

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents and discusses some aspects of the research methodology which has been briefly introduced in chapter I. It consists of research design, the population and the sample which were taken from SMPN 1 Lembang, the data collection, the instruments, the time allocation, the procedure of research, and the procedure of data analysis.

3.1 Research Methods

3.1.1 Research Design

In conducting the study, a quasi-experimental design with non-equivalent pretest and posttest control group design was applied in the case of using a diary in teaching recount texts to improve students' writing ability. Hatch and Farhady (1982:24) states that:

By using a quasi-experimental design, we control as many variables as we can and also limit the kinds of interpretations we make about cause-effect relationship and hedge the power of our generalization statements.

A quasi-experimental design was used in this study, due to limited time and cost. A true experimental design would not be feasible because of long time period. In addition, a true experimental design is conducted in random sampling. In this regard, it would need more steps to be taken, for example, making a list of junior high schools in Bandung, making a list of names of students in all junior

high schools, or at least taking a whole of eight graders in one school. However, the school only gave two classes to be observed. Based on that explanation, a quasi-experimental design is simpler than a true experimental design. So, a quasi-experimental design was used in this study.

In line with this, Fraenkel and Wallen (1990) states that the design is a comparison group design. The experimental group was treated by writing a diary and giving feedback for their writing, while the control group did not receive any treatments. The control group was taught by using a conventional method. The control group was taught by the teacher using the lesson plan from the school. Meanwhile, the experimental group was given treatments and lesson plan was tailored to suit the activities of writing a diary.

A pretest and posttest were used in this study to answer the research questions. Hatch and Farhady (1982) states that the pretest and posttest non-equivalent groups design is often used in classroom experiments when the experimental and control groups are such naturally assembled groups as intact classes which may be similar.

A diary was used as the treatments in the experimental group in conducting this study through the teaching of recount texts to the students as the materials based on the Standard Competencies and the Basic Competencies. Both the experimental and control groups produced recount texts as the exercises. In addition, writing a diary was conducted as the treatments in the experimental group. A diary was chosen in this study because a diary belongs to personal recount which is a type of recount text. Meanwhile, a conventional method was

taught in the control group. The control and experimental groups were given the pretest and posttest. The pretest was given in the beginning of the study and the posttest was given after conducting treatments. The posttest was conducted to measure the improvement of the students' writing ability. This study used a research design in the following schematically:

Table 3.1
The Research Design

| Groups | Pretest | Treatment | Posttest |
|--------------------|------------------|------------------|------------------|
| Experimental group | T ₁ E | X | T ₂ E |
| Control group | T ₁ C | - | T ₂ C |

Where

T₁E : The pretest for the experimental group

T₂E : The posttest for the experimental group

X : The Treatments

T₁C : The pretest for the control group

T₂C : The posttest for the control group

Based on the research design above, treatments were only given to the experimental group. The pretest was administered before the implementation of writing a diary as the treatments for students in the experimental group. The posttest was conducted to observe students' writing ability.

This study began with the null hypothesis (H_0) that the experimental and control groups are similar as follows:

$$H_0: \mu_{\text{experimental}} = \mu_{\text{control}}$$

Kranzler and Moursund (1998) states that there is no difference between the experimental and control classes in the mean adjustment levels. By using the null hypothesis, every possibility of a research study can be shown. Thus, it was expected that the results of this study would reject the null hypothesis. It was indicated that there is no difference between experimental group and control group.

3.1.2 Variables

Hatch and Farhady (1982:12) defines a variable as “an attribute of a person or an object which varies from person to person or from object to object”. There are two kinds of variables in this research, namely, an independent variable and a dependent variable. The independent variable is a variable which influences or evokes the changes in the dependent variable. In addition, the dependent variable is a variable which is influenced or resulted by the independent variable (Sugiyono, 2008). In conclusion, writing a diary as the implemented method was

the independent variable and became the major variable to be investigated. Meanwhile, the dependent variable was the students' writing ability.

3.2 Population and Sample

3.2.1 Population

According to Arikunto (2002), population is a whole research subject. When a researcher observes all the elements that exist in the research area, then the research is population research. In this study the population was the eighth grade students of SMPN 1 Lembang which consisted of nine classes from VIII-A to VIII-I.

