

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the methodology that be used in conducting the study. It contains research questions, research design, population and samples, research procedures, research instruments, data collection, and data analysis.

3.1 Research Questions

As mentioned in the previous chapters, this research focused on these following research questions:

1. Does the use of pictures improve students' skill in writing descriptive text?
2. What are the students' responses to the use of pictures in teaching descriptive text?

3.2 Research Design

The present research employed experimental design that dealt with the effect of the used of pictures, towards students' skill in writing descriptive text. Quasi experimental design was used in this research. It was used by considering the impossibility of random sampling because of limitation of time and cost. Therefore, choosing a small group in a population is thought as solution to save the time and cost (Hatch & Farhady, 1982).

This research involved two groups, those were experimental and control groups. Pretest was conducted to find out the initial skills of both groups (P₁).

Then, the experimental group was given specific treatment (X) using pictures, while the control group was given conventional method. Then, posttest was administered to find out the final results of the two groups (P₂). According to Hatch and Farhady (1983:22), the formula of pretest posttest control design is:

Table 3.1

Quasi-experimental Design

G1	P1	X	P2
G2	P1		P2

(Hatch and Farhady, 1982)

Note:

- G1 = Experimental group
- G2 = Control group
- P1 = Students' writing skill in pretest
- X = Treatment
- P2 = Students' writing skill in posttest

3.3 Data Collection

3.3.1 Hypothesis

The most common hypothesis null hypothesis which state that there is no difference between experimental and control group (Hatch and Farhady, 1982).

Therefore the hypothesis of this study is as follows:

Null hypothesis (H₀): *there is no significant difference of writing descriptive of experimental group between after and before treatment.*

3.3.2 Variable

There were two variables in this research which are the independent and dependent variable. The independent variable of the research is the use of pictures. Meanwhile, the dependent variable is writing descriptive text.

3.3.3 Population and sample

Population is the whole subject in the research field, while sample is representative of the population in the research (Arikunto, 2010). The population of this research was the seventh grade students of a public junior secondary school in Bandung. The sample selection was based on the class teacher's suggestion about students' equal abilities and characteristics of samples that was alike. Both classes consisted of 35 students with equal composition of male and female students and the ages ranged from 12 to 13 years old. There were two classes taken as the samples; the first class was VII-A as the experimental group and the second one was VI-F as the control group.

3.3.4 Research instruments

There were three kinds of instruments used in this research, namely pre-test, post-test and questionnaire. Arikunto (1996:136) states that research instruments are the media used by the researcher in collecting data. The data were collected to answer the research questions of this research. A pre-test was conducted before the treatments to both of experimental and control groups. The pre-test was held to find out students' initial ability in writing descriptive text and

make sure that the initial ability of two groups are not different significantly. Besides that, the post-test was held after the treatments to both the groups. The test was conducted to measure whether or not the writing skill of two groups change after the treatment and also to measure whether there is any significant differences on the post-test. The both of test were used to answer the first research question whether the pictures improved students' skill in writing descriptive text. On the other hand, questionnaire was administered to answer second research question to support the data in explaining how students perceived the use pictures in teaching writing descriptive text (See appendix 2).

3.4 Research Procedures

3.4.1 Organizing teaching procedure

There were two steps in organizing teaching procedure. The first step was preparing appropriate teaching materials that were be used in the treatments. There were 3 pictures shown in this study. These pictures are categorized into 3 types: Describing favorite animal, describing people, and describing my room. (see appendix A for teaching material).

The next step organizing lesson plan as teaching procedure in teaching writing descriptive text for both of the experimental and control group whereas the experimental group was taught by using picture while the control group was taught by conventional media. There were some lesson plans to implement during the treatment sessions. Those lesson plans were design for six meeting, excluded

the allocation for pre-test. and post test sessions. (See appendix 2 for detail the lesson plan).

3.4.2 Administering pilot test

Before conducting the pre-test and post-test, the pilot test was examined to find out the instruments was appropriate or not. If the respondents were able to understand the given instruction it was concluded that the instrument can be used as pre-test and post-test. In this research, the pilot test was given to the students in similar level (class VII-B) which was not included in the control and experimental groups but they had already learned descriptive text. In this test was conducted on September 22, 2012, the students were asked to write a descriptive text. And the topic was about "Famous People" (see Appendix B).

3.4.3 Administering pre-test

Pretest was administered to find out students' initial writing skill before getting treatment. In this test, the students are asked to write a descriptive text, students are given a picture and then asked to describe the picture.

