

## **CHAPTER IV**

### **RESEARCH FINDING AND DISCUSSION**

This chapter presents the finding of the research and the discussion of the finding. The finding consist of the result of pre-test, the result of post-test and the computation data analysis through SPSS.

#### **A. Research Finding**

In this chapter, researcher will explain the data that was found during the research. Those data will answer the research problem. The data was taken from pre-test and post-test in two different classes. The experimental class is X MIPA 2 and the control class is X MIPA 3. The pre-test was done for control group at 1th of February 2020 and for experimental group at 6th of February 2020. The post-test was done for control group at 29th of February 2020 and for experimental group was done at 5 th March of 2020. The test was applied for two classes X MIPA 3 as experimetal class and X MIPA 3 as control class of tenth grade at MAN 2 Kediri. The researcher presented the calculation from the result of pre-test and post-testfrom both experimental and control group. The researcher analyzed the data from pre-test and post-testusing ANCOVA from SPSS to know the result from the tests.

##### **1. The Result of Pre-test**

Before giving the treatment, researcher conducts pre-test for both experimental and control group to know the students writing skill before they get the treatment from researcher. The data that is used in this score is the score of the students writing skill at tenth grade of MAN 2 Kediri. The

researcher took the students' writing score used 5 scoring guide of writing. Those are Content, Organization, Vocabulary, Language use, Mechanics. The summary result of pre\_test score from both control and experimental group is presented in Table 4.1.

**Table 4.1 Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experimental	30	47	76	63.77	6.668
Pre_Test Control	30	50	80	65.80	5.744
Valid N (listwise)	30				

Table 4.1 shows that the number of students for both experimental and control group consist of 30 students and shows the mean score of pre-test. The highest score of pre-test from experimental group is 76.00 and control group is 80.00. The lowest score from experimental group is 47.00 and control group is 50.00. The mean score of experimental group is 63.77 and the control group is 65.80. Then, the standard deviation from experimental group is 6,668 and for control group is 5,744.

## 2. The Result of Post-test

The post-test was held after the students get some treatment from the researcher. The purpose of giving post-test is to know the students' writing skill after they get some treatment of Instagram from the researcher. The researcher presented the summary result of post-test using SPSS and the result is presented in table 4.2.

**Table 4.2 Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Post_Test Experimental	30	64	88	76.97	6.381
Post_Test Control	30	52	87	71.23	6.516
Valid N (listwise)	30				

Table 4.2 shows the mean score of post test. The highest score of post-test from experimental group is 88.00 and control group is 87.00. The lowest score from experimental group is 64.00 and control group is 52.00. The mean score of experimental group is 76.97 and the control group is 71.23. Then, the standard deviation from experimental group is 6.381 and for control group is 6.516.

## 3. Inter Raters Reliability

In this research there are two raters giving the score to the students to know their writing skills. After collecting the score of pre-test and post-test from both experimental and control group, the researcher find out the

correlation between two group scores using pearson product moment correlation by SPSS. The classification number of two examiners correlation is interpreted based on the interpretation coefficient value. There were interpretation of coefficient values by Rosyid ( 2015: 214) as follows in Table 4.3.

Then the result of person product moment calculation of pre-test from experimental group is presented in Table 4.4.

**Table 4.3 Interpretation of Coefficient Values**

<b>Coefficient Correlation</b>	<b>Interpretation</b>
<b>0,80-1,00</b>	<b>Very Strong</b>
<b>0,60-0,80</b>	<b>Strong</b>
<b>0,40-0,60</b>	<b>Sufficient</b>
<b>0,20-0,40</b>	<b>Low</b>
<b>0,00-0,20</b>	<b>Very Low</b>

**Table 4.4 Inter Rater Pre-test Experimental  
Correlations**

		Rater 1 Pre- test Experimental	Rater 2 Pre- test Experimental
Rater 1 Pre-test Experimental	Pearson Correlation	1	.946**
	Sig. (2-tailed)		.000
	N	30	30
Rater 2 Pre-test Experimental	Pearson Correlation	.946**	1
	Sig. (2-tailed)	.000	
	N	30	30

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The value coefficient of correlation between variable pre-test of experimental group from two raters is significant at the 0.01 level with the coefficient correlation 0.946. It means that the coefficient correlation between two raters is very strong.

