in assessing students' speaking skill is a phenomenon that wants to be analyzed in this study. Since a case study is a study of problem in order to analyze a "case" or bounded system includes understanding an event, activity, process, or one or more individuals (Creswell, 2002, p. 61),

this study was purposed to investigate the implementation of video production as a project in teaching speaking skill.

3.2 Sample

The population in this research was first grade students in one of private vocational school in Bandung. The sample will use two classes, experiment and control class; each class consists of 30 students. There are no differences between the experimental and control class in terms of assessing their speaking ability. In this case, short presentation was used to assess students' speaking ability. So the fix number of the sample were 60 students.

3.3 Instrumentation

In this study, there were three instruments in collecting data which consist of: test, questionnaire, and observation.

3.3.1 Test

In this study the test was given to experiment and control class in pretest and posttest. The test was in spoken form. The students were asked by the teacher to make short presentation in front of class. The pretest was given to experiment and control class in the first meeting. The post test was given to experiment class video production project is finished; the posttest was given to control group in the end of the section.

In order to assess students' speaking ability, a scoring rubric was developed based on the scoring guides proposed by Brown & Abeywickrama (2010). The adapted scoring rubric consisted of two important aspects which are Speaking skill includes fluency and coherence, lexical resource and range, grammatical range and accuracy, pronunciation and task accomplishment; and presentation skills. The aspects existed in table below.

Table 3.1 Scoring Table

INITIAL	CRITERIA	SCORE
VG	Very good	20 points
G	Good	15 points
S	satisfactorily	10 points
P	poor	5 point

Table 3.2 Criteria of Speaking Skill

CRITERIA	VG	G	S	P	COMMENT
SPEAKING SKILLS					
Fluency and Coherence					
Speaks fluently with only rare repetition or self-correction; Speaks coherently and develops topics fully and appropriately					
Lexical resource and range					
Express with some flexibility and appropriateness, giving effective descriptions and expressing viewpoints on a variety of topics.					
Grammatical range and accuracy					
Complex sentence use and minor grammatical occurrence.					
Pronunciation					
Pronounce words correctly, articulate clearly, intonate appropriately					
Task accomplishment					
Total					

Adapted from: Brown & Abeywickrama (2010), Language assessment: principles and classroom practice (2nd ed.), New York: Pearson Education Inc.

1.3.2 Questionnaire

A set questionnaire was used in this study. It was given only to experimental group since the study focus on investigating the students' response toward the implementation of video production as a project in teaching speaking skill. The questionnaire consisted of several questions related to students' response toward the implementation of video production as a project in teaching speaking skill. Likert-Scale with five options (Strongly Disagree, Disagree, Uncertain, Agree and Strongly Agree) was used in this questionnaire. The questionnaire was delivered in Bahasa Indonesia to avoid misunderstanding in giving the statements. The table below show the categories of the questionnaire that was delivered to the experimental students.

Table 3.3 Students' Response Categories

NO	CATEGORIES	TOTAL NUMBER OF QUESTIONS
1	Cognitif	6
2	Afective	6
3	Behavior	4
	TOTAL	16

3.3.3 Observation

In this study, classroom observation was conducted. As Barocsi (2007) says, observation is the process of detecting and measuring the world around us, including analyzing of people and other measurable events. Therefore, the observation is aimed to find out the process of the implementation of video production as a project in teaching speaking skill.

The observation was conducted 7 times by recording the process of teaching and learning by implementing project-based learning using video production as a project in teaching speaking skill. The result of the observation was transcribed and converted to field note as a primary data.

3.4 Procedural Detail

This current study is going to analyze the implementation of project-based learning (PBL) using video production as a project in teaching speaking skill. In detail this study will analyze:

1. How the implementation of project-based learning (PBL) by using video production as a project in teaching speaking skill.
2. The effect of the implementation of project-based learning (PBL) by using video production as a project in teaching speaking skill.
3. Students' response toward the implementation of project-based learning (PBL) by using video production as a project in teaching speaking skill.

This study was conducted in one of private vocational school in Bandung. The population was first grade students in the school. The study will randomly choose two classes, experiment and control class and each class consisted of 30 students. This study was conducted in May 2017 until June 2017. The reason why the study will conducted in that month, because this study followed the school regulation.

