CHAPTER III
RESEARCH METHODOLOGY

This chapter consists of methodology of the study, including research design, site and participants, research instruments, research procedures, scoring rubric, data collection, and data analysis.

3.1 RESEARCH DESIGN

The study used quantitative method in form of a quasi-experimental design. The design is chosen because according to Hatch and Farhady (1982), a quasi-experimental design is practical compromises between true experimentation and the nature of human language behavior which we wish to investigate.

<table>
<thead>
<tr>
<th>G1</th>
<th>T1</th>
<th>X</th>
<th>T2</th>
</tr>
</thead>
<tbody>
<tr>
<td>G2</td>
<td>T1</td>
<td>-</td>
<td>T2</td>
</tr>
</tbody>
</table>

Table 3.1 Research Design

Notes:
G1 : The experimental group
G2 : The control group
T1 : Pre test
X : Treatments (Reflective Essay Technique)
T2 : Post test

(Adapted from Hatch & Farhady, 1982)

The pre-test and post-test were administered to both control and experimental groups. It is aimed at answering the first research question about the effectiveness of the use of reflective essay in improving students’ scores in writing recount text. As for the second research question, questionnaires were distributed only to the experimental group in order to find out students’ responses toward the technique.
3.1.1 VARIABLE

Variable can be classified into dependent and independent variables. According to Hatch and Farhady (1982), independent variable is a variable which is selected, organized, and evaluated by the researcher. Meanwhile, dependent variable is the variable in which the researcher observed in order to find out the effect of the independent variable. As for the study, the independent variable was the reflective essay technique, while the dependent variable was students’ scores in writing recount text.

3.1.2 HYPOTHESIS

Hypothesis is described as a formal confirmatory statement guessing a single research result, a tentative explanation of the relationship between two or more variables. According to Best (1981), hypothesis limits the focus of the investigation to a define target and determines what observations will be made. However, the most common hypothesis is the null hypothesis which declares that there is no difference between the results of experimental and control groups (Hatch & Farhady, 1982). Therefore, the hypotheses are elaborated as follows:

- \( H_0 \) = There is no significant difference between students’ post-test scores in the experimental group and students’ post-test in the control group.
- \( H_1 \) = There is a significant difference between students’ post-test scores in the experimental group and students’ post-test in the control group.

The study is aimed at rejecting the null hypothesis, which means there was a significant difference between students’ post-test scores which were given the reflective essay as a treatment and students’ post-test scores which were not.
3.1.3 SITE AND PARTICIPANTS

The study was conducted in one senior high school in Bandung, Indonesia. The reason of choosing the school to be the site of the study is because this school was accessible. The participants of the study were two classes of first grade consisting of sixty students. The participants were chosen purposively based on the same number of the students and the non-significant different scores of both classes. The difference was measured by using the independent t-test.

3.1.4 RESEARCH INSTRUMENTS

Research instruments are media used by the researchers to collect the data (Arikunto, 1996). The study used two main instruments. The first was pre-test and post-test in forms of instruction writing test. It was aimed at answering the first research question about the effectiveness of the use of reflective essay in improving students’ scores in writing recount text. The pre-test was administered to both control and experimental groups before the treatments to find out students’ initial ability in writing recount text. Whereas, the post-test was administered after the treatments given to find out whether or not there was a significant difference on students’ scores of both control and experimental groups. Meanwhile, questionnaires were distributed only to the experimental group as the second main instrument of the study. It was aimed at answering the second research question about students’ responses toward the technique.

The pre-test and post-test were administered in forms of instruction writing test. As suggested by Heaton (1983), the test item has to be in the form of an instruction to write based on a real-life situation in which students are pretended to be in. Therefore, the students were asked to write a recount text based on the given topic, which was “My Holiday Experience”.

Pre-test and post-test in forms of instruction writing test should be measured whether or not it was valid since it acted as the main instrument of this study. According to Fraenkel and Wallen (1990), validity refers to the suitability, meaningfulness, and usefulness of the inferences a researcher makes. Pre-test and
post-test should have two kinds of validity, face validity and content validity. As stated by Hughes (1989), a face validity test should have a clear and understandable instruction on how to do the test. Meanwhile, a test can be considered to have content validity is when the test is likely to be an accurate measure of what it is supposed to measure. A test is said to have content validity when the test item is successful to direct the test takers to show particular language skills in their works expected by test makers (Heaton, 1983).

