

CHAPTER IV

RESULT AND DISCUSSION

This chapter presents the research result, hypothesis testing, and discussion. The research finding discusses the result of data analysis. It also discusses the data description.

A. Result of Research

In this chapter, the researcher presented the data on student's writing achievement by using Collaborative Writing strategy across different personality styles. The researcher presented and analyzed the data which had been collected through two kinds of test, they are pre-test and post-test, and to understand about student's personality styles the researcher collected questionnaire. It was conducted for twenty six to students' experimental groups and twenty four to students control groups.

B. Data Description

The pretest and posttest scores are classified into 6 categories: (1) The scores of the students in the experimental class who are taught using Collaborative Writing ; (2) the scores of those in control class who are taught using Conventional Teaching ; (3) the result of Collaborative Strategy across personality styles; (4) students' writing achievement across personality styles; (5) the result of Normality and Homogeneity. The followings are the detail descriptions of students' scores in each category.

1. The Scores of the Students in the Experimental Class who are taught using Collaborative Writing Strategy

The Result of Pretest and Posttest of Writing Test can be seen in Table 4.1 below:

**Table 4.1
The Data of Pretest-Posttest of Experimental Group**

No.	Name	Pre-Test Score	Post-Test Score
1.	AKQ	70	82
2.	AAF	64	80
3.	ABA	72	86
4.	ARH	62	78
5.	ABS	64	76
6.	AFH	66	80
7.	ANRA	68	82
8.	EF	70	84
9.	IASI	62	78
10.	KJK	60	68
11.	MK	58	76
12.	MAM	66	80
13.	MAYS	68	78
14.	MBW	66	78
15.	MCZ	72	86
16.	MFA	68	80
17.	MFNNR	68	78
18.	MFRS	64	72
19.	MH	64	70
20.	NHS	74	88
21.	NFA	58	72
22.	RP	68	76
23.	RAS	72	84
24.	SAM	72	82
25.	SY	68	78
26.	WMA	58	72

Based on the table 4.1, there were 26 students as sample of the research. the descriptive statistics of experimental class as follows.

a. Pre-test and Post-test of Experimental Class

Table 4.2 Pre-test and Post-test in Experimental Class

		Statistics	
		Pretest	Posttest
N	Valid	26	26
	Missing	0	0
Mean		66.23	78.62
Std. Error of Mean		.910	.991
Median		67.00	78.00
Mode		68	78
Std. Deviation		4.642	5.052
Variance		21.545	25.526
Range		16	20
Minimum		58	68
Maximum		74	88
Sum		1722	2044

Based on the table 4.2 above, it showed that pre-test of experimental class minimum score was 58, the maximum score was 74, and the mean score 66.23. While the post-test of experimental class, the minimum score was 68, the maximum score was 88 and the mean 78.62. Then, it was also presented using distribution frequency in the following table:

**Table 4.3 Frequency of Pre-Test and Post-Test in
Experimental Class**

		Pretest			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	58	3	11.5	11.5	11.5
	60	1	3.8	3.8	15.4
	62	2	7.7	7.7	23.1
	64	4	15.4	15.4	38.5
	66	3	11.5	11.5	50.0
	68	6	23.1	23.1	73.1
	70	2	7.7	7.7	80.8
	72	4	15.4	15.4	96.2
	74	1	3.8	3.8	100.0
	Total	26	100.0	100.0	

Table 4.3 above showed that pre-test score minimum was 58 and score maximum was 74. Score 58 had 3 frequency (11.5%), score 60 had 1 frequency (3.8%), score 62 had 2 frequency (7.7%), score 64 had 4 frequency (15.4%), score 66 had 3 frequency (11.5%), score 68 had 6 frequency (23.1%), score 70 had 2 frequency (7.7%), score 72 had 4 frequency (15.4%), score 74 had 1 frequency (3.8%).

