

CHAPTER III

RESEARCH METHOD

This chapter describes the procedure used to answer the research questions in chapter one. It covers research design of the study, data collection, and data analysis. The data collection explained the process of how the data were gained, and elaborated. While data analysis was justifying of how the data were analyzed in the frame of the theories accounted in the previous chapter.

3.1 Research Design

This research was directed to employ quasi-experimental. Quasi experimental, in this study, will be used to identify, test, observe and analyze the data. Johnson (1999) states that quasi-experimental design is an adaptation of true experimental design where one of three elements such as manipulation, randomization, and control group is missing. Besides, Hatch and Farhady (1982) say that quasi-experimental designs are practical compromise between true experimental and the nature of human language behavior, which is used to investigate. Thus, it can be used to provide the completeness of the elements of true experimental. The design of the study described as follows:

Table 3.1
The Quasi-Experimental Design

Group	Pre-test	Treatment	Post-test
Experimental	Xa1	T	Xa2
Control	Xb1	O	Xb2

Where:

Xa1: Pre-test for experimental group

Xb1: Pre-test for control group

T: Treatment

O: Non-Edmodo treatment

Xa2: Post-test for experimental group

Xb2: Post-test for control group

From the table above, there were two groups of the students. Those were experimental group and control group. The both of groups were given a pre-test in order to know their competence before giving the treatment. The difference came from the experimental group. This group was given a treatment of edmodo which is the writing assignment during the learning and giving of feedback. However, the control group did not use edmodo in terms of giving writing task or receiving feedback. The control group used paper as a medium in case of doing the writing assignment and receiving the feedback. After conducting the treatment to the experimental group, both of the groups were given a post-test to see whether the treatment works well or not.

3.2 Research Hypothesis

Hypothesis is a tentative statement about the outcome of the research (Hatch & Farhady, 1982). In this study, there are two types of hypotheses, namely null hypothesis and alternative hypothesis. The null hypothesis is accepted as there is no significant difference between the score of students in the experimental and control groups. Meanwhile, the alternative hypothesis is accepted when there is a significant different from both groups. Therefore, according to Coolidge (2000) and Krander & Moursund (1999), the null hypothesis and the alternative hypothesis for this study are as follow:

Christoper Tambunan, 2015

THE USE OF EDMODO TO MOTIVATE STUDENTS IN WRITING

Universitas Pendidikan Indonesia | repository.upi.edu | perpustakaan.upi.edu

- H_0 = there is no significant difference between the students' post test scores of the experimental group and the students' post test scores of the control group.
- H_A = there is significant difference between the students' post test scores of the experimental group and the students' post test scores of the control group.

3.3 Research Site and Participants

This research was conducted in one of the Senior High Schools in Bandung. The participants were from two different classes of tenth grade, which are for experimental group and control group. According to Kothari (2004: 59) this kind of sample is called as non-probability sampling since they are chosen by the researcher. Besides, they were chosen since it was found out that the students had an awareness of using technology and its application. In the research, all of the students from experimental group were given edmodo technique as a form of assignment in English class.

3.4 Data collection

In collecting the data, this study employed two techniques, those were questionnaire and edmodo. Yildirim & Simsek (2008, cited in Çankaya, Durak & Yünkül, 2013) state that using more than one data collection technique supports the validity and reliability of the study. Each technique of data collection were described below.

3.4.1 Research Instruments

Before applying the real instrument (questionnaire) to the real sample of group, the value of validity and readability were sought first. In doing so, the designed questionnaire consisting of the statements was tested to another class in order to obtain the items that are valid and reliable. After analyzing the validity, the

items of the questionnaire were selected to be a real questionnaire that was given to the real sample of group in pre and post test. The purpose of the pretest was to measure the students' writing motivation before the treatment, and post test was used to measure the students' writing motivation after the treatment using edmodo. Technique of data collection was described as follows:

3.4.2 Teaching Material

In this study, the teaching materials used are recount text about experience. It is chosen because it was appropriate to the standard competence of syllabus released by the National Education Ministry of grade X of Senior High School.

In conducting this, several preparations need to take into account. First is the preparation of all the materials and teaching procedure that will be used. Second is preparing the medium which is edmodo. Edmodo is prepared to be introduced and used by the students.

