CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents a discussion on the methodology employed in conducting research. The discussion below involves Research Design, Research Population and Sample, Research Instrument, Research Procedures and Data Analysis.

3.1. Formulation of Problems

This research was conducted to answer problems as follows.

1) Does peer reviewing technique improve the students' ability in writing a narrative text?

2) What are the students' responses toward peer reviewing technique?

3.2. Research Design

3.2.1. Design

This research was conducted based on quasi experimental design. According to Fraenkel and Wallen (1990: 242) the quasi experimental study is categorized into two kinds, the matching only post test and the matching only pre test post test design. In the matching only post test, both experimental and control group get the different pre test but same post test. Meanwhile, in the matching only pre test post test design, both experimental and control group get the same test in the pre test and post test. This study was conducted based on the matching only pre test post test control group.

Table 1

The Experimental Research

Sample	Pre Test	Subject	Treatment	Post Test
Treatment group	O	M	X_1	O
Control Group	O	M	X_2	O

3.2.2. Research Variable

According to Fraenkel and Wallen (1990), a variable is a concept – a noun stand for variation within a class of object, such as chair, gender, eye color, achievement, motivation or running speed.

There were two types of variable in this research. They were independent variable and dependent variable. According to Fraenkel and Wallen (1990), independent variable is the treatment or manipulated variables referred to previously; those variables the investigator choose to study, while dependent variable depends on what the independent variable does to it and how it affects it. In this research the independent variable was peer reviewing, while the dependent variable was teaching writing.

3.3. Research Population and Sample

The population of this study was the ninth grade students of one of Junior High School Bandung which spread into ninth classes. This school was chosen as the place of conducting research because the researcher did teaching training there.

A sample in a research study refers to any group on which information is obtained (Fraenkel and Wallen, 1990: 67). In this study the researcher took two classes from ninth grade.

3.4. Data Collection

3.4.1. Research Instrument

The instruments in this study were writing composition test and questionnaire. The writing performance test was writing a narrative text. It was conducted in the first meeting (pre test) and last meeting (post test). The last instrument was questionnaire to investigate the students' perception toward peer reviewing.

3.4.2 Research Procedures

3.4.2.1. Preparing the lesson plan

The researcher made two lesson plans. The first lesson plan was designed to be implemented during treatment to the experimental group. The researcher designed the lesson plan for 6 meetings. The first and the last meeting were allocated to conduct pre test and post test, while the rest 3 meetings were allocated to implement peer reviewing treatment. The lesson plan was designed based on the National Curriculum of English for ninth grade students which consists of Competence Standard, Basic Competence, Indicator, Instructional Objective, and Lesson Plan Material, method/technique, steps of activity, source lesson, and the evaluation. The second lesson plan was designed for the control group.

3.4.2.2. Pilot Test

Pilot test was intended to measure whether or not the instrument valid and reliable for the ninth grade students. It was tried into a class of ninth grade students outside the experimental and control group. The test was in the form of making composition of a narrative text.

3.4.2.3. Pre-test

Pre-test was conducted for both experimental and control group in the first meeting. This test was intended to get the data of basic students' writing skill and to make sure that both group had the same ability before they received treatment. Both of experimental and control group did the test of making composition of a narrative text.

3.4.2.4. Treatment

In conducting the study, the researcher used peer reviewing for the experimental group. The treatment was carried out for 3 meetings for experimental group, while the control group was treated conventional method.

Table 2

The Research Schedule

No	Date	Experimental Group	Date	Control Group
1	September 26th, 2011	Pre Test	September 26th, 2011	Pre Test
2	September 29th, 2011	Playing game "find the words" about cinderella.	September 28th, 2011	Playing game "find the words" about cinderella.

		Peer reviewing.		Reading : "The Princess and the pea"
3	September 30th, 2011	Reading : "The Princess and the pea" Teacher explains the generic structure and lexicogrammatical features of narrative Peer reviewing.	September 29th, 2011	Reading : "The Princess and the pea" Teacher explains the generic structure and lexicogrammatical features of narrative.
4	October 3rd, 2011	Peer Reviewing Making draft of a narrative text.	October 3rd, 2011	Playing game. Rewrite "The Princess and the Pea" and making their own solution.
5	October 6th, 2011	Peer reviewing	October 5th, 2011	Making draft of a narrative text.
6	October 10th, 2011	Post test and questionnaire	October 6th, 2011	Post test

3.4.2.5. Post Test

In the last meeting the researcher conducted a post test for both experimental and control group. This was conducted to find out the result of the whole treatment. The procedure of post test was the same as pre test. The purpose of post-test was to find out whether there are any differences between students' score of experimental and control group. The test was the same as pre test.

3.4.2.6. Questionnaire

Closed questionnaire was conducted in order to investigate the students'
response towards the using of peer reviewing in teaching writing narrative text.
This questionnaire was only for the experimental group. The questionaire used
Indonesian language so the students could understand.

3.5. Data Analysis

After collecting data, the researcher had to analyze the data gained. The
data from post-test were used to find out the students' improvement in writing a
narrative by using peer reviewing. The influence was shown on the students'
writing ability of narrative text in experimental group after the treatment given.

3.5.1. Scoring

The scoring was based on ESL Composition Profile (Jacob et al, 1981).

