

CHAPTER IV

FINDINGS AND DISCUSSION

In this chapter, the researcher presents the finding and the discussion of the research. Four main topics will be discussed in this part the description of data, normality testing, hypothesis testing and discussion.

A. The Description of Data

In this sub chapter, the researcher presents the descriptive statistics of the research. The result of students' writing decriptive text in term of pre-test and post-test, then those were calculated by using writing scoring rubric. The tests were given to X Chemical Engineering of SMKN 1 Boyolangu. The number of students were 36 that consist of 5 male and 31 female. The students' scores of pre-test and post-test. In addition, The test was conducted before and after using Instagram's Photo Content as the treatment in teaching writing descriptive text.

1. Computation Result of The Students' Score Before being Taught by Using Instagram's Photo Content (Pre-test)

In this part of test, the researcher asked the students to write the description of Tourism Place in Indonesia. The students were given about 60 minutes to write the descriptive text. There were 36 students as the sample of this research. The purpose of conducting pre-test was intended to measure the students' writing achievement before they were given the treatment. The result of pre-test based on processing in SPSS 23.0 version software (table 4.1). The histogram chart of pre-test (4.2). The descriptive statistic of pre-test score

consisted of mean (table 4.3) and the frequency distribution of pre-test (table 4.4), those can be seen as below:

Table 4.1 The Result of Students' Score in Pre-test

No	Students' Name	Pre-test (X ₀)
1	S1	73
2	S2	75
3	S3	57
4	S4	68
5	S5	67
6	S6	69
7	S7	65
8	S8	60
9	S9	59
10	S10	66
11	S11	83
12	S12	70
13	S13	41
14	S14	61
15	S15	65
16	S16	58
17	S17	65
18	S18	45
19	S19	67
20	S20	79
21	S21	61
22	S22	73
23	S23	75
24	S24	65
25	S25	63
26	S26	71
27	S27	65
28	S28	61
29	S29	71
30	S30	66
31	S31	70

32	S32	63
33	S33	57
34	S34	70
35	S35	80
36	S36	63
N= 36/ Total Score		2367

Based on the table 4.1, it could be seen the lowest and the highest scores of X Chemical Engineering students. The lowest score in pre-test was 41 and the highest one in pre-test was 83.

The researcher used SPSS 23.0 version to know the descriptive statistic and the percentage of students' score of pre-test. To understand the data of the students' score of pre-test, it could be seen the histogram chart below:

Table 4.2 The Histogram Chart of Pre-test

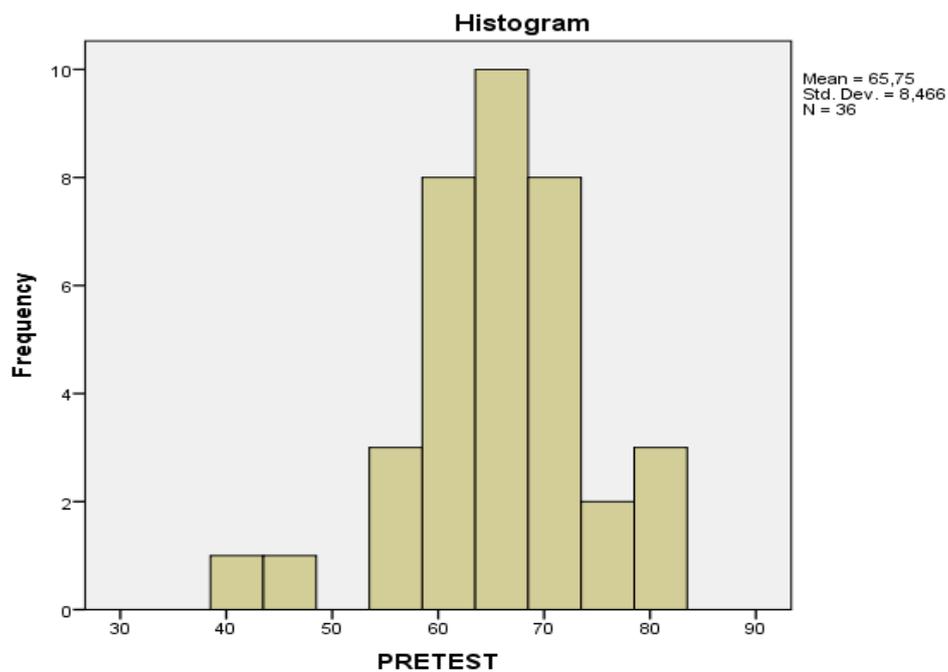


Table 4.3 The Descriptive Statistic of Pre-test Scores

Statistics		
PRETEST		
N	Valid	36
	Missing	0
Mean		65,75
Std. Error of Mean		1,411
Median		65,50
Mode		65
Std. Deviation		8,466
Variance		71,679
Range		42
Minimum		41
Maximum		83
Sum		2367