Furthermore, all the teaching materials and the procedures are prepared in experimental group that is completely related to the use of edmodo in teaching recount text. However, in the control group, the conventional method is used where the medium and the teacher feedback used is conducted through paper, not edmodo.

3.4.3 Questionnaire

This research used the questionnaire in the form of rating scales. Rating scales questionnaire is very useful for the researcher for its effectiveness in building degree of sensitivity of response which will generate numbers (Cohen et al, 2007, p.325). The advantage in using questionnaire in the research was the respondents were free to express their feeling without any pressure from anyone (Alwasilah, 2003:152).

The purpose of the research in using questionnaire was to find out how the edmodo can help motivate the students to write and how the students' responses towards the use of edmodo.

3.4.3.1 Pre Test and Post Test

Pre-test is one of the research instruments. It was implemented to firstly know and find out the initial differences between experimental group and control group. It was used to measure student's capability before the treatment is given. Meanwhile post-test will be used to find out the improvement of students' motivation in writing (Frankel and Wallen, 1993). The procedure of both instruments was actually the same. Both the pre-test and post-test were questionnaire form and consisted of ten items. The questionnaire was then distributed to experimental group only. It was designed as close-ended questionnaire with four optional answers based on Likert-Scale questionnaire, those are:

Table 3.2
The Likert-Scale in the Questionnaires

Strongly Agree	Agree	Disagree	Strongly Disagree
4	3	2	1

The questionnaire was aimed to gain specific data that were needed to analyze the students' writing motivation. The questionnaire was designed based on the existing theoretical frameworks such as Self-Determination theory by Ryan and Deci (1985), supported by Vallerand (et al., 1992, cited in Blais, 1995) namely dividing motivation into two categories: intrinsic and extrinsic motivation.

Table 3.3

The Framework of Students' Writing Motivation Questionnaire

No	Category	Indicator	Item Number	Total
1	Students' intrinsic motivation	Engagement in writing	1,2,3,4	4
		Strategies in facing writing difficulties	5,6,7	3
2	Students' extrinsic motivation	Avoidance of punishment	8	1
		Expectation of rewards	9,10	2

In addition, more another questionnaire was distributed to examine students' responses to the use of edmodo as described below:

Table 3.4
The Aspects of Students' Responses to the Edmodo Activity Questionnaire

No	Category	Indicator	Item Number	Total
1	Students' responses to edmodo activity	Students' enjoyment in writing on edmodo	1, 2, 4,10	3
		Students' perception in writing on edmodo	12	1

2	Benefits from edmodo activity	Students' improvements on writing skill	3	1
		Students' improvement on self-expression	5	1
		Students' improvement on critical thinking	6	1
		Students' improvement on self-reflection	7,9	2
		Students' improvement on self-confidence	8	1
		Students' improvement on writing motivation	11	1

3.4.3.2 Research Procedure

This research conducted following research procedure as follows.

1. Administering the pilot questionnaire instrument

Cohen & Manion (1994) say that this kind of implementation aims to gain the validity, level difficulty, discrimination, and reliability of the instrument. This will be administered to different class, which is not the sample in this research. It will be given before the study begins.

Christoper Tambunan, 2015

THE USE OF EDMODO TO MOTIVATE STUDENTS IN WRITING

Universitas Pendidikan Indonesia | repository.upi.edu | perpustakaan.upi.edu

2. Administering pre test

The first questionnaire administered to the real sample will be pre-questionnaire which is to find out the initial ability of the students (Freankel & Waleen, 1993). The students will be required to fill in the first questionnaire about their writing motivation.

3. Conducting the edmodo treatment to the experimental group

The step, first, is to introduce the edmodo to the students. The researcher will lead the students into the understanding of the Edmodo by directly showing the Edmodo application, give them a guide, introduced all the stuff in Edmodo, ask them to create account in Edmodo, and explain the interface and function of every single component in this learning platform. The researcher will ensure the students will understand the use of Edmodo. The treatment will be conducted for three weeks in a month. During the treatment of using Edmodo, students will be told that they will start writing on edmodo as form of assignment. In doing the task on edmodo, they will have to write in a form of minimum 200 words compositions in recount text concerning their experience.

