

### CHAPTER III

#### RESEARCH METHOD

This chapter discusses the steps used in conducting research. It presents; research design, population and sample, research instrument, research procedure, and data analysis.

#### A. Research Design

The objective of this research was to investigate the effectiveness of *WhatsApp Electronic Peer Correction Technique* on Improving Writing Descriptive Textin MAN Kota Blitar. Quantitative was selected as an approach to respond to research questions which require numerical data. It was selected because quantitative research is ‘explaining phenomena by collecting numerical data that are analyzed mathematically based on methods (in particular statistics)’ (Muijs, 2004:1).

Meanwhile, the research design selected was *Posttest-Only Control-Group Design*. This research used two classes which were randomly chosen; they were control group and experimental group. The sequence, taken from (Creswell, 2014:193) is;

**Table 3.1.1 Research Design**

	<i>Treatment</i>	<i>Test</i>
Experimental Group	✓	✓
Control Group	-	✓

The design worked as follows: subjects in experimental group were given ‘treatment’ whereas subjects in control group were not given treatment. Both groups were scored to determine the outcome. The scores were gotten from the test administered. The results of the test were used to find out whether or not the treatment applied in experimental group had an effect or a significant difference from control group.

## **B. Population and Sample**

This research was done at MAN Kota Blitar which is located at Jl. Jati No.167, Sukorejo, Blitar, East java 66121. The subjects were at the eleventh grade.

### **1. Population**

Population is the whole subjects of the research. The population chosen was the eleventh graders of MAN Kota Blitar. The eleventh grade of MAN Kota Blitar has ten classes. Its distribution is as follows;

**Table 3.2.1.1 Distribution of the Eleventh Graders at MAN 3 Kediri**

<b>No.</b>	<b>Class</b>	<b>Total of the Students</b>
1.	Natural Science 1	35
2.	Natural Science 2	38
3.	Natural Science 3	36
4.	Natural Science 4	39
5.	Social Science 1	39

6.	Social Science 2	37
7.	Social Science 3	40
8.	Social Science 4	35
9.	Religion 1	34
10.	Religion 2	40
	TOTAL	373

Ten classes are divided into three programs; Natural Science program, Social Science program, and Religion program. Natural Science program has four classes with 148 students. Social Science program has four classes with 151 students. Meanwhile, Religion program has two classes with 74 students. The total of population is 373 students.

## **2. Sample**

Sample is a part of population. It is small proportion of the population selected for observation analyses. In determining the subject of research, it was randomly chosen that the subject or class chosen as the experimental group was Social Science Program 4. The class consisted of 35 students. Meanwhile, the control group was social Science Program 3. The class consisted of 40 students. They were chosen based on the consideration that they had similar writing achievement.

## **C. Research Instrument**

Instrument has essential function to collect the data. It was the tool used to get the data related to the research focus. The instrument used was a writing test.

The test administered for control and experimental group was the same. The students were asked to write a descriptive text in minimal 100 words. Time allocation for doing the test was 60 minutes. The topic of their writing was about things, animals, and someone. Their writing would be scored based on some aspects, those were; content (13 – 30), organization (7 – 20), vocabulary (7 – 20), language use (5 – 25), and mechanics (2 – 5). Instrument trial was given before the instrument was tested to experimental and control groups.

<b>Score</b>	<b>Level</b>	<b>Criteria</b>
<b>Content</b>	30-27	Excelent to Very Good; knowledgeable, substantive, through development of ideas, relevant to assigned topic
	26-22	Good to Average: some knowledge of subject, adequate range, limited development of ideas, mostly relevant to topi, but lacks detail.
	21-17	Fair to Poor: limited knowledge of subject, little substance, inadequate development of ideas

	16-13	Very Poor: does not show knowledge of subject, non-subjective, not pertinent, or not enough to evaluate
<b>Organization</b>	20-18	Excellent to very good: fluent expression, ideas clearly stated/supported, succinct, well-organized, logical sequencing, cohesive
	17-14	Good to average: somewhat copy, loosely organized but main ideas stand out. Limited support, logical but incomplete sequencing
	13-10	Fair to poor: non-fluent, ideas confused or disconnected, lacks logical sequencing and development
	9-7	Very poor: does not communicate, no

		organization, not enough to evaluated
<b>Vocabulary</b>	20-18	Excelent to very good; sophisticated range, effective word/idiom choice and usage, word form mastery, appropriate register
	17-14	Good to Average: adequate range, occasional errors of word/idiom form, choice, usage but meaning not obscured.
	13-10	Fair to poor; limited range, frequent errors of word/ idiom form, choice, usage but meaning not obscured.
	9-7	Very poor: Essentially translation, little knowledge of english vocabulary
	25-22	Excelent to very good;