In this research, the group was intended to X Chemical Engineering students SMKN 1 Boyolangu. Table 4.3 showed that the total of data were divided with number of data which determined as mean score from pre-test. It was 65.75. Then, the half number of data sample which determined as median score from pre-test was 65.50. To know the most frequently appeared number, the data used mode score and the most appeared number was 65. The standard deviation of pre-test is 8.466. The range of pre-test is 42. In addition, the minimum score was 41. The maximum score was 83. The sum of pre-test is 2367. Then, the number of score appeared in pre-test, the researcher presents frequency distribution as below:

Table 4.4 Frequency Distribution of Pre-test**PRETEST**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	41	1	2,8	2,8	2,8
	45	1	2,8	2,8	5,6
	57	2	5,6	5,6	11,1
	58	1	2,8	2,8	13,9
	59	1	2,8	2,8	16,7
	60	1	2,8	2,8	19,4
	61	3	8,3	8,3	27,8
	63	3	8,3	8,3	36,1
	65	5	13,9	13,9	50,0
	66	2	5,6	5,6	55,6
	67	2	5,6	5,6	61,1
	68	1	2,8	2,8	63,9
	69	1	2,8	2,8	66,7
	70	3	8,3	8,3	75,0
	71	2	5,6	5,6	80,6
	73	2	5,6	5,6	86,1
	75	2	5,6	5,6	91,7
	79	1	2,8	2,8	94,4
	80	1	2,8	2,8	97,2
	83	1	2,8	2,8	100,0
	Total	36	100,0	100,0	

The table 4.4 showed the numbers that describe the categorizing based on frequency distribution by considering on qualification of the scoring rubric.

- a. There are 7 students who got score between 41-60, it means that the students writing achievement was still fair. It needed much enhancement.
- b. There are 28 students who got score between 61-80, it means that the students writing achievement was good enough. However, it also still needed the enhancement.
- c. There are only 1 student who got score 83, it means that the students writing achievement was excellent.

After knowing the result of pre-test, the researcher gave the treatment or Instagram's Photo Content with the purpose probably the students writing achievement could be increased. At last, the researcher gave post-test to measure the difference scores or achievement after conducting the treatment.

2) Computation Result of The Students' Score After being Taught by Using Instagram's Photo Content (Post-test)

In Post-test, the researcher asked the students to write the description with different topic than pre-test. The topic was Your Favorite Beach in Indonesia. The allocation time was 60 minutes. There were 36 students as the sample of this research. The purpose of conducting post-test was intended to measure the students' writing achievement after they were given the treatment.

The result of post-test based on processing in SPSS 23.0 version software (Table 4.5). The histogram chart of post-test (Table 4.6).The descriptive statistic

of post-test score consisted of mean (Table 4.7) and the frequency distribution of post-test (Table 4.8), can be seen below:

Table 4.5 The Result of Students' Score in Post-test

No	Students' Name	Post-test (X1)
1	S1	80
2	S2	88
3	S3	67
4	S4	88
5	S5	81
6	S6	85
7	S7	73
8	S8	70
9	S9	75
10	S10	83
11	S11	91
12	S12	71
13	S13	58
14	S14	73
15	S15	83
16	S16	63
17	S17	78
18	S18	69
19	S19	83
20	S20	91
21	S21	63
22	S22	80
23	S23	87
24	S24	79
25	S25	70
26	S26	80
27	S27	79
28	S28	81
29	S29	83
30	S30	88
31	S31	73
32	S32	70
33	S33	69
34	S34	77
35	S35	83
36	S36	75
N= 36/ Total Score		2787