The researcher used a pilot test to find out whether or not the test instruments which used in the study have face validity and content validity. In the pilot test, the researcher asked students outside the participants to do the test based on the instruction constructed in the test. When the students understood clearly about the instruction given, it means that the test has possessed the face validity. Meanwhile, if the students faced difficulties in understanding the instruction, the researcher had to ask which part of the instruction was confusing them. Then, the researcher fixed the confusing part to reach the face validity. After that, the researcher had to examine students’ works to find out whether or not the test instrument has content validity. If the test result of several students has reached the particular language skills expected by the researcher, it means that the test instrument has possessed the content validity. The researcher could administer pre-test and post-test when the test instruments have proved two kinds of validity.

Questionnaire was administered only to the experimental group which had given the reflective essay technique. It was aimed at finding out students’ responses toward the technique. The questionnaire consisted of 11 statements which were divided into four parts: 1) students’ responses toward English lesson; 2) students’ responses toward writing recount text; 3) students’ responses toward the use of reflective essay; and 4) students’ responses toward the implementation of reflective essay in learning recount text.
3.2 DATA COLLECTION

3.2.1 RESEARCH PROCEDURES

There were three steps used by the researcher in order to collect the data, such as:

1. Preparing and organizing the lesson plan.
2. Creating research instruments
   a. Creating instruction for the writing test
   b. Creating statements for the questionnaire
3. The teaching phase:
   a. Administering pilot test which aimed at measuring whether or not the instruction of the writing test has already appropriate.
   b. Administering pre-test which aimed at finding out students’ initial ability about recount text.
   c. Conducting teaching and learning by using reflective essay through GBA for the experimental group and using GBA in learning recount text for the control group. (Treatments)
   d. Administering post-test which aimed at finding out whether or not the treatment (reflective essay technique) was effective in improving students’ scores in writing recount text.
   e. Administering questionnaire which aimed at finding out students’ responses toward the reflective essay technique.

In the study, the researcher acted as a teacher in the classroom for both control and experimental groups. The teaching schedule is presented in the table below:
## Table 3. 2 Teaching Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Control Group</th>
<th>Experimental Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jumat, 13 September 2013</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Pilot Test)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jumat, 20 September 2013</td>
<td>Pre-test</td>
<td>Pre-test</td>
</tr>
<tr>
<td>Jumat, 04 Oktober 2013</td>
<td>(BKOF) Giving recount texts to be discussed in terms of the main idea of the text, difficult vocabularies in the text, and the writers’ comments or expressions used in the text.</td>
<td>(BKOF) Giving recount texts to be discussed in terms of the main idea of the text, difficult vocabularies in the text, and the writers’ comments or expressions used in the text + 1st treatment (writing a reflective essay at the end of the class)</td>
</tr>
<tr>
<td>Jumat, 11 Oktober 2013</td>
<td>(Modeling) Giving some examples of recount text to be discussed and identified together about its social function, generic structure, language features, and grammatical pattern.</td>
<td>(Modeling) Giving some examples of recount text to be discussed and identified together about its social function, generic structure, language features, and grammatical pattern + 2nd treatment (writing a reflective essay at the end of the class)</td>
</tr>
<tr>
<td>Jumat, 18 Oktober 2013</td>
<td>(JC) Asking students to make a recount text in groups based on the given topic.</td>
<td>(JoT) Asking students to make a recount text in groups based on the given topic + 3rd treatment (writing a reflective essay at the end of the class)</td>
</tr>
<tr>
<td>Jumat, 25 Oktober 2013</td>
<td>(IC) Asking students to write a recount text individually based on the given topic.</td>
<td>(IC) Asking students to write a recount text individually based on the given topic + 4th treatment (writing a reflective essay at the end of the class)</td>
</tr>
<tr>
<td>Kamis, 31 Oktober 2013</td>
<td>Post-test</td>
<td>Post-test + Questionnaires</td>
</tr>
</tbody>
</table>
3.2.1.1 ADMINISTERING PILOT TEST

A pilot is a small experiment designed to test logistics and gather information prior to a larger study, in order to improve the latter’s quality and efficiency (Dodd S & Williamson PR, 2004). In order to test the face validity and content validity of the instruments, the researcher used pilot test. The face validity was aimed at checking whether or not the test instruments were clearly understood by the students in terms of instruction. Meanwhile, the content validity was aimed at checking students’ test results. If the test result of several students has reached the particular language skills expected by the researcher, it means that the test instrument has possessed the content validity.