Posttest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	68	1	3.8	3.8	3.8
	70	1	3.8	3.8	7.7
	72	3	11.5	11.5	19.2
	76	3	11.5	11.5	30.8
	78	6	23.1	23.1	53.8
	80	4	15.4	15.4	69.2
	82	3	11.5	11.5	80.8
	84	2	7.7	7.7	88.5
	86	2	7.7	7.7	96.2
	88	1	3.8	3.8	100.0
	Total	26	100.0	100.0	

While the post-test showed that score minimum was 68 and score maximum was 88. Score 68 had 1 frequency (3.8%), score 70 had 1 frequency (7.7%), score 72 had 3 frequency (11.5%), score 76 had 3 frequency (15.4%), score 78 had 6 frequency (23.1%), score 80 had 4 frequency (11.5%), score 82 had 3 frequency (11.5%), score 84 had 2 frequency (7.7%), score 86 had 2 frequency (7.7%), score 88 had 1 frequency (3.8%)

The categorization of students' pre-test and post-test score as follow:

Table 4.4 Categorization of Students' Score in Experimental Class

Pre-Test Score

Range of Score	Frequency	Grade	Percentage
81-100	0	A	0
61-80	22	B	84.6%
41-60	4	C	15.4%
0-40	0	D	0

Post-Test Score

Range of Score	Frequency	Grade	Percentage
81-100	8	A	69.2%
61-80	18	B	30.8%
41-60	0	C	0
0-40	0	D	0

Based on the table 4.4 above, it can be seen that in pre-test, there were 4 students (15.4%) got score 41-60 in grade C. then, there were 22 students (84.6%) got score 61-80 in grade B. Meanwhile, there was no student (0%) got in score 0-40 in grade D and the score 81-100 in grade A.

Besides in post-test, there were 18 students (69.2%) got score 61-80 in grade B. Then, there were 8 students (30.8%) got score 81-100 in grade A. Meanwhile, there was no student (%) got in score 0-40 in grade D and the score 41-60 in grade C.

2. The Scores of the Students in the Control Class who are taught using Conventional Teaching

The Result of Pretest and Posttest of Writing Test can be seen in Table 4.5 below:

Table 4.5
The Data of Pretest-Posttest of Control Group

No.	Name	Pre-Test Score	Post-Test Score
1.	AFZ	60	68
2.	AW	64	66
3.	AI	62	72
4.	KN	66	76
5.	KA	70	78
6.	LH	72	74
7.	NTC	66	66
8.	NK	70	70
9.	NH	60	68
10.	PWN	56	66
11.	RAP	58	70
12.	SNU	64	68
13.	SV	62	72
14.	SKM	70	76
15.	URT	62	66
16.	UK	60	78
17.	UUH	66	74
18.	WNH	68	72
19.	WF	62	68
20.	WAI	64	76
21.	YIK	62	68
22.	YA	58	70
23.	YIS	60	68
24.	ZA	64	78

Based on the table 4.5, there were 24 students as sample of the research. the descriptive statistics of experimental class as follows.

b. Pre-test and Post-test of Control Class

Table 4.5 Pre-test and Post-test in Control Class

		Statistics	
		Pretest	Posttest
N	Valid	24	24
	Missing	0	0
Mean		63.58	71.17
Std. Error of Mean		.868	.851
Median		63.00	70.00
Mode		62	68
Std. Deviation		4.252	4.167
Variance		18.080	17.362
Range		16	12
Minimum		56	66
Maximum		72	78
Sum		1526	1708

Based on the table 4.5 above, it showed that pre-test of control class minimum score was 56, the maximum score was 72, and the mean score 63.58. While the post-test of control class, the minimum score was 66, the maximum score was 78 and the mean 71.17. Then, it was also presented using distribution frequency in the following table:

Table 4.6 Frequency of Pre-Test and Post-Test in Control Class

		Pretest			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	56	1	4.2	4.2	4.2
	58	2	8.3	8.3	12.5
	60	4	16.7	16.7	29.2
	62	5	20.8	20.8	50.0
	64	4	16.7	16.7	66.7
	66	3	12.5	12.5	79.2
	68	1	4.2	4.2	83.3
	70	3	12.5	12.5	95.8
	72	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

Table 4.6 above showed that pre-test score minimum was 56 and score maximum was 72. Score 56 had 1 frequency (4.2%), score 58 had 2 frequency (8.3%), score 60 had 4 frequency (16.7%), score 62 had 5 frequency (20.8%), score 64 had 4 frequency (16.7%), score 66 had 3 frequency (12.5%), score 68 had 1 frequency (4.2%), score 70 had 3 frequency (12.5%), score 72 had 1 frequency (4,2%).