The result of reliability analysis for inter-rater Pre-test of control group can be seen in Table 4.5.

**Table 4.5 Inter Rater Pre\_Test Control  
Correlations**

		Rater 1 Pre Test Control	Rater 2 Pre- test Control
Rater 1 Pre Test Control	Pearson Correlation	1	.914**
	Sig. (2-tailed)		.000
	N	30	30
Rater 2 Pre-test Control	Pearson Correlation	.914**	1
	Sig. (2-tailed)	.000	
	N	30	30

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The value coefficient of correlation between variable pre-test of control group from two raters is significant at the 0.01 level with the coefficient correlation 0.914. It means that the coefficient correlation between two raters is very strong.

The result of reliability analysis for inter-rater post-test of experimental group can be seen in Table 4.6.

**Table 4.6 Inter Rater Post-testExperiment  
Correlations**

		Rater 1 Post- testExperime tal	Rater 2 Post- testExperime ntal
Rater 1 Post- testExperimental	Pearson Correlation	1	.947**
	Sig. (2-tailed)		.000
	N	30	30
Rater 2 Post- testExperimental	Pearson Correlation	.947**	1
	Sig. (2-tailed)	.000	
	N	30	30

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The value coefficient of correlation between variable post-test of experimental group from two raters is significant at the 0.01 level with the coefficient correlation 0.947. It means that the coefficient correlation between two raters is very strong.

The result of reliability analysis for inter-rater post-test of control group can be seen in Table 4.7.

**Table 4.7 Inter Rater Post-testControl  
Correlations**

		Rater 1 Post Tes Control	Rater 2 Post- testControl
Rater 1 Post Tes Control	Pearson Correlation	1	.925**
	Sig. (2-tailed)		.000
	N	30	30
Rater 2 Post- testControl	Pearson Correlation	.925**	1
	Sig. (2-tailed)	.000	
	N	30	30

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The value coefficient of correlation between variable post-test of control group from two raters is significant at the 0.01 level with the coefficient correlation 0.925. It means that the coefficient correlation between two raters is very strong.

#### **B. The Fulfillment of ANCOVA Assumption**

In this part, researcher present the calculation result of pre-test and post-test then calculate them into ANCOVA. The purpose of this calculation is to know the significant influence using Instagram to the students writing skill. Before calculate the data using ANCOVA, there are some assumption that should be fulfilled previously.



## 1. The Result of Normal Distribution

The data is normally distributed if the asymp. Sig (2-Tailed) is higher than 0.5. But, if the asymp. Sig (2-Tailed) is lower than 0.05 it means that the data is not normally distributed. The result of the data can be seen in Table 4.8

**Table 4.8 Test of Normal Distribution  
Tests of Normality**

	Class	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Pre_ Test	Experimental Class	.139	30	<b>.143</b>	.928	30	.044
	Control Class	.151	30	<b>.081</b>	.918	30	.024
Post_ Test	Experimental Class	.116	30	<b>.200*</b>	.971	30	.574
	Control Class	.111	30	<b>.200*</b>	.957	30	.260

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the data on Table 4.8, the Kolmogorov sig of pre-test Experimental class shows 0,143, that is higher than 0.05. And the Kolmogorov sig of pre-test Control class shows 0,081, that is higher than 0.05. It means that the data is normally distributed. After calculate the student's score on pre-test, then the researcher present the calculation result of student's score on Post-test. The Kolmogorov sig of post-test Experimental class shows 0,200, that is the higher than 0.05. And the Kolmogorov of post-test control class shows 0,200, that is the higher than 0.05. It mean that the data is normally distributed.