3.2.1.2 ADMINISTERING PRE-TEST TO EXPERIMENTAL AND CONTROL GROUPS

Pre-test was administered after the researcher found that the test instruments were possible to be used in the study. The test was aimed at finding out students’ writing ability in writing recount text before the treatment given. Thus, students’ improvements on the post-test could be measured.

3.2.3.3 CONDUCTING TREATMENTS

The treatment in the forms of reflective essay was used only in the experimental group. Students’ on the experimental group was taught by using genre-based approach (GBA) + reflective essay technique. On the other side, the control group was taught by using the same approach but without using the reflective essay technique. It was aimed at finding out whether or not there was a significant difference between students’ scores which were given reflective essay technique and students’ scores which were not. Hence, the effectiveness of the reflective essay technique could be measured. Further information related to the process of conducting treatment is elaborated below:
a. Treatment 1
The first treatment applied the first stage of Genre-Based Approach (GBA) named Building Knowledge of Field (BkoF). Building Knowledge of Field or preparation is the first stage in which teacher tells the students about the social features of the text, vocabularies, grammatical pattern, etc (Derewianka, 2004). In this stage, the researcher who also acted as the teacher distributed a recount text entitled “My Holiday in Bali” in form of cloze test. Students were asked to fill in the blanks while listen to the audio version of the text. As stated by Emilia (2011) that in the BKoF stage, teacher can read the text aloud or ask the students to listen to the audio version of the text from a tape recorder. Then, the teacher asked some students to read aloud the text in order to check the way they pronounced some words in the text. The teacher also asked whether or not there were some difficult vocabularies in the text. After that, students were asked to find out the main idea of each paragraph of the text. The teacher also proposed some questions related to the text. Students were also encouraged to identify the writer’s comments or expressions used in the text, such as: “It was fantastic”, “I was so happy to see it”, etc. As suggested by Gibbon (2002), in this stage, teacher should build up students’ background knowledge until they have enough background knowledge about the topic that they are going to write. As for the students of the experimental group, they were asked to write a reflective essay at end of the class. The content of reflective essay consists of students’ activities and feelings toward the lesson of the day. Further information related to the activities on the first treatment can be seen on the appendices.

b. Treatment 2
The second treatment applied the Modeling stage. In this stage, teacher provided some recount texts related to the topic of the day that was “My holiday experiences”. As stated by Emilia (2011), modeling is the stage in which teacher provides or demonstrates some texts which are going to be the focus of the lesson to the students. Students were asked to read the text and
find out the main idea of each paragraph. After that, teacher explained some materials related to recount text, such as the social function of the text, the generic structure of the text, and language features of the text. Then, students were encouraged to identify the generic structures and language features of recount text. These steps were in line with Emilia’s theory (2010) which stated that there are some activities which can be done in the modeling stage. First, the teacher can introduce and familiarize the social context and function of the text to the students. Second, the teacher can show the schematic structure of the text by using power point or overhead transparency, and presenting the model of the text. Third, the teacher can present the grammatical features of the text to the students (Gibbons, 2005; Emilia, 2005, cited in Emilia, 2010).

As for the students of the experimental group, they were asked to write a reflective essay at end of the class. The content of reflective essay consists of students’ activities and feelings toward the lesson of the day. Further information related to the activities on the second treatment can be seen on the appendices.

c. Treatment 3
The third treatment applied the Joint Construction of the Text stage (JC). After the students have clear understandings about the characteristics above, they are ready to write and implement their comprehension and skill although they did not work on their own (Gibbons, 2002, p. 66). In this stage, students were asked to make a group of three or four. It was in line with Emilia’s theory (2011) which stated that teacher can divide the students into group of three or four with the group members that can be decided by themselves. Each of group was given a topic card related to the theme of the day which was “My friend’s personal experience”. Each member of the groups has to interview a friend from other group related to their topic card. Then, they were asked to make a recount text together based on the results of their group’s interview. In this step, the teacher asked students about their difficulties in writing recount text. As suggested by Emilia (2010), teacher should come to each group and
remind students about the aspects of writing and monitor students’ progress in their writing. As for the students of the experimental group, they were asked to write a reflective essay at end of the class. The content of reflective essay consists of students’ activities and feelings toward the lesson of the day. Further explanation related to the activities can be seen in the appendices.

