CHAPTER III
RESEARCH METHODOLOGY

Chapter II has discussed the review of related literatures underlying the present study. In this chapter, detailed information on the methodology of this study is presented. The discussion starts with the purposes of the study, and proceeds to the research design, setting and participants, data collection and data analysis.

3.1 The purposes of the study

Chapter 1 presented the purposes of the study, which become the basis for the choice of the research methodology. This study seeks (1) to find out whether or not the use of Schoology as blended learning platform in teaching writing affects the students’ ability in writing descriptive text, and (2) to describe how Schoology is implemented in teaching writing at senior high school.

3.2 Research design

This study employed a mixed method design incorporating both quantitative and qualitative procedures to accomplish the objectives of the study. Mix method research involves both collecting and analyzing quantitative and qualitative data (Cresswell and Clark, 2007:6). To explore the first research question, a quasi-experimental design was applied. Quasi experimental design was chosen since it does not involve choosing the participants randomly as suggested in the true experimental design. The research design has five basic characteristics including 1) it has two groups of subjects namely the experimental and control group; 2) the two groups are compared with respect to the measurement or observation on the dependent variable; 3) both groups are measured twice through the use of pretest and posttest; 4) measurement of the dependent variable for both groups is conducted at the same time with the same test; and 5) the experimental group is manipulated with a particular treatment (Hatch and Lazarraton, 1991). The illustration for the method implementation is presented in the following table.
Table 3.1
Quasi-Experimental Design of the Present Study

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pretest</th>
<th>Treatment</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>T1_E</td>
<td>Y</td>
<td>T2_E</td>
</tr>
<tr>
<td>Control</td>
<td>T1_C</td>
<td>X</td>
<td>T2_C</td>
</tr>
</tbody>
</table>

E: Experimental
C: Control
T1: Writing Achievement Pretest
T2: Writing Achievement Post-test
Y: Experimental Group
X: Control Group

Moreover, to answer the second research question, the qualitative design was applied. It was used especially to describe how Schoology is implemented in teaching writing at a senior high school.

3.3 Setting and Participants

The present study was undertaken at a senior high school in Subang, West Java, Indonesia. It was conducted to the two classes of tenth grade students who have been chosen as the sample of this study by the teacher and under the school permission. The school was chosen due to the feasibility and accessibility factors. In regard to its feasibility, the school has more than one class or group of tenth graders. Hence, it is feasible to conduct the aforesaid experiment. Meanwhile, in term of accessibility, the school and the English teacher gave after the intensive communication. Those two factors drive the researcher to choose the school since, according to Mackey and Gass (2005, p.19), feasibility of a study becomes one of the factors to be considered.
3.4 Variable and Hypotheses

The characteristics of this study including the variable and hypothesis are shown in the following table:

<table>
<thead>
<tr>
<th>Null Hypothesis (H₀)</th>
<th>There is no significant difference between writing post-test scores of the experiment and those of the control group.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Hypothesis (H₁)</td>
<td>There is a significant difference between reading post-test scores of experimental and control group.</td>
</tr>
<tr>
<td>Significant Level</td>
<td>0.05, two tailed</td>
</tr>
<tr>
<td>Design</td>
<td>Pre-test – post-test control design</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>Students’ writing skill</td>
</tr>
<tr>
<td>Measurement</td>
<td>Score</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Treatment to the experimental and control groups (The use of Schoology)</td>
</tr>
</tbody>
</table>
| Treatment            | 1. Treatment to the experimental group  
                       | 2. Treatment to the control group                                                                              |
| Statistical Procedure | Independent t-test                                                                                              |

3.5 Data collection

The data of the present study included the students’ test scores (pretest and post-test), and the recording of the students’ activity in the classroom. The students’ test scores were gained by conducting a pretest prior to the implementation of the program and post-test after the implementation of the program. Finally, observation was conducted during the implementation of the program.

The implementation of program at the school is started from September to October 2017. The teaching program was run once in a week. It was held on
Monday and Wednesday, according to the normal schedule of the two classes set by the school.

During the experiment, the experimental group was taught by the teaching stages of the blended learning model. Therefore, the teaching program was divided into two sessions in a week, one in the classroom (Offline) and one on the Schoology (Online). Meanwhile, the control group was taught normally by using the conventional method. The materials used in the present study were adopted from the students’ book which is developed by the government.

3.5.1 Test

The tests in this study were used to figure out the effectiveness of Schoology as blended learning platform in improving the students’ writing ability. The tests were divided into two types: pretest which was administered prior to the treatment and post-test which was given after the treatment. Both tests required the students to write a descriptive text in a piece of paper given. In its implementation, the students were given the tests with the identical instruction. Moreover, a spoken explanation was also given to ensure that the students did the test as expected.

The students’ descriptive texts were then scored by two raters. Rater 1 and rater 2 were trained to assess descriptive texts by using the rubric from Oshima and Hague (2007). It was done due to the importance of having reliable scores from both raters; whether or not by using the same criteria of scoring, the two raters shared typical scores for each of the students’ texts (Heaton, 1990).

3.5.2 Observation

Observation was employed to mainly answer the second research question. Observation was particularly chosen for several reasons. First, it was chosen because of its effectiveness to portray reality or real situations during the implementation of Schoology in teaching writing. Second, it allowed the researcher to find out many unique things because it recorded the whole process of events (Cresswell, 2003).

During the observation, the researcher acted out as a teacher-researcher.
This is based on what Stake (1995) states that a researcher can act as a teacher. The teacher-researcher role was adapted for two reasons. First, there was no English teacher in the site who applied blended learning model. Second, it was conducted to see how blended learning was applied in writing class for the first time.