SMPN 1 Lembang was chosen as the school in conducting this study because it was a place where the writer worked and taught English. In addition, SMPN 1 Lembang is known as a school which has a good reputation in Lembang. Eight grade students were chosen as a population of this study based on the curriculum which is explained in the Standard Competencies and the Basic Competencies that recount texts are taught in the eight graders of junior high school. In this study, a diary belongs to a recount text which tells about past activities or experiences of students.

3.2.2 Sample

According to Sugiyono (2008), a sample is part of the total and the characteristics that exist in that population. In this study, two classes of eighth grades in SMPN 1 Lembang were taken as the sample. The first class (VIII-C) as a control group was taught by a conventional method and the second class (VIII-I) as an experimental group was given some treatments. Both of them had the same level in English proficiency and the same number of students. The pretest and posttest were conducted in the two groups in this study.

3.3 Data Collection

In collecting data, some steps were conducted in this study. First, the teaching procedures in the experimental and control group classes were organized. Second, the research instruments were organized. Third, a pilot test was distributed to the students outside the experimental and control groups. Fourth, a pretest was administered to both the control and experimental groups in order to investigate initial abilities between the two groups who have a similar level in writing ability.

Fifth, the lesson plan was organized in teaching writing of recount texts to the experimental group students which was given treatments of writing a diary. Then, the control group was taught by using a conventional method. Sixth, the posttest was administered to both the control and experimental groups in order to reveal of the treatments. Seventh, an interview was conducted towards the experimental group in order to gather further information about students'

responses of the implementation of writing a diary in improving their writing ability.

3.4 Research Instrument

In collecting the data, two kinds of instruments were used: a writing test and an interview. The writing text (recount text) were employed in the form of a pretest and a posttest. The pretest and posttest were administered to the experimental and control groups.

The writing test was used to investigate students' writing ability by asking the students to make a recount text based on one theme which was determined by the teacher. In the pretest, the students were asked to make a recount text, so students made a recount text based on their basic knowledge of writing. Then, the posttest was administered for students in the control and experimental groups by asking them to make a recount text. The experimental group was given treatments by asking them to make a diary in every meeting and the control group was taught by using a conventional method.

In addition, an interview was used to support the data in explaining information about students' responses of the use of a diary in the practice of writing to improve students' writing ability. The interview was only given to the experimental group at the end of this study.

Furthermore, the lesson plan was designed based on the Standard Competencies and the Basic Competencies the syllabus of the school. The

teaching material was appropriate material for students in the eight grade of junior high school based on the Standard Competencies and the Basic Competencies. The syllabus of eighth grade of junior high school in writing skill is presented as follows:

Table 3.2

Eighth Grade of Junior High School Syllabus in Second Semester

| Standard Competence | Basic Competence |
|--|--|
| <p>Writing</p> <p>12. Mengungkapkan makna dalam teks tulis fungsional dan esei pendek sederhana berbentuk <i>recount</i> dan <i>narrative</i> untuk berinteraksi dengan lingkungan sekitar.</p> | <p>12.1 Mengungkapkan makna dalam bentuk teks tulis fungsional pendek sederhana dengan menggunakan ragam bahasa tulis secara akurat, lancar dan berterima untuk berinteraksi dengan lingkungan sekitar</p> <p>12.2 Mengungkapkan makna dan langkah retorika dalam esai pendek sederhana menggunakan ragam bahasa tulis secara akurat, lancar dan berterima untuk berinteraksi dengan lingkungan sekitar berbentuk <i>recount</i> dan <i>narrative</i>.</p> |

(Taken from Kompilasi Bahan-Bahan PLP UPI, 2007)

3.5 Time Allocation

This study was conducted in SMPN 1 Lembang for three weeks. A pilot test was conducted before the pretest. Then, a pretest was conducted in the first week of meeting for both experimental and control groups. The treatments were conducted in the second until the sixth meeting in the experimental group. The control group, however, was taught by using the conventional method. Finally, posttest was conducted in the sixth meeting in the experimental and control groups. Sixth lessons plan were used in the teaching learning process in both the experimental and control groups. The treatments were conducted in the experimental group by asking the students to make a diary and by giving feedback for their writing.