d. Treatment 4

The fourth treatment applied the Independent Construction (IC). In this stage, students were asked to write a recount text individually based on the topic given by the teacher which was “My Unforgettable Moment”. As stated by (Derewianka, 2004; Hyland, 2004; Emilia, 2011), Independent Construction is the stage where students are asked to write a text based on what they have learned individually. As for the students of the experimental group, they were asked to write a reflective essay at end of the class. The content of reflective essay consists of students’ activities and feelings toward the lesson of the day. Further explanation related to the activities can be seen in the appendices.

3.2.1.3 ADMINISTERING POST-TEST TO EXPERIMENTAL AND CONTROL GROUPS

Post-test was administered to both experimental and control groups after the treatments given. It was aimed at finding out the effectiveness of the use of reflective essay as a technique in improving students’ scores in writing a recount text. As stated by Dimitrov and Rumrill (2003), pre-test and post-test designs are widely used in behavioral research, primarily for the purpose of comparing groups and/or measuring change resulting from experimental treatments.

3.2.1.4 ADMINISTERING QUESTIONNAIRE

Questionnaire is a series of written questions for which the respondents has to provide the answers (Bell, 1999). After the treatments given, the questionnaire was administered only to the experimental group. It was aimed at answering the second research question about students’ responses toward the reflective essay technique.
3.3 DATA ANALYSIS

In the study, there were several processes in analyzing the data. Data analysis included the scoring procedure, data analysis on the validity test of the test instruments (pilot test), data analysis on the pre-test and post-test scores, and data analysis on the questionnaire. Further information related to the information is elaborated below.

3.3.1 SCORING PROCEDURE

In evaluating students’ works, there are five aspects that should be included in writing scoring rubrics, such as genre, register, discourse, grammar, and graphic feature (Rose, 2007, p. 9-30). The point of each aspect is in range of 1 up to 20 in which the total maximum score is 100.

Table 3.3 Writing Rubric

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Genre</strong></td>
<td>The organization text completely consists of orientation, events, and re-orientation in which those are appropriate to elements of organization structure of recount text.</td>
<td>1-20</td>
</tr>
<tr>
<td><strong>Register</strong></td>
<td>The availability of appropriateness, clarity and complexity of language features, context, and its addressee.</td>
<td>1-20</td>
</tr>
<tr>
<td><strong>Discourse</strong></td>
<td>The writer constructs the meaning by using good connection, coherency, suitable references, and expressive ideas.</td>
<td>1-20</td>
</tr>
<tr>
<td><strong>Grammar</strong></td>
<td>Consists of whole aspects of grammar, such as tenses, verb-agreement, sentence construction, the use of adjectives, etc.</td>
<td>1-20</td>
</tr>
<tr>
<td><strong>Graphic feature</strong></td>
<td>This aspect includes the spelling, neatness in presenting the writing, such as margins, spacing, and ordering.</td>
<td>1-20</td>
</tr>
<tr>
<td><strong>Total maximum score</strong></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

(Rose, 2007)
3.3.2 DATA ANALYSIS ON PILOT TEST

The researcher used a pilot test to analyze the validity of the test instruments. If the instructions of the test instruments were found to be clear and understandable enough for the students, it means the test instruments have possessed face validity (Hughes, 1989). After the pilot test administered, the researcher examined the students’ works. If several students could perform particular language skills which were expected by the researcher, it means the test instruments have possessed content validity (Heaton, 1983).

3.3.3 DATA ANALYSIS ON PRE-TEST AND POST-TEST SCORES

Pre-test and post-test were administered to both experimental and control groups in the same procedures. The scores obtained were analyzed by using the independent t-test. The independent t-test is a tool to determine whether or not there is a significant difference between the means of two independent samples (Fraenkel & Wallen, 1990). In order to use the independent t-test, both experimental and control groups’ scores should be normally distributed and equal in terms of homogeneity of variance (Hatch & Farhady, 1992). Therefore, before using the independent t-test, the normal distribution test and the homogeneity of variance test were used in order to fulfill the two criteria above.