3.5.3 Data Collection Procedures

3.5.3.1 The Preliminary Phase

This part elaborates the preparation stages before collecting the data. In this stage, several steps were taken, namely 1) the instruments (test items both for pretest and post-test) were organized, 2) the lesson plans were created to be a guidance during the application of the treatment, 3) the materials were prepared to support the treatment, and 4) the students were assigned to the control group and experimental groups.

3.5.3.2 Preparing the research instruments

As mentioned above, pretest and post-test are parts of the instruments of the present study. The test items were therefore prepared with reference to the research problems. Since they were in form of writing test, in which students were asked to write a descriptive text, the test included a brief and detailed instruction stated descriptively in written form. According to Heaton (1988), this kind of instruction will result in more realistic and natural writing, and it makes the task more meaningful and purposeful (pp.138-143). Thus, it is very important to have a clear and detailed writing instruction in the instrument.

3.5.3.3 Preparing Lesson Plans and Materials

The next step taken was arranging the lesson plans for both the control class and experimental class. Four lesson plans were prepared for each group as there were four sessions of teaching for each group. The lesson plans were prepared with reference to the current regulation, especially with regard to the format and guidance from the teacher at the research site.
The preparation was not only done to the lesson plans but also to the learning materials used to support the teaching-learning process. The learning materials were taken from the students’ book developed by the government. The book was used based on the teacher’s suggestion in which she stated that the material is clear and easy to follow.

3.5.3.4 Assigning Students to the Control and Experimental Groups

The school principal and the English teacher of the tenth-grade students first assigned two classes out of nine classes to be involved in this study. Then, after selected as the participants, the students were classified into control group and experimental group. The student grouping was organized by considering what was going on in the classroom. Moreover, it was based mainly on the learning schedule of those two groups so that the teaching and learning process with the teacher was not interrupted. The groups received different treatments in which the experimental group was taught using Blended learning model as the treatment, and the control group was taught by using the conventional method or the placebo treatment.

3.5.3.5 Administering Pretest

In this phase, the two groups were assigned to take pretest. The test was a writing test contained a clear and detailed instruction what the students have to write. Heaton (1988) believes that giving meaningful situation in form of brief description of real-life situation in composition tests should be done (p.137). In contrast, giving students a no guidance of a test item should be avoided whenever possible. In addition, a brief oral explanation was delivered before the students took the test to ensure that they understood what to do in the test.

3.5.3.6 The Main Phase

Teaching descriptive text by using Schoology as the platform in blended learning setting was the main phase of this study. In other words, the important matter in the study is the process of giving treatment by using Schoology as blended learning platform to the students. According to the plan, there were 4 sessions for
each group in this phase. Every session lasted for 2x45 minutes.

3.5.3.7 The Closing Phase

After two groups of the students involved in the teaching-learning process, they were assigned to take post-test whose items were the ones that have been used for pretest. In other word, it was the same test item. The purpose of doing this is to measure the achievement of the students, i.e. whether or not there was a progress in the students’ ability after being taught to write descriptive text by using Schoology. After all of the data obtained, the next step was analyzing the data, as discussed in the following section.

3.6 Data Analysis

As discussed in the previous section, the data of the present study included test results and the recording of the classroom activity during the implementation of the program. The data were analyzed in different ways according to the nature of each type of the data. The test results were analyzed through statistical examination, while the recordings of the teaching activity were analyzed qualitatively.

3.6.1 Analysis Pretest and Posttest

The data obtained from pretest and post-test (i.e. test scores) were analyzed quantitatively involving several steps. First, the students’ works were rated by the two raters by using rubric which covers 5 aspects of examination. To arrive at the final score, the assigned scores on a student’s work from the two raters were calculated to come up with the mean score. Thus, the final score for the student’s work is the mean score gained from the two raters. It is important to note that the scoring activity done by the two raters achieved high inter-rater reliability.

Second, after those final scores were established, the next step taken was to analyze the data statistically. In this case, t-test was used to compare the performance of the two groups, i.e. experimental and control groups with the level of significant 0.05 (Hatch and Lazaraton, 1991). Particularly, the test was utilized to examine the effectiveness of Schoology in improving the students’ writing skill.
In its implementation, the mean scores of the group were compared in order to find out the difference. If any, there might be a possibility that the means score of the two groups are different. The significant difference can be seen after the t-value is obtained.

Prior to conducting t-test, other required tests such as the tests of normality and the homogeneity of variance were carried out. These tests were necessary to decide the analysis procedures to be applied, i.e. whether it should be parametric or nonparametric. Because the results show that the data were normally distributed and homogeneous, a parametric procedure i.e. t-test was used. The t-test computation was carried out using SPSS 20 software application.

3.6.2 Analysis of Observation Data

The qualitative analysis was done the notes and the audio recordings taken during the online and offline observation. In its process, the data were categorized into four stages of writing: (1) prewriting stage, (2) drafting stage, (3) revising and editing stage, (4) publishing stage. Then, all of information from observation was interpreted to answer the second research question.

3.7 Ethical Challenges

Ethical issues play a crucial role in human research in order to address that participants are not harmed in any manners. Prior to conducting the research, a letter of consent from School of Post Graduate Studies was given to the headmaster. Then, a teacher and the headmaster were provided with a copy of thesis proposal with detailed information about background of the study, the purpose of the study, and the data collection techniques. Furthermore, the researcher was fully aware that respondent’s consent to this study should be voluntary and informed. Thus, in this study, the researcher negotiated with the teacher to conduct the research in her class; the teacher was informed that the choice to participate in this study was her own decision.

The information gathered during the research was only accessed by the researcher for the purpose of analyzing the data. In addition, to ensure
confidentially, the participants’ personal details were not disclosed. Also, to maintain the anonymity of the research participants, pseudonyms were used in all reports of this study.