Posttest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	66	4	16.7	16.7	16.7
	68	6	25.0	25.0	41.7
	70	3	12.5	12.5	54.2
	72	3	12.5	12.5	66.7
	74	2	8.3	8.3	75.0
	76	3	12.5	12.5	87.5
	78	3	12.5	12.5	100.0
	Total	24	100.0	100.0	

While the post-test showed that score minimum was 66 and score maximum was 78. Score 66 had 4 frequency (16.7%), score 68 had 6 frequency (25.0%), score 70 had 3 frequency (12.5%), score 72 had 3 frequency (12.5%), score 74 had 2 frequency (8.3%), score 76 had 3 frequency (12.5%), score 78 had 3 frequency (12.5%).

The categorization of students' pre-test and post-test score as follow:

Table 4.7 Categorization of Students' Score in Control

Class

Pre-Test Score

Range of Score	Frequency	Grade	Percentage
81-100	0	A	0
61-80	17	B	70.8%
41-60	7	C	29.2%
0-40	0	D	0

Post-Test Score

Range of Score	Frequency	Grade	Percentage
81-100	0	A	0
61-80	24	B	100%
41-60	0	C	0
0-40	0	D	0

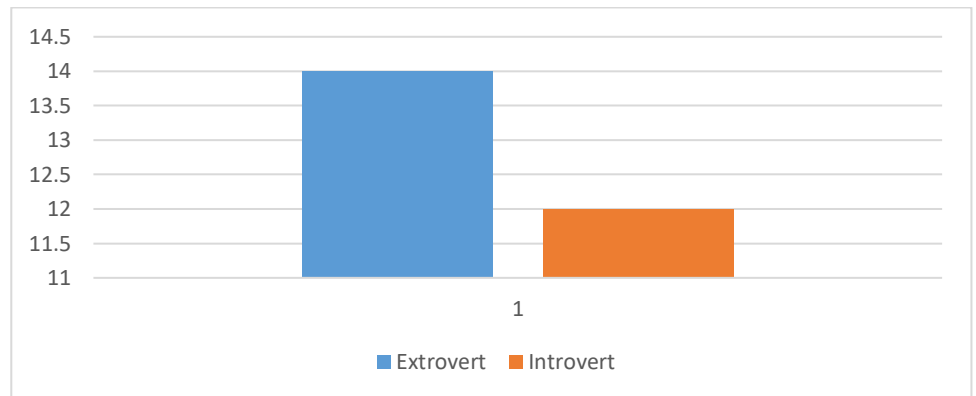
Based on the table 4.7 above, it can be seen that in pre-test, there were 7 students (29.2%) got score 41-60 in grade C. then, there were 17 students (70.8%) got score 61-80 in grade B. Meanwhile, there was no student (0%) got in score 0-40 in grade D and the score 81-100 in grade A.

Besides in post-test, there were 24 students (100%) got score 61-80 in grade B.. Meanwhile, there was no student got in score 81-100 in grade A, 0-40 in grade D and the score 41-60 in grade C.

3. The Result of Collaborative Strategy Across Personality Styles

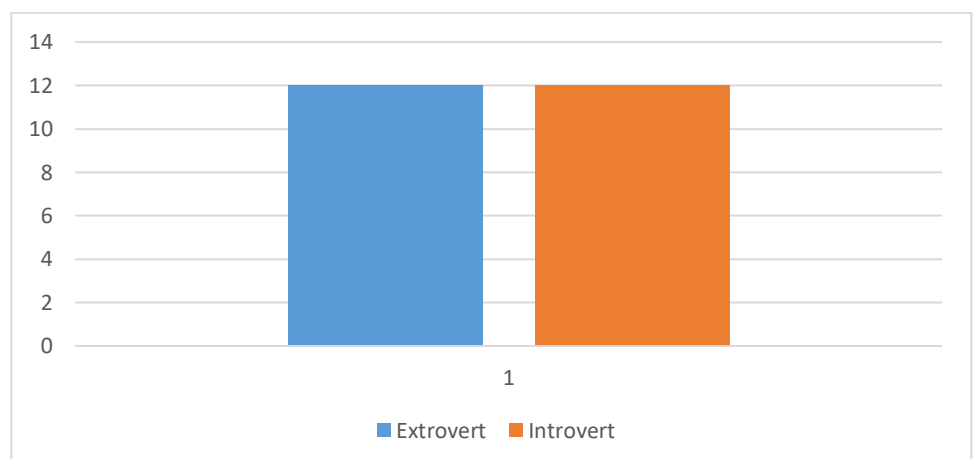
The analysis of the students' writing achievement of learning styles was started by classifying the students' different personality styles. Summarized that, the students' writing achievement scores summarized based on this classification.