<b>Language Use</b>		effective complex constructions, few errors of agreement, tense, number, word order/function, articles, pronouns, preposition
	21-18	Good to average; effective but simple construction, minor problems in complex construction, several errors of agreement, tense, number, word/function, article, pronouns, preposition but meaning seldom obscure
	17-11	Fair to poor; major problems in simple/complex constructions, frequent errors of negation, agreement, tense, number, word, order/function, articles,

		pronouns, preposition and/or fragment, run-ons, deletion, meaning confused or obscure
	10-5	Very poor; virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate
Mechanics	5	Excellent to very good; demonstrate mastery of convention, few errors of spelling, punctuation, capitalization, paragraphing
	4	Good to average; occasional errors of spelling, punctuation, capitalization, paragraphing but meaning obscured
	3	Fair to poor; frequent errors of spelling,



		punctuation, capitalization, paragraphing, poor hand writing, meaning confused or obscured
	2	Very poor; no mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate

### 1. The Validity of Instrument

Test validity is discrimination index of questions which is determined from the difference of answering proportion in each group. It was used to check whether or not the instrument was valid and suitable to be applied in the research subject. Instrument validity was usually called point biserial correlation. It was symbolized by  $r_{pbi}$ . The validity was computed by using SPSS version 21.

The result of SPSS would show us two signs, those were one star (\*) and two stars (\*\*). One star means that the aspects were valid enough and two stars

meant that aspects were very valid. The aspects given were supposed to be valid.

## **2. The Reliability of Instrument**

Reliability of instrument was needed to make sure that the instrument could be consistent if it was used in other time. It meant that the instrument was reliable. The reliability was computed by using SPSS version 21.

## **3. The Normality of Instrument**

The normality of instrument was shown in histogram. If the histograms had a peak, it meant that the data could be included in normal distribution.

## **D. Research Procedure**

This research typically involved two groups. Those groups were given different treatments. Experimental group (XI Social Science 4) was given a new treatment; that was having online discussion in *WhatsApp Mesenggergroup* and *Peer Correction Technique*.

### **a. Procedure Experiment**

The class which was chosen as the experimental group was XI Social Science program 4 which consisted of 35 students.

#### **1. The First Meeting**

The first meeting, the steps for teaching and learning process in the classroom were divided into three steps, those were; pre-activity, main activity, and post-activity.

Some activities done in pre-activity were; 1) greeting, 2) praying, 3) checking attendance list, 4) doing brainstorming, 5) preparing media

and tool for teaching, and 6) delivering goal of learning and mechanism of teaching and learning process. The main activities done were;

This meeting was about the use of *WhatsApp Messenger* in language teaching and learning. This activity included;

- (1) Dividing 35 students into 4 groups (each group consists of 8 to 9 students). They were divided based on their numbers in attendance list.

The division was as follow;

- a) Group 1 was for number 1 to 8
- b) Group 2 was for number 9 to 17
- c) Group 3 was for number 18 to 26
- d) Group 4 was for number 27 to 35

- (2) Explaining the rules to obey in the group discussion within *WhatsApp Messenger*. The rules for students were; 1) using English, 2) posting opinions related to the topic, and 3) being active in group by responding the others' opinion and correcting the others' mistake such as grammar or punctuation.

The last activity was post-activity. The activities done were; 1) concluding the material, 2) delivering the next lesson plan, 3) praying, and 4) greeting the students

## 2. The Second Meeting

The second meeting, the steps for teaching and learning process in the classroom were divided into three steps, those were; pre-activity, main activity, and post-activity.

Some activities done in pre-activity were; 1) greeting, 2) praying, 3) checking attendance list, 4) doing brainstorming, 5) preparing media and tool for teaching, and 6) delivering goal of learning and mechanism of teaching and learning process. The main activities done were;

- (1) asking the students to gather with their friends (based on *WhatsApp Messenger* group division);
- (2) showing screenshot of topic “The king jungle, Lion”
- (3) asking the students to present some screenshots of *WhatsApp Messenger* discussion group by group with the topic ‘*Lion*’ for the first and the second group and ‘*Tiger*’ for the third and the fourth group;
- (4) Making paragraph writing minimal 100 words.
- (5) Discussing (one selected member of group explains their work, and another groups give their corrections and responses)
- (6) Collecting the writing and also the correction’s another groups.

The last activity was post-activity. The activities done were; 1) collecting the texts written by students, 2) concluding the material, 3) delivering the next lesson plan, 4) praying, and 5) greeting the students.