3.6 Research Procedures

In conducting this study, there were some procedures administered. First, pilot test was required to analyze the validity and reliability of the test. The result was determined whether or not the test can be used in the study. Furthermore, pretest, posttest, and interview were conducted to answer research questions. In addition, the interview was conducted to answer second research question about the aspects in which writing a diary improves students' writing ability.

3.6.1 Organizing Teaching Procedure

The quasi-experimental study was conducted to discover the effect of the two different groups: the experimental and control groups. The experimental group was asked to make a diary as treatments. The control group did not receive any treatments; it was taught by using the conventional method.

The pretest was conducted before the treatments, while posttest was conducted after the treatments. Such activities were conducted to both groups to reveal the improvement of students' writing ability. The research schedule is presented as follows:

Table 3.3
Research Schedule

| No | Experimental Group | | Control Group | |
|----|--------------------|---|---------------|--|
| | Date | Theme/Material | Date | Theme/Material |
| 1. | 12-01-2010 | Pre-test | 12-01-2010 | Pre-test |
| 2. | 14-01-2010 | Treatment 1: a Possum in the House | 14-01-2010 | Treatment 1: a Possum in the House |
| 3. | 15-01-2010 | Treatment 2: a Trip to Dunia Fantasi | 15-01-2010 | Treatment 2: Going to Camp Site |
| 4. | 21-01-2010 | Treatment 3: Earthquake | 21-01-2010 | Treatment 3: Self-Service Machine |
| 5. | 22-01-2010 | Treatment 4: Soft Drinks with Everything | 22-01-2010 | Treatment 4: Small Children Like Toys |
| 6. | 28-01-2010 | Treatment 5: Mickey | 28-01-2010 | Treatment 5: In the |

| | | Helped his Father | | Supermarket |
|----|------------|--------------------------|------------|--------------------|
| 7. | 29-01-2009 | Post-test | 29-01-2010 | Post-test |

3.6.2 Administering Pilot Test

A pilot test was administered to measure the validity and reliability of the instruments. The pilot test was given to the students outside the sample (the experimental and control groups), but in the population which was the same level as the sample. There were 5 students involved in the pilot test. The pilot test was an instruction to make a recount text based on one theme to identify whether the students understand the instruction or not by checking students' writing.

3.6.3 Administering Pretest

A pretest was administered after the pilot test was conducted. The pretest was administered to both the experimental and control groups. The result of the pretest showed the differences between the experimental and control groups, that they had a similar level in writing ability. Before receiving the treatments, the students had a pretest in the form of a written test by asking them to make a recount text.

Then, the teacher collected students' writing and assessed it based on some criteria. The scores from the pretest were used to assess the initial ability of both groups before conducting the treatments; whether they are similar or not.

3.6.4 Conducting the Treatments

The treatments were conducted to the experimental group after the pretest was administered. The treatments in this study consisted of discussing generic structures and language features of the recount text, asking students to make a diary and giving feedback for their writing. The treatments were conducted in the experimental group until six meetings. The design of the lesson plan was based on the Standard Competencies and the Basic Competencies in the syllabus of the school which was developed by the teacher. The control group was taught by using the conventional method.

A diary was chosen in the area of the recount text. This text type is taught in the eighth grade of junior high school based on the Standard Competencies and the Basic Competencies. Moreover, students practiced writing in the form of a diary. This activity could stimulate them to be aware of what they write. In this case, students would be more aware of the use of generic structures and language features in their writing.

3.6.5 Administering Posttest

A posttest was also administered to both groups after series of treatments were given. The posttest had the same procedures as the pretest by asking students to make a recount text. The scores from posttest were used to measure whether the implemented method influences the experimental group or not.

3.6.6 Conducting an Interview

According to Sugiyono (2008), an interview is used as a technique of collecting data when the observer do a previous study to investigate the problem that will be observed, or the observer want to know more deeply about responses or information from respondents. The interview was conducted to the experimental group to investigate students' responses of writing a diary in improving students' writing ability. In addition, the interview was conducted to investigate students' responses about aspects in which their writing improved.