a. Figure 4.1 The Result of Students' Personality Styles Questionnaire for Experimental group



Based of figure 4.1, extrovert and introvert students' personality styles there are fourteen (14) students who are extrovert students and twelve students (12) who are introvert students in experimental class.

b. Figure 4.2 The Result of Students' Personality Styles Questionnaire for Control group



Based of figure 4.2, extrovert and introvert students' personality styles there are twelve (12) students who are extrovert

students and twelve students (12) who are introvert students in control class.

The personality style categorization was based on the students' achieved score in choosing the questionnaire. As a result, all of the students were calculated in the personality style categorization. In addition, the classification of the students based on the personality styles can be seen in Table 4.8

Table 4.8. The Classification of the Students based on the Personality Styles.

Groups	Personality Styles	
	Extrovert	Introvert
Experimental	14	12
Control	12	12
Total	26	24

Table 4.8, shows that in the experimental group, there were 14 students who were categorized as extrovert students and 12 students were categorized as introvert students. Meanwhile, in the control group, there were 12 students who were categorized as extrovert students and 12 students who were categorized as introvert students. In summary, there were 26 extrovert style students (52%) and 24 introvert personality style students (48%).

4. Students' Writing Achievement Across Personality Styles.

The analysis of the students' writing achievement across personality styles was started by classifying the students into extrovert and introvert learning styles. After that, the students' writing achievement scores were summarized based on this classification.

a. The Result of the Post-test of the Students across Personality Styles

The results on the post-test then were analyzed based on the students' personality style. The descriptive statistics data of extrovert and introvert personality style students showed that there were some differences between both groups. The descriptive statistics data of the extrovert and introvert personality style students are presented in Table 4.10 and the SPSS computation was attached in Appendix

Table 4.10. Descriptive Statistics Data of the Students' Post-test across Personality Styles.

Descriptive Statistics	Experimental		Control		Both Groups	
	Extrovert	Introvert	Extrovert	Introvert	Extrovert	Introvert
N	14	12	12	12	26	24
Minimum	76	68	68	66	72	67
Maximum	88	80	78	72	84	75
Mean	81.57	75.57	74.00	68.50	78.57	71.25
SD	3.659	4.014	3.717	2.111	3.836	2.914

Table 4.6 shows that the mean score of the extrovert students taught by using Collaborative Writing was 81.57 and the mean score of the introvert students taught by using Collaborative strategy was 75.57. Mean used to find out the mean different, low and high both to personality styles in both groups. Moreover, the mean score of the extrovert students taught with conventional strategy was was 74.00, and the mean score of the introvert students taught with convensional strategy was 68.50. Mean used to find out the mean different, low and high both to personality styles in both groups. From this description, it reveals that the mean score of the extrovert students taught by using

Collaborative strategy was higher than the extrovert students taught with conventional strategy ($81.57 > 74.00$). Meanwhile, the mean score of the introvert students taught with Collaborative strategy was higher than the mean score of the introvert students taught by using conventional strategy ($75.57 > 68.50$).

5. The Result of Normality and Homogeneity

The quantitative analysis of the data in this research involved the investigation on the fulfillment of the statistical assumptions after descriptive statistical employed. Normality and Homogeneity tests using SPSS 23 were performed to investigate whether or not the data fulfilled the statistical assumptions. The result becomes the prerequisite basis in selecting parametric or non-parametric statistics for hypotheses testing.

a. Normality Test

Normality test was administered to measure the extent to which a distribution of scores approximates the standard normal curve or distribution of normal data. This was tested by using Kolmogorov-Smirnov test by means of SPSS 23 program with the criteria of acceptance or rejection of this assumption is 0.05 level of significance. The criteria of significance are stated in formulas: (1) if Sig. > 0.05, normal; (2) if Sig. ≤ 0.05, not normal.