## 2. The Result of Homogeneity Variance

The second assumption is the variances between groups are homogeneous. This homogeneity variances test has aim to know whether sample in this research that was gotten from the population have same variance or not. Levene's Test used to count the homogeneity variances between two groups. In this case, if the result of the homogeneity variances test was more than  $\alpha$  0.05, so the variance of the data between groups was homogeneous. The result of the Levene's test can be seen in the table 4.9 below.

**Table 4.9 Levene's Test of Equality of Error Variances**

Dependent Variable: Post\_Test

F	df1	df2	Sig.
1.328	1	58	.254

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Pre\_Test + Class

From Levene's Homogeneity Variances test shows the different ability between both experimental and control group. On the table above, it can be seen that the Significant of Levene's test is 0,254 that score is bigger than 0.05. It means the ability between experimental and control group is almost the same. It can conclude that the data is homogeneous.

### 3. The Result of Homogeneity Regression ( Slope)

The third assumption is the homogeneity of regression (slope). The homogeneity regression (slope) test has aim to know the assumption of the interaction of the covariate (pre-test) and the independent variable (Instagram) in predicting the dependent variable. To be able to proceed with ANCOVA, there must be no interaction between the covariate and the independent variable ( $p > \alpha 0.05$ ). The result of homogeneity regression test can be seen in the table 4.10 below.

**Table 4.1 Tests of Between-Subjects Effects**

**Dependent Variable: Post\_Test**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1560,983 <sup>a</sup>	3	520,328	21,674	.000
Intercept	434,143	1	434,143	18,084	.000
Class	113,109	1	113,109	4,711	.034
Pre_Test	1056,713	1	1056,713	44,016	.000
<b>Class * Pre_Test</b>	<b>65,987</b>	<b>1</b>	<b>65,987</b>	<b>2,749</b>	<b>.103</b>
Error	1344,417	56	24,007		
Total	332354,000	60			
Corrected Total	2905,400	59			

a. R Squared = ,537 (Adjusted R Squared = ,512)

From the result of calculation above, it can be seen that the significant score for group\* pre-test is 0,103. Because the significant value is bigger than 0.05, it means that there is no interaction between covariate and independent variable. It can be concluded that there is no interaction

between covariate and independent variable. Based on the findings, the researcher can continue calculate the data using ANCOVA analysis.

#### 4. The Result of Test of Linier Relationship Covariate & Dependent

The last assumption is the relationship between covariate (pre-test) and dependent variable (post-test). The covariate is included in the analysis to control for the differences on the independent variable. The aim of the covariate test is to evaluate the relationship between the covariate and dependent variable, controlling for the independent variable (from any particular group). It can be estimated by the significant value ( $p < \alpha 0.05$ ). The result of linear relationship between covariate and dependent variable test can be seen in the table 4. 11 below.

**Table 4.11 Tests of Between-Subjects Effects**

Dependent Variable: Post\_Test

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1494,996 <sup>a</sup>	2	747,498	30,209	.000
Intercept	504,288	1	504,288	20,380	.000
<b>Pre_Test</b>	<b>1001,929</b>	<b>1</b>	<b>1001,929</b>	<b>40,492</b>	<b>.000</b>
Class	734,042	1	734,042	29,666	.000
Error	1410,404	57	24,744		
Total	332354,000	60			
Corrected Total	2905,400	59			

a. R Squared = ,515 (Adjusted R Squared = ,498)

From the table above, the relationship is significant,  $p (0.000) < (0.05)$ . It means that there is relationship between the covariate and the dependent

variable. Based on the findings of the table above, it can be concluded that the covariate is linearly related to the dependent variable.

### C. Testing Hypothesis of ANCOVA

This part explains the testing of hypothesis using tests of between subject effect to know the influence of the treatment to the students' writing skill. The hypothesis as follows:

$H_a$  : There is significant difference between the students taught by using Instagram and student taught by using PPT for the tenth grade students of MAN 2 Kediri.

$H_0$  : There is no significant difference between the students taught by using Instagram and student taught by using PPT for the tenth grade students of MAN 2 Kediri.