Based on the table 4.5, it could be seen the lowest and the highest scores of X Chemical Engineering students. The lowest score in post-test was 58 and the highest one was 91. The researcher used SPSS 23.0 version to know the descriptive statistic and the percentage of students' score of post-test. To understand the data of the students' score of post-test, it could be seen the histogram chart below:

Table 4.6 The Histogram Chart of Post-test

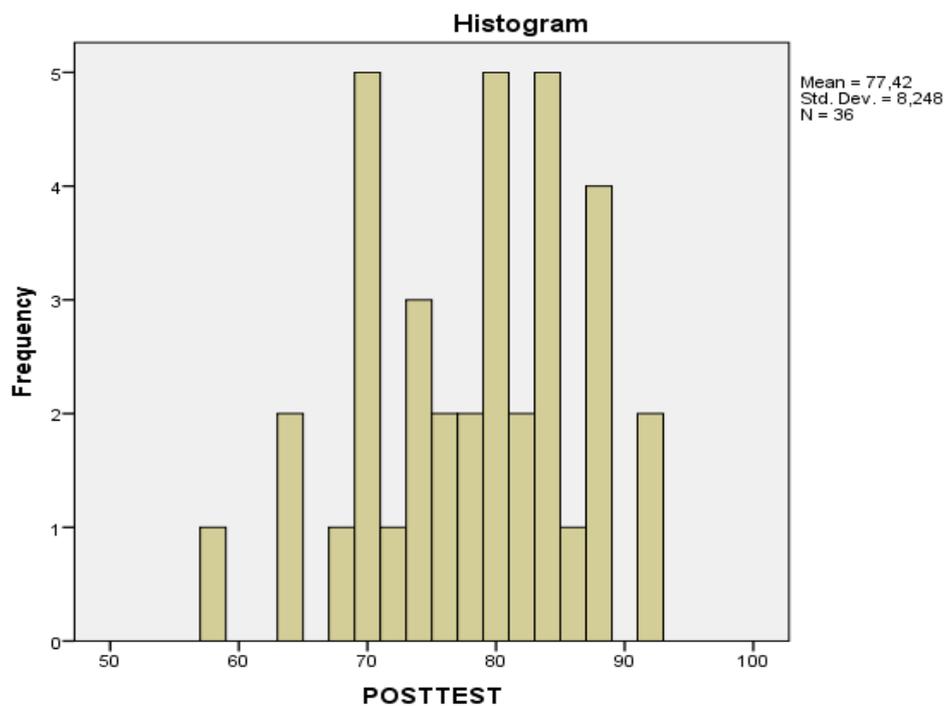


Table 4.7 The Descriptive Statistic of Post-test Scores

Statistics

POSTTEST

N	Valid	36
	Missing	0
Mean		77,42

Std. Error of Mean	1,375
Median	79,00
Mode	83
Std. Deviation	8,248
Variance	68,021
Range	33
Minimum	58
Maximum	91
Sum	2787

In this research, the group was intended to X Chemical Engineering students SMKN 1 Boyolangu. Based on table 4.7 showed the total all data were divided with number of data which determined as mean score from pre-test, it was 77.42. Then, the half number of data sample which determined as median score from pre-test was 79. To know the most frequently appeared number, the data used mode score and the most appeared number was 83. The standard deviation of post-test is 8.248. The range of post-test is 33. In addition, the minimum score was 58. The maximum score was 91. The sum of post-test is 2787.

To know the number of score appeared in pre-test, the researcher used frequency distribution as follow below:

Table 4.8 Frequency Distribution of Post-test

POSTTEST					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	58	1	2,8	2,8	2,8
	63	2	5,6	5,6	8,3

67	1	2,8	2,8	11,1
69	2	5,6	5,6	16,7
70	3	8,3	8,3	25,0
71	1	2,8	2,8	27,8
73	3	8,3	8,3	36,1
75	2	5,6	5,6	41,7
77	1	2,8	2,8	44,4
78	1	2,8	2,8	47,2
79	2	5,6	5,6	52,8
80	3	8,3	8,3	61,1
81	2	5,6	5,6	66,7
83	5	13,9	13,9	80,6
85	1	2,8	2,8	83,3
87	1	2,8	2,8	86,1
88	3	8,3	8,3	94,4
91	2	5,6	5,6	100,0
Total	36	100,0	100,0	

The table 4.8 showed the numbers that describe about the division and percentages of frequency distribution. The frequency of post-test after being distributed showed based on the categorizing of scoring rubric:

- a. There are 1 student who got score 58, it means that the students writing achievement in descriptive text was fair.
- b. There are 21 students who got score between 63-80, it means that the students writing achievement was good enough.

c. There are only 14 students who got score between 81-91, it means that the students writing achievement was excellent.