The table below are the resume used in the teaching program conducted in the study.

Table 3.4 Teaching Program

Section	Activities	Time
First meeting	Pre-test	8th May 2017
Second meeting	• Teacher set the stage for the student with real-life samples • Students take on the role of project designers	15th May 2017
Third meeting	• Students discuss and accumulate the background information • Negotiating the criteria for evaluation	18 May 2017
Fourth meeting	• Accumulating the necessary materials	22nd May 2017
CREATING THE PROJECT		23rd May 2017- 4th June 2017
Fifth meeting	• Preparing to present the project	5th June 2017
Sixth meeting	• Presenting the project • Reflecting on the process and evaluating the process	8th June 2017
Seventh meeting	Post-test	12th June 2017

This study used mix method in collecting the data. This method divided into quantitative and qualitative data analysis. The quantitative data analysis was used to analyze the effect of the implementation of video production as a project in teaching speaking skill. Moreover the qualitative data analysis was used to analyze the process of implementing video production as a project in teaching speaking skill and to find out students' response toward the implementation of project-based learning using video production as a project in teaching speaking skill.

3.5 Internal Validity

There were several procedures that were conducted in this research includes:

1. Finding out some theories and concepts related to speaking skill, project based learning in teaching speaking skill, technology, and response;
2. Selecting the participants;
3. Distributing pre-test to the students;
4. Observing the experimental class meeting;
5. Distributing post-test to the students;
6. Interviewing the students;
7. Distributing the questionnaires to the students;
8. Computing the data from pre-test and posttest using SPSS 21 software.
9. Transcribing and converting the observation data into field note;
10. Analyzing the data from students' pre-test and post-test, observation, interview and questionnaires;
11. Interpreting the findings from those instruments; and
12. Concluding the obtained data.

3.6 Data Analysis

The analysis of data is conducted after assembling the required data such as pre-test, post-test, questionnaires, interview and observation.

3.6.1 Pre-test and Post-test Data Analysis

The Pre-test and Post-test were statistically analyzed by using t-test. Before the test, tests of normality of distribution ad variance homogeneity were conducted. If the scores were normally distributed, t-test could be conducted.

1. Normality of Distribution

Analysis of normality of distribution was conducted to find out the scores of experimental and control group whether the scores were normally distributed or not. To analyze the normality of distribution, Kolmogrov-Smirnov formula was used in SPSS for windows. If the *Asymp. sig.* is higher than the level of significance (0.05), the scores was normally distributed.

2. Homogeneity of Variance

The analysis of homogeneity of variance was conducted to find out the variance of the experimental and control group whether the scores were homogenous or not. To analyze homogeneity of variance, Levene Test formula was be used in SPSS for widows. If the probability is higher than level of significance (0.05), variance of the experimental and control group was homogenous.

3. The Independent T-test

The analysis of independent t-test was conducted to find out the means of experimental and control group whether there is significant difference or not. Independent sample test formula was be used in SPSS for windows. If the *Asymp. sig.* is higher than the level of significance (0.05), means of the experiment and control groups were significantly different.

3.6.2 Questionnaire

The data gained from questionnaire was analyzed and described by using percentage. The data were experimental students' responses toward the video production as a project in teaching speaking skill. The formula of percentage was used to analyze the questionnaire. The data were interpreted based on the frequency of the students' answer.

$$P = \frac{F}{N} \times 100\%$$

Notes:

P : Percentage of response
F : Frequency of answer
N : number of students

The data were interpreted based on the frequency of students' answer.

3.6.3 Observation

The data from observation was in the form of video recording. The video was transcribed and converted in to field note. The field note was analyzed and categorized to gain information related to the research question about the implementation of project-based learning using video production as a project in teaching speaking skill.

3.7 Concluding Remark

This chapter has presented the methodology in this study (the implementation of project-based learning using video production in teaching speaking skill). The methodology that is used in this study consisted of the research design, sample, instrumentation includes test, questionnaire, interview, and observation; procedural detail, internal validity, and data analysis includes pre- and post-test data analysis, questionnaire, interview, and observation; the concluding remark of this chapter is also written in the end of this chapter.