The treatment will be administered in two sections; those are first in a classroom where the students are taught about the material by giving them examples through edmodo. The second section is online teaching, which is they have to access edmodo website to do their homework and submit it. The treatment will be given by using blended learning approach. In the class students will be taught first about recount text, more specifically about the generic structure or organization of recount text. Then during the experiment, the students will be asked to make three drafts until final draft. During the process of doing the draft, the students will also be given feedback from the teacher in case they make some mistakes on their draft. It is estimated that teacher will give

feedback to the students twice. In doing the drafts, the students will be asked to make recount text related to their experience. They will be asked to submit or post it on edmodo feature which is assignment feature, then teacher will check whether the generic structure of their writing is correct or not. If there are some mistakes on the generic structure, teacher will give indirect feedback by posting it on “comment” feature so that the students can revise it again. Both teacher and students will use those features. After they accept the teacher feedback, they have to revise it as a second draft of their writing based on the feedback teacher gives. Then for the second time, teacher re-checks their writing, focusing on the generic structure and if there are still mistakes on it, teacher will give feedback again and post it to the students’ account. Then students who accept it have to revise it again as a final draft until it is appropriately correct. Then they have to resubmit it again on edmodo for the last time.

4. Conducting treatment to the control group

The treatment that will be given to the control group is conventional technique. The students in this group will use paper as the medium. They will write the essay and receive the teacher feedback through paper only, not edmodo. However, they will receive exact material like experimental group from the teacher. After final draft, teacher will distribute the post test to the control group to see and find out the difference of results between experimental group and control group concerning their motivation in writing after using edmodo treatment.

4. Administering Post-test

After the students finish using edmodo, they also have to fill in the same questionnaire as the first one, which will be distributed to find out their motivation in writing after edmodo activity.

5. Distributing Response Questionnaire

The response questionnaire in this study will only be given to the experimental group. It aims to find out the responses of the students toward the implementation of Edmodo in enhancing students' motivation in writing. Purposely, this questionnaire is used to answer the third research question of the study.

3.5 Data Analysis

3.5.1 Reliability

Reliability is the extent that a test is produced in constant result when administered under similar condition (Hatch & Farhady, 1982). The formula that was used to measure the reliability is Cronbach's formula in SPSS 20.00 for windows. The result was interpreted by using the following criteria :

Table 3.5
r Coefficient Correlation

Alpha	Reliability
0.00-0.199	Very Low
0.20-0.399	Low
0.40-0.599	Fair
0.60-0.799	High
0.80-1.00	Very High

3.5.2 Data Analysis on Pre-Test and Post-Test

3.5.2.1 The Normal Distribution Test

Pre-test was administered in the very beginning of the study before the treatment is given to the experimental group. This test was applied to both of the group. In order to investigate the normal distribution of the set of data, the Kolmogrov-Smirnov test was employed. Therefore, this test is appropriate to be used because the sample of this research took two classes of tenth grade students where each of the class has 25 students. The test employed SPSS 20 for windows.

There were several steps in using Kolmogrov-Smirnov test. The first step was stating the hypothesis and setting the alpha level. The second was analyzing the groups' scores by employing Kolmogrov-Smirnov through SPSS 20 for windows.

In the first step, 0.05 (two-tailed) is set as the alpha level. Thus, hypotheses are as follow:

- H_0 = the score of the experimental and control groups are normally distributed
- H_A = the score of the experimental and the control groups are not normally distributed.

Finally, the data were analyzed by using Kolmogrov-Smirnov through SPSS 20 for windows. The output data were interpreted by these ways: If $Asymp.sig > 0.05$, the null hypothesis is accepted. Meaning that data distribution is normal. If $Asymp.sig < 0.05$, the hypothesis is rejected, meaning the data is not normal (Field, 2005).