B. Normality Testing

Normality testing is conducted to determine whether the gotten data is normal distribution or not. The main reason of conducting normality testing in a research is to know that the population or data involved in the research is in normal distribution. The computation of normality testing in this research using *One-Sample Kolmogorov-Smirnov test* in IBM SPSS Statistics 23.0 by significant level (0.05). The hypothesis of normality testing is stated as follow:

➤ H₀ : the data distribution is normal.

If the p-value > 0.05, it means that the data distribution is normal.

➤ H_a : the data distribution is not normal.

If the p-value < 0.05, it means that the data distribution is not normal.

Table 4.9 Normality Result

One-Sample Kolmogorov-Smirnov Test		PRETEST	POSTTEST
N		36	36
Normal Parameters ^{a,b}	Mean	65.75	77.42
	Std. Deviation	8.466	8.248
	Absolute	.104	.104
Most Extreme Differences	Positive	.073	.066
	Negative	-.104	-.104
Kolmogorov-Smirnov Z		.622	.623
Asymp. Sig. (2-tailed)		.835	.832

a. Test distribution is Normal.

b. Calculated from data.

Based on the output from SPSS above, the table shows that the p-value of pre-test is 0.835 and p-value of post-test is 0.832. Both of p-value of pre-test and post-test are bigger than 0.05. The p-value of pre-test is 0.835 and it is bigger than 0.05 ($0.835 > 0.05$). It means that H_a is rejected and H_0 is accepted. It automatically the data distribution of pre-test is normal. Then, the p-value of post-test is 0.832 and it is bigger than 0.05 ($0.832 > 0.05$). It means that H_a is rejected and H_0 is accepted. It automatically the data distribution of post-test is also normal. Therefore, it could be concluded that both of the data (pre-test and post-test) are normal distribution.

C. Hypothesis Testing

This research was conducted to know whether there is significant difference achievement of tenth grade students in SMKN 1 Boyolangu in academic year 2018/2019 in writing descriptive text before and after being taught by using Instagram's Photo Content. To analyze the finding data, the researcher used *Paired Sample Test* by using SPSS 23.0 version.

When the sample size is large or at least 30, the z test is used. However, the z test is inappropriate when the sample size is less than 30. In such a case, t test is called for. In relation with this, Bluman stated that t test is a statistical test for the population mean, and is used when the population is normally distributed or approximately normally distributed, σ is unknown, and $n < 30$ (1998: 378).

The hypothesis was stated as follow:

- a. $H_0 = \mu_1 \leq \mu_2$ or the mean of post-test is smaller than or equal to the mean of pre-test.

The mean of students' descriptive writing ability after being taught using instagram's photo content is less than or equal to their ability before being taught by using instagram's photo content.

- b. $H_a = \mu_1 > \mu_2$ or the mean of post-test is higher than the mean of pre-test.

The mean of students' descriptive writing ability after being taught using instagram's photo content is higher than their ability before being taught by using instagram's photo content.

The result of hypothesis testing can be seen in table 4.10 below:

Table 4.10 Paired Sample T-test

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	65,75	36	8,466	1,411
	POSTTEST	77,42	36	8,248	1,375

		N	Correlation	Sig.
Pair 1	PRETEST & POSTTEST	36	,771	,000

		Paired Differences				T	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	PRETEST – POSTTEST	-11,667	5,662	,944	-13,582	-9,751	12,363	35	,000

1. If $P\text{-value} \leq \alpha$, the null hypothesis (H_0) is rejected and the alternative (H_a) is accepted. It means that the use of instagram's photo content is effective for increasing or raising the students' descriptive writing ability.

2. If $P\text{-value} > \alpha$, the null hypothesis (H_0) is accepted and the alternative (H_a) is rejected. It means that the use of Instagram's photo content is not effective for increasing or raising the students' descriptive writing ability.