Pretest was conducted in experimental and control groups to find out students' initial skill in writing descriptive text. The test was done on 28 September 2012. (See appendix 1).

3.4.4 Giving the treatments

The treatments of this study were the use of a picture in teaching writing descriptive text. The experimental group was given a picture and the control group was taught using the conventional technique (giving the written words directly in front the class on the whiteboard). The schedule for the experimental and control group will be described in the following table.

**Table 3.1
Time Schedule of Research**

Day / date	Activity/Material	
	Experimental group	Control Group
September 28, 2012	Pretest	Pretest
September 5, 2012	Treatment: Using a picture Theme: My Favorite animal	Treatment: Conventional method Theme: My Favorite Animal
September 8, 2012	Treatment: Using a picture Theme: Me and My Family	Treatment: Conventional method Theme: Me and My Family
September 12, 2012	Treatment: Using a picture Theme: Me and My Family	Treatment: Conventional method Theme: Me and My Family
September 15, 2012	Treatment: Using a picture Theme: My Room	Treatment: Conventional method Theme: My Room
September 19, 2012	Treatment: Using a picture Theme: My Room	Treatment: Conventional method Theme: My Room
September 20, 2012	Posttest and Questionnaire	Posttest and questionnaire

The treatments were conducted by applying the use of pictures during learning writing descriptive text. It took place from October 5-19, 2012 every twice a week which consisted of 80 minutes per meeting.

3.4.5 Administering post-test

Post-test was conducted at the end of the research. It was also administered to both groups to investigate whether there was a significant difference between students' posttest and pretest means after the treatment. It was

distributed to both experimental group and control group. The posttest was carried on after conducting the treatments to the experimental group on 20 October 2012. It was aimed to find out students' skill in writing descriptive text after the treatments. It was also done to figure out whether there was a significant difference between posttest means in the control and experimental groups.

3.4.6 Conducting questionnaire

Arikunto states that questionnaire refers to a written test which has a purpose to gain information and responses from the respondents (Arikunto, 2006: 67). Questionnaire may serve as a most appropriate and useful data gathering device in research project. It could save time and expense because of the availability of a number of respondents in one place.

Likert response scaled questionnaire was used for answering the second research question. It was intended to collect information about how students in experimental group perceived the use of a picture.

In addition, the use of questionnaire in this research was intended to find out the students' responses towards the use of pictures in their class where twelve questions were distributed to the students.

3.5 Data Analysis Procedures

3.5.1 Scoring rubric

The results of pretest and posttest were submitted and assessed by two examiners (The writer and the English teacher) based on the scoring rubric. In this

research the criteria of writing scoring system was adapted from Jacob et al.'s scoring profile (1981, cited in Weigle, 2002). The aspects assessed covered content, organization, vocabulary and language use. The rubric is presented as follows:

Table 3.2
Writing Scoring Rubric

Aspect of writing	Range	Score	Criterion
Content	5	excellent	Main idea stated clearly and accurately, change of opinion very clearly
	4	Good	Main ideas stated fairly clearly, and accurately, change of opinion relatively clear
	3	Average	Main ideas somewhat unclear or inaccurate, change of opinion statement somewhat weak
	2	Poor	Main ideas not clear or accurate change of opinion statement weak.
	1	Very poor	Main ideas not at all clear or accurate change of opinion statement very weak.
Organization	5	Excellent	Well-organize and perfectly coherent.
	4	Good	Fairly well-organized and generally coherent
	3	Average	Loosely organized but main ideas clear, logical but incomplete sequencing
	2	Poor	Ideas disconnected, lacks logical sequencing
	1	Very poor	No organization, incoherent.
Vocabularies	5	Excellent	Very effective choice of words and use of idioms and words forms.
	4	Good	Effective choice of words and words form.
	3	Average	Adequate choice of words but some misuse of vocabulary, idioms and word forms.
	2	Poor	Limited range, confused use of words, idioms and word forms.
	1	Very poor	Very limited range, very poor knowledge of words, idioms and word forms.
Grammar	5	Excellent	No errors. Full control of complex structure.
	4	Good	Almost no errors, good control of structure.
	3	Average	Some errors, fail control of structure.
	2	Poor	Many errors, poor control of structure.
	1	Very poor	Dominated by errors, no control of structure.
Mechanics	5	Excellent	Mastery of spelling and punctuation.
	4	Good	Few errors of spelling and punctuation.
	3	Average	Fair number of spelling and punctuation errors.
	2	Poor	Frequent errors in spelling and punctuation.
	1	Very poor	No control over spelling and punctuation.