3.5.2.2 Homogeneity of Variance Test

The formula that was used to in this test is called Levena's formula in SPSS 20.00 for windows. The procedures of this test as follow:

- Stating the Hypothesis and setting the alpha level at 0.05
 H_0 = the variance of experimental and control groups are homogenous.
 H_1 = the variance of experimental and control groups are not homogenous
- Analyzing the variance homogeneity by using SPSS 20.00 for windows
- Comparing the significant value with significant level for testing the hypothesis. If Levine's test is significant at $p \leq .05$, it can be concluded that the variances are significantly different. If Levine's test is significant at $p > .05$ means that the variances are approximately equal (Field, 2005).

3.5.2.3 The Independent t-Test

Hatch & Farhady (1982:155) said that independent t-test was applied to investigate the significant differences between the means of the two groups. Coolidge (2000:143) stated that there are several requirements for conducting t-test; first, the data should be measured in form of interval or ratio. Second, the data should be homogenous. Third, the data should have normal distribution. The procedures of the analysis can be seen as follow:

- Stating the Hypothesis and setting the alpha level at 0.05 (two-tailed test)
 H_0 = there is no difference of pre-test and post-test between both of groups
 H_1 = there is significant difference of pre-test and post-test between both of groups
- Calculating the t value by using independent sample test computation in SPSS 20.00 for windows.
- Comparing t_{obt} and t_{crit} at $p=0.05$ and $df^*= 58$ to examine the hypothesis. If $t_{obt} > t_{crit}$ means that the hypothesis is rejected, meaning that there is significant difference of means between experimental and control group. If $t_{obt} < t_{crit}$ means

that the hypothesis is accepted, meaning that there is no significant difference of means between experimental and control group (Coolidge, 2000).

3.5.2.4 The Dependent t-test

Hatch and Farhady (1982) stated that the pre-test and post-test score were analyzed by using dependent t-test to investigate whether the difference of the pre-test and post-test is significant or not. Look at the following procedures:

- Stating the Hypothesis and setting the alpha level at 0.05 (two-tailed test)
H0 = there is no significant difference of pre-test and post-test score
H1 = there is significant difference of pre-test and post-test score
- Calculating the t value by using dependent sample test computation in SPSS 20.00 for windows.
- Comparing t_{obt} and t_{crit} at $p=0.05$ and $df^*= 29$ to examine the hypothesis. If $t_{obt} > t_{crit}$ means that the hypothesis is rejected, meaning that there is significant difference of means between experimental and control group. If $t_{obt} < t_{crit}$ means that the hypothesis is accepted, meaning that there is no significant difference of means between experimental and control group (Coolidge, 2000)

3.5.2.5 The Calculation of Effect Size

Coolidge (2000) said that it is important to administer the calculation of effect in order to determine the effect of the influence of independent variable upon the dependent variable. If the treatment works well, there will be a large effect. The formula and the steps for calculating the effect size could be seen as follow:

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

Where:

- r: Effect size
- t: tobt or tcrit value from the calculation of independent t-test
- df: N1+N2-2

After the r was round, the score was interpreted by using the following table:

Table 3.6
Effect Size Value

Effect size	r Value
Small	.100
Medium	.243
Large	.371

(Coo
lidge
,
2000
:151)

3.5.3 Data Analysis on Students' Responses

The data obtained from questionnaire became meaningless until it is classified, organized and interpreted (Alwasilah, 2000). The data from questionnaire were used as quantitative data.

The data gained from the pre- and post- treatment questionnaire were tabulated and presented through some stages, as follows:

1. Examining the data gained from the questionnaire
2. Selecting and classifying the data derived from the questionnaire into categories to simplify the tabulation and interpretation
3. The calculation for the data will be measured by using the following formula:

$$P = \frac{F \times 100\%}{N}$$

Where:

P = Number of percentage

F = Frequency of strategies or procedures

N = Number of whole samples

The data analyzed from questionnaire showed the actual use of *Edmodo* in enhancing students' writing motivation. The data of either students' writing motivation or responses questionnaire were interpreted through descriptive explanation. The data from this source is expected to bring about general themes found in this research. The result of this analysis was then discussed in chapter 4 of this research.

3.6 Concluding Remark

This chapter has presented the research method of the study. This chapter has covered research design, research site and participants, research hypothesis, data collection, research procedure, data analysis, and the clarification of terms. This research aims to investigate the use of *Edmodo* in motivating students' writing motivation and their response toward the use of it.