### 3. The Third Meeting

The third meeting, the steps for teaching and learning process in the classroom were divided into three steps, those were; pre-activity, main activity, and post-activity.

Some activities done in pre-activity were; 1) greeting, 2) praying, 3) checking attendance list, 4) doing brainstorming, 5) preparing media and tool for

teaching, and 6) delivering goal of learning and mechanism of teaching and learning process.

The main activities done were;

- (1) Showing screenshot “Mountain” that has been discussed in WhatsApp Group.
- (2) Dividing into group.
- (3) Doing discussion with group.
- (4) Making paragraph writing about the topic individually in the paper.
- (5) Changing to friend and correction each other.
- (6) Collecting the paper and review.

The last activity was post-activity. The activities done were; 1) concluding the material, 2) praying, and 3) greeting the students.

#### **b. Data Analysis**

The purpose of this study was to find the effectiveness of using *WhatsApp and Peer Correction* in teaching writing of descriptive text. Essay test provided the students’ writing achievement. This data analysis helps to know the result of students’ writing achievement in experimental and control groups.

Before analyzing the data, the students’ writing achievements were scored based on some aspects (the scoring rubric). After determining the score for each aspect, the total scores were gotten by using the formula below;

$$\text{Score} = \text{Content} + \text{Organization} + \text{Vocabulary} + \text{Language Use} \\ + \text{Mechanics}$$

The students' scores were categorized into some criteria as can be seen in table 3.5.1. Table of categorization is adapted from *Badan Penelitian dan Pengembangan Pendidikan Nasional Pusat Kurikulum, Depdiknas*.

**Table 3.5.1 Criteria of Students' Score**

Score	Category
85 – 100	Very Good
69 – 84	Good
53 – 68	Fair
37 – 52	Bad
20 – 36	Very Bad

The classification could make easier to show how many students got value in very good level, good level, fair level, bad level, and very bad level.

The data of students' writing achievement were analyzed by using SPSS version 21. The steps of data analysis for control and experimental group's scores are presented as follows;

- (1) open *SPSS Version 21* application;
- (2) input the data tally of students' achievement in *Data View*;
- (3) click *Variable View* and change; a) VAR00001 to Content; b) VAR00002 to Organization; c) VAR00003 to Vocabulary; d) VAR00004 to Grammar; e) VAR00005 to Mechanic; f) column width from 8 to 4; and g) decimals from 2 to 0;
- (4) go back to *Data View*;

(5) click *Transform* → *Compute Variable* → type 'TOTAL' in *Target Variable* column → type 'SUM (Content to Mechanic)' in *Numeric Expression* column → click OK;

(6) calculate Descriptive Statistic and Frequency by the following steps;

- a) click *Analyze* → *Descriptive Statistics* → *Frequencies*;
- b) input 'TOTAL' variable to *Variable(s)* column;
- c) click *Statistics* → give some check lists to some options needed → click continue;
- d) click *Charts* → choose *Bar Charts* → choose *Frequencies* → click continue → click OK; and
- e) the result is shown in output window.

After getting the result of descriptive statistic for control and experimental group, the next step done was calculating t-test. The steps for calculating t-test are explained as follows;

(1) open *SPSS version 21* application;

(2) click *Variable View*;

- a) Row 1 = type 'Group' in *Name* column → type '1' in *Values* column → type 'WhatsApp' in *Label* column → click *Add* → type '2' in *Value* column → type 'Discussion' in *Label* column → click OK → choose *Nominal* in *Measure* column; and
- b) Row 2 = type 'Score' in *Name* column → choose *Scale* in *Measure* column.

(3) go back to *Data View*;

- (4) in *Media* column, type '1' for rows number 1 to 35 (based on the total subject of experimental group);
- (5) input the scores of experimental group in *Score* column;
- (6) in *Media* column, type '2' for rows number 36 to 69 (based on the total subject of control group = 34 students);
- (7) input the scores of control group in *Score* column;
- (8) click *Analyze* → click *Compare Means* → click *Independent-Samples T-test*;
- (9) input 'Group' in *Grouping Variable* column → click *Define Groups* → type '1' in *Group 1* column → type '2' in *Group 2* column → click *Continue* → input 'Score' in *Test Variable(s)* column → click OK; and
- (10) the t-test result is shown in output window.

After finding the t-test result or *t-value*, the next step is interpreting it. If the significance value is the same as or is lower than 5% or 0.05, the difference between two groups is found and *WhatsApp Messenger and Peer Correction Technique* is effective.