(adapted from Cohen (1994: p.328)

3.5.2 The pilot test analysis

The pilot test was aimed to check the validity of the instrument. It was conducted before doing pre-test and post-test. In the pilot test, the instruction contained in the pretest and posttest items was found to be clear and understandable enough. Therefore, it was proven that the items had face validity. It could be concluded that the instrument could be used for post-test and pre-test.

3.5.3 Pretest and posttest data analysis

3.5.3.1 Normality distribution test

Normality distribution test was conducted to find out whether or not the data of both groups normally distributed. The Kolmogorov-Smirnov test in SPSS version 21.0 was used in analyzing the normality of data distribution.

The steps of analyzing the normality distribution are as follows,

1. Stating the hypotheses and setting the alpha level at 0.05 (two-tailed)
 H_0 : the scores of the control and experimental groups are homogeneous.
 H_1 : the scores of the control and experimental groups are not homogeneous.
2. Analyzing the homogeneity of variance using Levene's test for equality of variance in SPSS version 21.0.
3. Comparing the Asymp. sig (probability) with the level of significance (0.05) for testing the hypothesis. If the Asymp. sig. is more than the level of significance, then the null Hypothesis (H_0) is retained. If the Asymp. sig. is less than the level of significance, then the null Hypothesis (H_0) is rejected (Hatch & Farhady, 1982: 88).

3.5.3.2 Homogeneity of variance

The homogeneity of variance test was conducted to find out whether or not the variances of scores in control and experimental groups were equal. The Levene's test for equality of variance in SPSS version 21.0 was used in analyzing the variance homogeneity.

The procedures of testing homogeneity of variance were also similar to normality distribution test, namely

1. Stating the hypotheses and setting the alpha level at 0.05 (two-tailed)

H_0 : the scores of the control and experimental groups are homogeneous.

H_1 : the scores of the control and experimental groups are not homogeneous.

2. Analyzing the homogeneity of variance using Levene's test for equality of variance in SPSS version 21.0, then

3. Comparing the Asymp. sig (probability) with the level of significance (0.05) for testing the hypothesis. If the Asymp. sig. is more than the level of significance, then the null Hypothesis (H_0) is retained. If the Asymp. sig. is less than the level of significance, then the null Hypothesis (H_0) is rejected (Hatch & Farhady, 1982: 88).

3.5.3.3 t-test computation

When the data of this research was normally distributed and homogeneous, then the assumptions of using parametric test was achieved. In order that, the independent *t*-test is used to find out whether there is a significant difference between the means of experimental and control groups.

The steps are as follows,

4. Stating the null hypothesis and the alpha level at 0.05 (two-tailed),

H_0 : there is no significant difference between the means of control and experimental groups.

H_1 : there is a significant difference between the means of control and experimental groups.

5. Finding the significance value with independent t -test formula using SPSS version 21.0.

6. Comparing significance value and level of significance. If significance value is lower than level of significance, the result is statistically significant at the 0.05 level, then H_0 is rejected; meanwhile, if significance value is higher than level of significance, the result is not statistically significant, then H_0 is retained (Hatch & Farhady, 1982: 88).

Besides the independent t -test, the paired t -test was also conducted to calculate the significant difference between the pretest and posttest means of the both groups. The first step is stating the hypotheses and the level of significance at 0.05 (two-tailed):

H_0 : there is no significant difference between the means of control and experimental groups.

H_1 : there is a significant difference between the means of control and experimental groups.

Then, paired *t*-test was carried out to find significance value. If the significance value is lower than 0.05, then H_0 is rejected. On the other hand, if the significance value is higher than 0.05, then H_0 is retained (Hatch & Farhady, 1982: 88).

3.5.4 Questionnaire data analysis

The questionnaire aimed at answering the research question about the students' response towards to use a picture in teaching writing descriptive text.

The data gathered from the questionnaire were used to investigate the students' responses to the use a picture in teaching writing descriptive text. After questionnaire was distributed to the sample, the data was computed into percentage. The following presents the formula to calculate the percentage below:

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

Where:

P = Percentage

F_o = Frequency observed

N = Number of sample

100 = Constants

The criteria of percentage categories are described as follow:

Table 3.3
Criteria of Percentage of Respondent

Percentage of respondent	Criteria
1-25%	Small number of the students
26-49%	Nearly half of the students
50%	Half of the students
51-75%	More than half of the students
76-99%	Almost all of the students
100%	All of the students

(Indah Rahmawati, 2008 cited in Lestari Kaosar, 2011)