Based on the table 4.10 above, the output confirms that the means of the students after and prior the treatment are respectively 65.75 and 77.42. The result of the t-test reveals that the t value is -12.363, with the df 35, and the *p-value* (two-tailed) is 0.000. Given that the present test is one-tailed test, so the *p-value* (0.000) is divided by two ($0,000/2$) equals to 0. Since 0 is smaller than the $\alpha = 0.05$, so the null hypothesis is rejected. In other words, the hypothesis saying that the mean after the treatment is smaller than or equal to the one before the treatment is rejected. It automatically accepts the alternative hypothesis saying that the mean after the treatment is bigger than the one before the treatment. The conclusion is the use of Instagram's photo content is effective for increasing or raising the students' descriptive writing ability.

D. Discussion

In this research, the researcher conducted the research by using one sample of population. It is X Chemical Engineering students of SMKN 1 Boyolangu. The number of students are 36, it has been chosen by purposive sampling technique in term suggestion by some eligible people in the school. To know the result of this research whether this media is effective or not, the researcher used pre-test and post-test then compute both of the tests into SPSS 23.0 version software. The result of computation between pre-test and post-test showed that the use of

instagram's photo content is effective for increasing or raising the students' descriptive writing ability.

The standard deviation is to measure how much the variance of the sample. The standard deviation of pre-test is $8.466 < 65.75$ and post-test is $8.248 < 77.42$, if the standard deviation is getting higher than the mean it means that the mean is not homogeny and if the standard deviation is getting smaller than the mean it means that the mean is homogeny. Therefore, it can be concluded that standard deviation of pre-test and post-test was homogeny, it means that the sample of this research almost has the same mean.

The standard error mean is to measure the accuracy with which a sample represents a population. The standard error mean of pre-test is $1.411 < 65.75$ and post-test is $1.375 < 77.42$, if the standard error mean is getting higher than the mean it means that the sample is not representative and if the standard error mean is getting smaller than the mean it means that the sample is representative. Therefore, it can be concluded that the sample of this research indicated good sample or representative from population.

As the requirement of hypothesis, if the *p-value* is smaller than or equal to the α (0.05), it means that the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. It can be said that the students' writing descriptive text ability after being taught using instagram's photo content is higher than their skill before being taught using instagram's photo content. In fact based on the table of paired sample t-test, the result showed that the number of the significant value is $0.000/2$ equals to 0, and it is smaller than the $\alpha = 0.05$. It means that the

use of instagram's photo content is effective for increasing or raising the students' descriptive writing ability.

Finding result by using instagram's photo content can increase students achievements in descriptive writing at Senior High School especially at X Chemical Engineering students of SMKN 1 Boyolangu. Based on the mean of pre-test 65.75 becomes 77.42 in post-test. The increasing score above related to the benefit of using instagram's photo content generally on writing. Suharso (2017) stated that the use of Instagram elicits a statistical improvement on the students' writing skill. Besides, The result was consistent with Listiani's (2016) research which showed that the students in the experimental group outperformed those in the control group as a result of the implementation of Instagram.

Regarding on the result of data analysis above, it's also strongly with previous study as stating that the use of instagram is of effective for teaching writing. Purwandari (2017), this research was an experimental study to find out whether there is any learning achievement of students who are taught writing descriptive text using photographs as media which is significantly different from those who are taught without photographs. The subjects of the study were the 8th year students of SMP Negeri 1 Ungaran. In order to achieve the objective, the researcher conducted an experimental research. There were two groups involved in this research, the experimental and the control group. The experimental group was taught using photographs in Instagram and the control group was taught without using photographs in Instagram. After both groups were given the treatment, the result of the study shows that the mean post-test score of

experimental group was 74.80 and the control group was 72.63. It means that the score of the experimental group was higher than the score of the control group. Based on the result of this study, it was concluded the application of photographs in Instagram could increase 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. In this case, the result of the mean score of the experimental group from previous study above was 74.80 and from this research was 77.42. It means that the mean of this research is higher than this previous study.

