

## **CHAPTER III**

### **METHODOLOGY**

This chapter outlines the methodology of the study. It is commenced with the statement of research questions and research purpose. It is continued with Research Design, Research Site, Research Participants, Data Collection and Data Analysis. This chapter is ended with conclusion.

#### **3.1. Research Questions and Purposes**

As a aforementioned in chapter I. This study was conducted in order to answer the following research question: (1). To what extent does the use of annotation feedbacks in Edmodo affect the students' text?; (2). What are the students' attitudes toward the use of annotation features in Edmodo for feedback?

Further, the study was carried out in order to attain the following purposes: (1) To find out to what extent the students' improvement can be achieved through the utilization of annotation feedback in Edmodo for their procedure text; (2) To investigate students' attitudes toward the use of Edmodo in learning process.

#### **3.2 Research Design**

This study employed a quantitative research design because it embraced several characteristics of quantitative study. The characteristics as follows (1) It is usually based upon numerical measurements and thus tends to use numbers and statistical methods as key research indicators and tools Schreiber & Asner-Self, 2011: 13).

(2) It tends to be associated with large-scale studies and with a specific focus, often condensing information from a large number of specific occurrences to search for general description or to investigate causal hypotheses (Jolley, & Mitchell, 2007).

This research can be characterized into quasi experimental design. Specifically, quasi experimental provides little or no control of extraneous variables. Therefore, the population and samples are not randomly assigned to the treatment group (Ary, Jacobs, Sorensen, & Razavieh, 2010: 316). The reason to not randomly assign the treatment was because the participants should have the devices which could be connected to the internet in employing Edmodo. This study consisted of a single group of first semester of college students. There were four-time tests. In each test, the students were asked to write a paragraph or more. The design of this study was as follows:

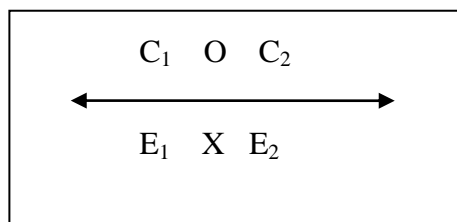


Figure 3.1 Design of the Study

C<sub>1</sub> = First Test of Control Class

C<sub>2</sub> = Second Test of Control Class

E<sub>1</sub> = First Test of Experimental Class

E<sub>2</sub> = Second Test

X = Treatment: using annotation feedback

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*ANNOTATION FEEDBACKIN EDMODO ONSTUDENTS' PROCEDURE TEXT*

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O = Treatment: using collaborative writing without using annotation feedback

### **3.3. Research Site**

This research was conducted at a College in Bandung, West Java. The selection of the research site was based on two reasons: First, the site where the research was conducted employed Edmodo as a particular technique to facilitate students' writing. Second, the teacher who conducted the teaching of writing in the research site knows the researcher so that an easy access can be gained.

### **3.4. Research Population and Sample**

The population of the research was first year students who took English subject in a college in Bandung. The population was chosen because they learnt writing a paragraph in the English class. Therefore, it was expected that the students would have basic knowledge about writing a paragraph. It was also hoped that by using Edmodo as media, the students were able to write better since they have a useful media that guides and helps them in writing.

In line with it, research sample of this research was two classes among all classes at the first year. The classes as the sample of the study were class 1<sub>A</sub> and 1<sub>B</sub> of Electrical major. As stated before, the sample of the research was chosen by purposive sampling. Thus, participants of this study were students of undergraduate students of a college in Bandung who took English subject. One essential requirement in choosing the sample by purposive was each student should have a particular device such as computer, smart phone or any devices which enable to connect to the internet. Among several classes of the first year, two classes from an electrical major were chosen. As required, all of students had the devices. There were 44 students of the two classes as the participant of the study. There were 22 students were in the

experimental class and 22 students were in the control class. The samples of experimental class had never received a treatment in writing a paragraph using Edmodo as media to help them.

### **3.5. Research Instruments**

To obtain the necessary data for the study, three types of instruments were used including; (1) pre-tests and post-test, (2) evaluation or assessment format, and (3) questionnaire for students. The first and second types of instruments are used to find out the students' improvement in their writing composition. Meanwhile, the third instrument was used to evaluate and assess the students' attitude toward the annotation feature of Edmodo for feedback. In this study, two readers comprising the teacher and the researcher read the students' written texts then gave those scores and made some necessary feedback provided by the Edmodo in comments section.

#### **3.5.1 The Pre-tests and Posttest**

In the writing tests for pre-tests, the experimental and control students were given the same instructions and were scored by using the same scoring rubric. The instructions involved the subject tested, the type of the test and the time given for the students. It also involved the general remarks. In this test, the students were asked to write a procedural text for at least one paragraph length. Several topics were given to them.