Table 3

The Scoring

Aspect of writing	Range	Score	Criteria
Content	20-25	Excellent to very good	Knowledgeable, substantive, thorough development thesis/genre, relevant to assigned topic.
	14-19	Good to average	Some knowledge of subject, adequate range, limited development of thesis/genre, mostly relevant to topic but

			lack detail.
	8-13	Fair to poor	Limited knowledge of subject, little substance, inadequate development of thesis/genre.
	2-7	Very poor	Does not show knowledge of subject, non substantive, not pertinent or not enough to evaluate, or no relation to assigned thesis/genre.
Organization	20-25	Excellent to very good	Organization clearly stated and supported- well organization and very thorough development of introduction, body and conclusion well organized and very thorough development of supporting detail.
	14-19	Good to average	Somewhat choppy-main ideas stand out, but organization unclear limited development of introduction, body and or conclusion, and/or limited development of supporting detail.
	8-13	Fair to poor	Ideas confused or disconnect-lack of logical sequencing and development of introduction, body, and/or conclusion- inadequate development of supporting details.

	2-7	Very poor	Does not communicate-no organization and/not enough to evaluate.
Sentence Construction	20-25	Excellent to very good	Effective use of simple, compound and complex sentences
	14-19	Good to average	Inconsistent control of simple, compound and complex sentences.
	8-13	Fair to poor	Major problem in simple, compound and complex sentences
	2-7	Very poor	Virtually no mastery of sentence construction rules
Mechanic	20-25	Excellent to very good	Few errors of spelling, punctuation, capitalization
	14-19	Good to average	Occasional errors of spelling punctuation, capitalization.
	8-13	Fair to poor	Frequent errors of spelling punctuation, capitalization.
	2-7	Very poor	Dominated errors of spelling punctuation, capitalization.

3.5.2. Data Analysis on Try Out

In collecting data, the researcher used a test as the research instrument. It is required to analyze the reliability and validity of the test.

Validity refers to appropriateness, meaningfulness, and usefulness of the inferences a researcher makes based on the data they collect (Fraenkel and

Wallen, 1990: 127). Meanwhile, reliability refers to the consistency they are for each individual from one administration of an instrument to another and from one set of items to another (Fraenkel and Wallen, 1990: 133).

3.5.3. Data Analysis on Pre-test and Post Test

The pre test and post test score were statistically analyzed by using SPPS version 17.0. The data analysis was conducted by several steps. The calculation included normality distribution, homogeneity variance, t test, paired sample t-test and effect size.

3.5.3.1. Normality Distribution

Normality distribution was analyzed by Kolmogorov-Smirnov formula in SPSS First setting the hypothesis H_0 , means the score between experimental and control group were normally distributed. Setting level significant at 0.05 (two tailed test)..H_0 is rejected at the < 0.05 level while H_0 is not rejected at the > 0.05 level. (Coolidge).

3.5.3.2. Homogeneity Variance

Homogeneity variance was analyzed by using ANOVA Levene test formula in SPSS. First setting the alpha level at 0.05 (two tailed test). H_0 means the variance for experimental and control group are homogenous. H_1 means the variance for experimental and control group are not homogenous. If Asymp. Sig. > 0.05 H_0 is not rejected. It means the variance data of experimental and control group are equal. Meanwhile if Asymp. Sig < 0.05 H_0 is rejected. (Field, 2005).

3.5.3.3. t Test Computation

Independent Sample test formula was used to investigate the significant differences between pre test mean for the experimental and control group before the treatment. SPSS version 17.0 for windows was used

First setting the alpha level at 0.05 (two tailed test). H_0 means there is no significant differences between pre test means for experimental and control group. H_1 means there is a significant difference between pre test means for experimental and control group. Then find the t value from pre test score by independent sample test formula in SPSS version 17.0. Compare the significant value with the level significance for testing the hypothesis. If t_{obt} and t_{crit} . If $t_{obt} > t_{crit}$, it means that the hypothesis is not rejected, there is the significant difference between two groups. If $t_{obt} < t_{crit}$, the hypothesis is rejected, there is no significant difference between the two groups (Coolidge, 2005).
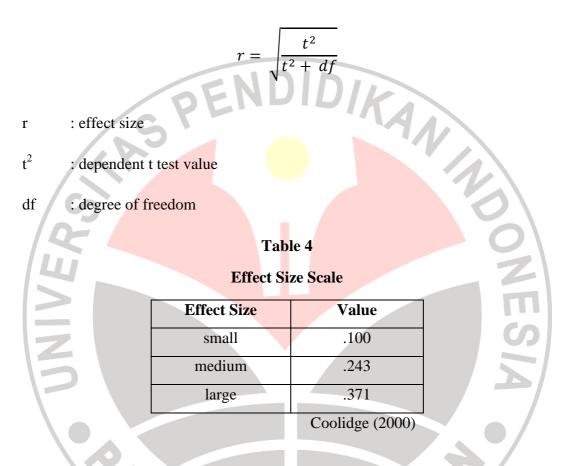
Independent sample t test formula was also used to analyze means of post test score for the experimental group and for the control group. The same procedure was done for the control group data.

3.5.3.4. Paired Samples t Test

Paired samples t test was calculated to certify that there is a significance effect between pre test and post test score in experimental group. The formula of paired samples t test in SPSS 17.0 was used to find out the t value.

3.5.3.5 Effect Size

The correlation coefficient of effect size was used to determined the effect size of the treatment to the experimental group. The formula is:

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

r : effect size

t^2 : dependent t test value

df : degree of freedom

Table 4

Effect Size Scale

Effect Size	Value
small	.100
medium	.243
large	.371

Coolidge (2000)

3.5.4. Data Analysis on Questionnaire

The close questionnaire was analyzed by using the formula percentage.

$$P = \frac{F_o}{n} \; x \; 100\%$$

P = percentage

F_o = frequency of observed

n = number of sample