Listiani (2016), this study was conducted by using experimental research especially quasi experimental research with 40 students participated. Those students were divided into experimental and control group. The experimental group was taught writing recount text by using Instagram as a teaching technique, whereas the control group was taught by using teacher centered writing. Results indicated that the final average score of experimental group was 73. Meanwhile, the control group got a lower average score with 67.15. Thus, the higher achievement of experimental group indicated that the use of Instagram promoted a better understanding for students with high and low motivation which improved the quality of their writing. In this case, the result of the mean score of the experimental group from previous study above was 73 and from this research was 77.42. It means that the mean of this research was higher than this previous study.

Handayani et al (2018), this study examined the effect of the use of Instagram on EFL students' writing ability. A pre-experimental research design

with no control group was chosen for this research. More specifically, it used one group pre-test post-test design. It involved 34 EFL students of an Indonesian university. The students were taught to write opinion essays with Instagram as the instructional medium. The treatment was given in six meetings, excluding the writing pre-test and post-test. After given the treatment, the result of the study showed that the mean score of pre-test was 60.0294 and post-test was 75.3676. Based on the result of the data analysis, it could be concluded that there is a significant difference between the EFL students' ability before and after the implementation of Instagram. It means that the students get better writing ability after the implementation of Instagram. In this case, the result of the mean score of the experimental group from previous study above was 75.3676 and from this research was 77.42. It means that the mean of this research was higher than this previous study.

Soviyah & Etikaningsih (2018), this study was categorized into an experimental research. The research setting was in a private high school in Yogyakarta and done in late of 2017. This research involved 6 classes of level X students who were divided into two groups namely experimental and control groups. Each group consisted of 25 students. In choosing the groups, it was done randomly using random sampling technique. The empirical data were collected through pre and post tests. The data were analyzed quantitatively applying t-test computation and descriptive analysis. After both groups were given the treatment, the result of the study showed that the mean post-test score of experimental group was 80.04 and the control group was 76.68. Results of the study indicate that there

is significant difference in students writing score between those taught using Instagram and those who aren't. In conclusion, teaching students writing by using Instagram pictures are more effective than teaching without using Instagram pictures. In other words, the use of Instagram is effective in teaching writing descriptive texts. In this case, the result of the mean score of the experimental group from previous study above was 80.04 and from this research was 77.42. It means that the mean of this research is lower than this previous study.

Alfiyatun & Muntaha (2018), the research design in this research was quasi experimental research with quantitative approach. Two classes were chosen as the samples by using cluster random sampling technique. X MIA 2 ICP class was the experimental group and X MIPA 1 ICT was the control group. The researcher used writing test to collect data. To get the data the researcher conducted pre-test before giving the treatment, post-test after giving treatment, and tried them out first to analyze the readability of the test before applied to the experimental and control group. In analyzing the data, the researcher used normality, homogeneity, and t-test formula to compare the difference post test scores between two groups. Furthermore, to analyze the data the researcher used normality test from chi-Square theory, homogeneity from F table theory, and t-test for hypothesis test. The result in this research, the average of students' score of experimental group using Instagram captions was 85.88 and for the students' control group using picture was 76. Based on the result above, it could be concluded that students who are taught by using Instagram captions as teaching media have better writing ability than those who are taught using picture as

teaching media. In this case, the result of the mean score of the experimental group from previous study above was 85.88 and from this research was 77.42. Its mean that the mean of this research is lower than this previous study.

From the result of finding above, this research also supports that Instagram was effective used in writing essay. Handayani et al (2018) stated that the students got better writing ability after the implementation of Instagram. It was found that the quality of the students' writings improved. Some mistakes like missing thesis statement in an essay and insufficient sentences in a paragraph decreased bit by bit. In general, the students were able to make a well-developed thesis statement. In line with Listiani (2016) teaching recount text using instagram resulted a better achievement. The experimental group's achievement in writing recount text was better than the control group's achievement. Then, Instagram helps students in writing assignments. Anggraeni (2017) used Instagram in writing assignments. The result reveals that the students' perspectives cover two aspects that include benefits and barriers of using Instagram. One of the benefits showed that participants have positive perspectives of using Instagram in their writing assignments. Participants view that Instagram is a valuable social network platform that motivate them to write better.

Overall, it could be said that Instagram's Photo Content as media in teaching writing is also suitable used in writing essay, recount text or just writing assignment. Furthermore, teaching writing descriptive text by using Instagram's Photo Content is effective to increase students achievement in the level of tenth grade students of SMKN 1 Boyolangu in academic year 2018/2019.