The test for pre-test was conducted to find out students background knowledge before the treatment was given. The test asked the students to write a procedure text. It was expected that the texts revealed features of procedural text such as using imperative, action verb, connective, adverbial clause and simple present tense. The results of the students writing were then analyzed using Heaton analytic method of scoring. This method depends on a marking scheme which has been

carefully drawn up by the examiner or body of examiners (Heaton, 1988: 148). This procedure was ideally suited to the classroom situation.

The post-test was administered similarly to the pre-test. It was conducted to figure out the effectiveness of the use of annotation feedback using Edmodo in improving students' achievement in writing procedure paragraphs. The data of the post-test were used to prove the hypothesis of the research. The post-test was given after the teaching process had been completed. The analytic method of scoring by Heaton (1988) was also applied to assess the post-test texts. In order to find the effectiveness of the annotation feedback, the post-test scores of experimental group was compared to that of the post-test scores of control group.

### 3.5.2 The Assessment format

The assessment format used in this research assessed the content, organization, vocabulary, language use, and mechanics of the texts. The scale was taken from Heaton (1988, p, 146). There are five aspects in this scale profiles listed in the following table.

Table 3.1 Five Aspects in this Scale Profile (Heaton 1988, p, 146)

Aspects	Descriptions
Content	When the writing is knowledgeable, substantive and relevant to assigned topic.
Organization	When the writing contains about fluent expression, the idea clearly stated/supported, succinct, well-organized and cohesive.
Good vocabulary	Consists of effective word, the word from mastery and appropriate register.

Language use	When the writing consists of agreement, tense, number and has word order/function.
Mechanics	When the writing consists of good spelling, punctuation, capitalization, paragraphing and handwriting.

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The table above reveals that the first aspect assessed is mechanics. Score 5 is obtained when the students demonstrate good mastery of punctuation, capitalization, paragraphing and spelling; score 4 is when they make few occasional errors of spelling and punctuation, capitalization, paragraphing but meaning not obscured; score 3 is if they make frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting and the meaning is obscured; and score 1 is if the students make a lot of errors and have no mastery of conventions, their writings are dominated by errors of spelling, punctuation, capitalization, paragraphing.

Further, the second aspect assessed is grammar. The students obtain the highest score within the range of 22-25 if they make effective complex construction and very few mistakes in grammar, few errors of agreement, tense, number, word order/function, articles, pronouns and preposition. Score within the range of 21-18 is given when the students make several mistakes, several errors of agreement, tense, number, word order/function, articles, pronoun, preposition but meaning seldom obscures. Score within the range of 11-17 is given if the students make frequent mistakes, major problems in simple/complex construction as well as frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, preposition and/or fragments, run-on deletions, confusing meaning. Score within the

range of 5-10 is given if their writings are dominated by errors and virtually no mastery of sentence construction rules, not communicative, not enough to evaluate.

The third aspect assessed is vocabulary. The students obtain the score within the range of 18-20 is given if they have sophisticated range of vocabulary with effective word/idiom choice and usage, word form mastery and appropriate register. The students obtain score within the range of 14-17 is given if they have adequate range of vocabulary with occasional errors of word or idiom form, choice and usage but meaning does not obscures. Meanwhile, score within the range of 10-13 is given if they have limited range of vocabulary with frequent errors of word or idiom form, choice, usage, confusing meaning or obscured.

The last aspect assessed is content. The students gain score within 27-30 if they make very few mistakes and substantive content as well as well constructed sentences and their writings are knowledgeable. They get score within 22-26 if their writings have adequate knowledge of the subject, limited development of thesis, mostly relevant to topic but lacks of detail. Score 17-21 is given if they have limited knowledge of subject and little substance and inadequate development of topic. Score within 13-16 is given if they do not show knowledge of subject as well as non substantive and not pertinent or not enough to evaluate. For the sake of etiquette all of students' names were all altered into codes when the texts were scored by both readers.

Apart from the scales scoring rubric was used to assists the readers to score the students' writing. The rubric includes the aspects assessed, the range of the score along with the description of the score. The total score was categorized into five level of writings; very good, good, fair, poor and very poor.

Table 3.2 Interpretation of Total Score Scale

Value	Range	Interpretation
A	90 – 100	Very good
B	80 – 89	Good
C	70 - 79	Fair
D	69 – 60	Poor
E	- 60	Very Poor

### 3.5.3 Questionnaire

Questionnaires in this study were aimed to find out what challenge may the students face in using Edmodo and in writing. The data from these questionnaires were intended to support the findings of the study, particularly on the utilization of Edmodo for education. Questionnaires for the students were written and asked in Indonesian language since the goals of the questionnaires were not to test their English proficiency in speaking but to gain information on the issues.