3.7 Data Analysis

3.7.1 Scoring Technique

The aspects of the writing ability to be measured are the organization, content, grammar, mechanics and style. Brown (2004) classifies a scale of numbers to evaluate students' writing work as follows:

Organization

20-18 = Excellent to good

17-15 = Good to adequate

14-12 = Adequate to Fair

11-6 = Unacceptable-not

5-1 = College-level work

Content

20-18 = Excellent to good

17-15 = Good to adequate

14-12 = Adequate to Fair

11-6 = Unacceptable-not

5-1 = College-level work

Grammar

20-18 = Excellent to good

17-15 = Good to adequate

14-12 = Adequate to Fair

11-6 = Unacceptable-not

5-1 = College-level work

Mechanics

20-18 = Excellent to good

17-15 = Good to adequate

14-12 = Adequate to Fair

11-6 = Unacceptable-not

5-1 = College-level work

Style

| | | |
|-------|---|--------------------|
| 20-18 | = | Excellent to good |
| 17-15 | = | Good to adequate |
| 14-12 | = | Adequate to Fair |
| 11-6 | = | Unacceptable-not |
| 5-1 | = | College-level work |

3.7.2 Data analysis on Pilot Test

The aim of administering the pilot test was to check the validity and reliability of the instruments. If the respondents had the ability to understand the instruction of the instruments and were able to give appropriate responses, it can be concluded that the instruments can be used as the pretest and posttest. The data from the students' writing of recount texts were assessed by the teacher. Then, the scores were compared with the minimum standard scores from the school.

3.7.3 Data Analysis on Pretest

The pretest and posttest were given both to the experimental and control groups in the same procedures. The pretest was done in the beginning of the research. The data obtained from the pretest was aimed to investigate the students' initial ability

in writing and were analyzed by the independent sample t-test statistics. A hypothesis was stated with the alpha level at 0.05. Hatch and Farhady (1982) states three assumptions underlying the t-test: 1) the subject is given to one group in experiment; 2) the variances' scores are equal and normally distributed; 3) the scores on the independent variable are continuous. In conclusion, the normal distribution test and the homogeneity of variance test were calculated before the t-test calculation by comparing the level of significance.

In this study, the Kolmogorov-Smirnov Sample Test in SPSS version 16.0 was used to analyze the normal of distribution. It was aimed to investigate whether or not the distributions of pretest and posttest scores in the two groups were normally distributed. Then, Levene Test Formula in SPSS was used to analyze the variance homogeneity, and finally the independent samples t-test was used to discover the null hypothesis (H_0) whether or not any difference between the control and experimental groups of students' writing ability.

3.7.4 Data Analysis on Posttest

The posttest was administered after doing those of the treatments. The independent samples t-test was also conducted in analyzing the posttest scores of the control and experimental groups to compare the means of both groups.

A matched t-test was used in this study to investigate whether or not the difference of the pretest and the posttest means of each group are significant.

Analyzing matched t-test was done by comparing pretest and posttest scores in the experimental group. This step was done to reveal the level of students' writing before and after writing a diary was treated.

3.7.5 Effect Size

An Effect size was conducted to check the level of effect of the treatment. The test of the effect size was administered after the t-test calculation. The calculation of the effect size was conducted by using t obtained from the independent sample t-test of posttest. The effect size formula was used to determine the impact significance of the treatments to the experimental group. According to Coolidge (2000), the formula of the effect size (r) is presented as follows:

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

- r : Effect size
 t : Independent t-test value
 df : Degree of freedom

In addition, Coolidge (2000) interprets the magnitude of the effect size as follows:

Table 3.4

The Scale of Effect size

| Effect Size | <i>r</i> value |
|--------------------|-----------------------|
| Small | 0.100 |
| Medium | 0.243 |
| Large | 0.371 |

1.7.6 Data Analysis on Interview

An interview was conducted in the experimental group after some treatments were given. The interview was conducted to get deep and comprehensive information from the students. An interview was conducted to reveal students' responses on the use of writing a diary in improving students' writing ability. The data of interview were transcribed by using an audio recorder. The interpretation of the interview results are given in the next chapter.