3.3.3.1 THE NORMAL DISTRIBUTION TEST

The normal distribution test was used to find out whether or not the sample was normally distributed. According to Weisstein (1999), normal distribution is a statistic distribution which aims at measuring the distribution of the data is normal. In order to compare two groups’ means of the pre-test and post-test data, the test should be calculated first. The Kolmogorov-Smirnov test was used in the study. The test compares the scores in the sample to a normally distributed set of scores with the same mean and standard deviation (Field, 2005). The test was calculated by the computation of SPSS 16.0 for Windows.
There were three steps to use the test. The first was stating the hypothesis (H_0= the scores between experimental and control groups are normally distributed) and setting the alpha level of significance at 0.05 (two-tailed test). The second was analyzing the groups’ scores using the Kolmogorov-Smirnov formula. The last was inferring the output data. If the score is non-significant (p< 0.05), it means that the distribution of the sample is significantly different from normal distribution (probably normal). If the result is significant (p> 0.05) then the distribution is not significantly different from normal distribution (the sample scores are normally distributed) (Field, 2005).

### 3.3.3.2 HOMOGENEITY OF VARIANCE

The researcher used the Levene’s test to analyze the homogeneity of variance of the scores. This test was aimed at finding out whether or not the data in the pre-test and post-test scores were homogenous. According to Field (2005), the Levene’s test hypothesis states that the variances in the groups are equal if the difference between the variances is zero. The test was calculated by the computation of SPSS 16.0 for Windows.

There were three steps to use the Levene’s test. The first was stating the hypothesis (H_0= data between the two groups are homogenous) and setting the alpha level of significance at 0.05 (two-tailed test). The second was analyzing the groups’ scores using the Levene’s test. The last was inferring the output data. If the result of the test is interpreted to be significant (p ≤ 0.05), it means the null hypothesis is incorrect and the variances are significantly different. On the contrary, if the result is interpreted to be non-significant (p>0.05), it means the null hypothesis is accepted and the variances are approximately equal (Field, 2005).

### 3.3.3.3 THE INDEPENDENT T-TEST

The Independent t-test was used to analyze the relationship between the independent variable (treatment) and the dependent variable (Coolidge, 2000). In the study, the test was aimed at finding out whether or not there was a difference
between the experimental and control groups in terms of the groups’ means on the pre-test and post-test scores. The test was calculated by the computation of SPSS Statistics 16.0 for Windows.

There were three steps to use the independent t-test. The first was stating the hypothesis (H0: there is no significant difference between the students’ writing scores in the experimental and control group) and setting the alpha level of significance at 0.05 (two-tailed test). The second was analyzing the groups’ scores using the independent t-test. The last was comparing the $t_{obt}$ with the level of significance for testing the hypothesis ($t_{crit}$). If the $t_{obt}$ is greater than $t_{crit}$, it means that the null hypothesis is rejected because there is a significant difference between experimental and control groups’ scores (Field, 2005).

### 3.3.3.4 THE DEPENDENT T-TEST

Dependent $t$-test (paired sample $t$-test) is used to analyze and compare the difference of means between the scores of pre-test and post-test of each group (Kranzel & Moursund, 1999). In the study, the dependent t-test was used only to the experimental group. It was aimed at finding out whether or not there was a significant difference between the scores of pre-test and post-test of the experimental group and the effect size of the treatment. The test was calculated by the computation of SPSS Statistics 16.0 for Windows.

There were three steps to use the dependent t-test. The first was stating the hypothesis (H0: there is no significant difference between the scores of pre-test and post-test of the experimental group) and setting the alpha level of significance at 0.05. The second was analyzing the scores of pre-test and post-test of the experimental group. The last was comparing the $t_{obt}$ with the level of significance for testing the hypothesis ($t_{crit}$). If the $t_{obt}$ is greater than $t_{crit}$, it means that the null hypothesis is rejected because there is a significant difference between the scores of pre-test and post-test of the experimental group (Field, 2005).
3.3.4 DATA ANALYSIS ON QUESTIONNAIRE

Questionnaire was administered only to the experimental group to find out students’ responses toward the reflective essay technique. As stated by Arikunto (2010), questionnaire consists of several questions needed by the researcher to obtain some information from the respondents. The questionnaire data were analyzed based on the frequency of students’ answers. The results were put in the percentage as follow:

\[ P = \frac{f_0}{n} \times 100\% \]

Notes:
P : Percentage
\( f_0 \) : Frequency of observed
\( n \) : Number of samples

(Coolidge, 2000)