### 3.6. Data Analysis

To analyze the data, there are two aspects involved, including score data analysis and hypothesis testing each is elaborated below

#### 3.6.1 Score Data analysis

There were several types of data obtained in this study. The data were gathered from questionnaires and writing scores. The students' scores were calculated from several aspects; they were aspects of grammar, vocabulary, mechanic and content. After the



total score was gained, the statistical analysis was used to analyze the data taken from pre-test and post-test. The data gained from pre-test and post-test were then compared by using t-test to observe the different mean of the two groups, the experimental group and the control group with the level of significant of 0.05 (Siregar, 2013). The significance of the test was analyzed by using computer program of Statistical Package of the Social Science (SPSS). The reason of using this statistical analysis was to measure the performance of both students of control and experimental classes as well as to figure out whether the means of the two groups were truly different. In other words, it was to find out if there was an effect of using authentic materials on the students' writing performance.

### **3.6.2 Hypothesis Testing**

According to Brown (1988), to test alternative hypotheses (H1), they are accepted if:

- Mean of post-test score is higher than that of pre-test score of the two classes
- Mean of pre-test score of the experimental class is not different from that the control class
- Mean of post-test score of experimental class is higher than that of the control class

Meanwhile, to check null hypotheses (H0), there are some deliberations should be complied. H0 is accepted if:

- There is no significant difference between mean of post-test score and pre-test one either of the experimental or control class
- There is no significant difference between mean of pre-test score of the two classes

- There is no significant difference between mean of post-test score of the two classes

The steps taken in testing hypothesis of this study are described below:

- Conducting pretest and matching test

As stated earlier, the pretest was conducted before the teaching activity embarked on. The scores gained from this test were employed to complete the matching test. This test was carried out to figure out the existence and nonexistence between the group initial knowledge of the controlling class and the experimental class. The hypothesis statistic used in matching test is as follows:

$$H_0 : \mu_e = \mu_c$$

$$H_1 : \mu_e \neq \mu_c$$

The statistical test employed was the matched t-test. After gaining the mean score, standard deviation and t value, the next step was to examine the value against the  $t$  critical value in the  $t$  distribution table. Afterwards, with the significant level ( $\alpha=0.05$ ), the obtained of t-test result was measured to the value of t table with degree of freedom ( $n-2$ ). If the t-test is  $\neq$  t table, it means both classes show the different knowledge level. If the t-test is = t table, it means both of the classes show similar knowledge level.

- Conducting Posttest and Hypothesis Test

The implementation of posttest to the experimental class as well as the control class was conducted after the treatment of teaching authentic materials and non-authentic materials was completed. The scores acquired from this test were to identify the existence or the non-existence of significant difference between the performance of students' learning outcome of the experimental class and the control class.

The statistical hypothesis employed in this hypothesis test is as follows:

$$H_0 : \mu \leq \mu$$

$$H_1 : \mu > \mu$$

If the t-test is higher than t table ( $t_{\text{test}} > t_{\text{table}}$ ), then  $H_0$  is rejected and  $H_1$  is accepted, meanwhile, if the t test is lower than t table ( $t_{\text{test}} \leq t_{\text{table}}$ ), then  $H_0$  is accepted and  $H_1$  is rejected.

In analyzing the questionnaire, the researcher used a Likert scale method as proposed by Paul (1999). It was used measured attitudes, opinions, perceptions, and knowledge. Score 4 is indicated to strongly agree, 3 is to agree, 2 is to disagree, and 1 is to strongly disagree. The scores are referred to a positive attitude. He additionally mentioned that if the statements are the negative attitudes, the score 1 is to strongly agree, 2 is to agree, 3 is to disagree and 4 is to strongly disagree. After each item is scored from 1-4 or from 4-1 the total score is analyzed. analyzed the total score.

### **3.7 Conclusion**

This chapter has outlined the methodology of the study. This chapter employed a quantitative research design because it embraced several characteristics of quantitative study. The reason is this study focuses on the purpose of the truth of the phenomena and it involves numbers to ideas.

This chapter illustrates that there were 44 students of the two classes as the participant of the study. There were 22 students in the experimental class and 22 students in the control class as research participants.

This chapter explains on how to obtain the necessary data for the study, three types of instruments were used in this study. They are 1) pre-tests and post-test, 2) evaluation

or assessment format, and 3) questionnaire for students. The first and second types of instruments are used to find out the students' improvement in their writing composition. Meanwhile, the third instrument was used to evaluate and assess the students' attitude toward the annotation feature of Edmodo for feedback. The next chapter will elaborate the Finding and Discussion of the study.