**Table 4.12 Tests of Between-Subjects Effects**

Dependent Variable: Post\_Test

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1494,996 <sup>a</sup>	2	747,498	30,209	.000
Intercept	504,288	1	504,288	20,380	.000
Pre_Test	1001,929	1	1001,929	40,492	.000
<b>Class</b>	<b>734,042</b>	<b>1</b>	<b>734,042</b>	<b>29,666</b>	<b>.000</b>
Error	1410,404	57	24,744		
Total	332354,000	60			
Corrected Total	2905,400	59			

a. R Squared = ,515 (Adjusted R Squared = ,498)

The result of calculate the data using ANCOVA assumption, we can see the findings of the calculation in the table 4.12. The result of the group significant is 0.000 that is lower than 0.05. So, the researcher have enough evidence to reject the null hypothesis. It means that there is difference result between the students who were taught using Instagram as teaching media and those who were not taught using Instagram. Therefore, students who were taught by using Instagram as a teaching media have better writing skill than those who Were not taught by using Instagram.

#### **D. Discussion**

The aim of this study is to investigate the effectiveness of using Instagram in teaching writing as a learning media whether the students taught by Instagram have better writing skill than other students who taught by non Instagram. The result of analysis shows that the students who taught using Instagram have better writing skill than those who are not taught by Instagram. The comparison from both group, it can be seen from the calculation from mean score. For an experimental group, which was given treatment by using Instagram has better score than control group which was not given Instagram as treatment. It can be concluded that Instagram is effective for the students' writing skill.

To know the effectiveness of Instagram as a learning media, it is not enough if the researcher only look at the comparison score of the mean from both group, but also have to know the statistical computation of ANCOVA using SPSS. The result of ANCOVA is not necessary to be consulted with the

critical value of T table, but researcher can look at the result of significant value from SPSS calculation. In the ANCOVA assumption, the result of the normality assumption from both experimental and control group is higher than  $\alpha$  (0.05). The distribution of dependent variable from pre-test experimental class is normal that is  $p$  (0.143)  $>$   $\alpha$  (0.05). Then, the distribution of dependent variable from pre-test control class is normal that is  $p$  (0.081)  $>$   $\alpha$  (0.05). The distribution of dependent variable from post-test experimental class is normal that is  $p$  (0.200)  $>$   $\alpha$  (0.05). The distribution of dependent variable from post-test control class is normal that is  $p$  (0.200)  $>$   $\alpha$  (0.05).

For the homogeneity variance assumption from both group is equal. The result of calculation shows that  $p$  (0.254)  $>$   $\alpha$  (0.05). And also there is no interaction between covariate and independent variable, as evidence by  $p$  (0.103)  $>$   $\alpha$  (0.05). And the homogeneity of linier shows  $p$  (0.000)  $<$   $\alpha$  (0.05). Then, the result of statistical, shows that the result is significant  $p$  (0.000)  $<$   $\alpha$  (0.05). Since the significant value is lower than 0.05, there is no enough evidence to reject the null hypothesis, then the alternative hypothesis is received. That there was differences result between students who got media Instagram in the experimental group and students who did not get media Instagram in the control group. It means that media Instagram is effective in teaching writing skill of tenth grade students of MAN 2 Kediri.

Based on previous study. The first previous study from Alfiyatun (2018) The researcher uses Instagram to teach writing descriptive text, and

state that media instagram is an effective media in teaching students writing descriptive text, Instagram create fun situation. It makes the students enjoy the teaching process. Second, Purwandari (2017) Her research was conclude the application of photographs in Instagram can be effective for students' writing skill in writing descriptive text. It was effective and recommended for the English teacher as one of references in teaching and learning process. Handayani (2018) she was agree that Instagram encourages students to improve writing, as she said students get better writing ability after the implementation of Instagram. That the students had positive response toward the implementation of the Instagram. The students view that Instagram was meaningful and fun to be implemented in class.

Summarizing the finding gotten, providing Instagram is an advantageous media in teaching students' writing skill from the whole calculating results gained in the study, it can be scientifically proved that Instagram is effective in teaching students' writing skill for senior high school.