The hypotheses were :

Null Hypothesis : the data is not normal or ≤ 0.05

Alternative Hypothesis : the data is normal or ≥ 0.05

The result of normality test are briefly presented in following Table.4.11

Table 4.11 The Result of The Normality Test of Both Groups

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for result	.087	50	.200*	.968	50	.195

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

a. Lilliefors Significance Correction

The normality of the students' writing scores were tested on the basis of the groups the students belonged to and the classification of their personality styles. The result of the normality test shown in table 4.11. It also that the score test result found that the test level of significance was (sig-value $.195 > \alpha.0.05$). The level of normality test of both experimental and control groups $> \alpha.0.05$. It means both extrovert and introvert were normal.

5.2 Homogeneity Test

The homogeneity test intended to measure the equality of the experimental and control group before the treatment was given. The test was tested by using Levene's Test by means of SPSS 23 program. The result then became the basis for choosing the appropriate inferential statistics for the post-test score. The criteria of signifance are stated in the formula: (1) if $\text{Sig.} \geq 0.05$, homogeneous: (2) if $\text{Sig.} \leq 0.05$, not homogeneous.

The hypotheses were :

Null Hypothesis : the data was not homogeneous or ≤ 0.05

Alternative hypotheis : the data was homogeneous or ≥ 0.05

The result of homogeneity test can be seen in Table 4.12

Table 4.12 The Result of The Homogeneity Test of Both Groups

Levene's Test of Equality of Error Variances^a
Dependent Variable: writing

F	df1	df2	Sig.
1.917	3	46	.140

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

a. Design: Intercept + method + personality + method * personality

The data in Table 4.12 shows that the obtained significant value of homogeneity test across groups was .140. It means that the null hypothesis was rejected and the alternative hypothesis was accepted since .140 was higher than 0.05. The results show that all groups involved in this study were equal and comparable.

Since the statistical assumptions in terms of normality and homogeneity were fulfilled, the parametric statistical analysis was administered to test the hypotheses.

C. Hypothesis Testing

a. Hypothesis Testing 1

The first hypothesis to be tested is the effect of using Collaborative writing on the students' writing achievement. The formulas of the first null and alternative hypothesis are declared as follows

Null Hypothesis 1(H₀)1:

Students' who are taught by using Collaborative strategy, do not achieve better than those who are taught by using conventional strategy.

Alternative Hypothesis 1(Ha)1:

The students taught by using Collaborative strategy, have better achievement in writing procedure text than those who were taught without using conventional strategy.

The criteria of significance are stated in the formulas: (1) if $\text{Sig} \leq 0.05$, significant different: (2) if $\text{Sig} \geq 0.05$, not significance different.

The hypotheses are:

Null Hypothesis : the data was significantly different or ≤ 0.05

Alternative Hypothesis : the data was not significantly different or ≥ 0.05

Table 4.13 The Result Two Way ANOVA Analysis on The Difference of Students' Writing Achievement Score in The Experimental and Control Groups.

Tests of Between-Subjects Effects

Dependent Variable: writing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1150.918 ^a	3	383.639	30.919	.000
Intercept	278579.584	1	278579.584	22451.850	.000
method	660.571	1	660.571	53.238	.000
personality	440.917	1	440.917	35.535	.000
method * personality	1.016	1	1.016	.082	.776
Error	570.762	46	12.408		
Total	283572.000	50			
Corrected Total	1721.680	49			

a. R Squared = .668 (Adjusted R Squared = .647)

Based on the Table 4.13, the result of the SPSS computation of the above two-ways ANOVA reveals that the obtained significant value for the effect of Collaborative Writing was .000. The result shows that the

obtained significant value was lower than the accepted significant level ($\text{sig}.000 \leq 0.05$). It means that there was enough evidence to reject the null hypothesis and to accept the alternative hypothesis. Therefore, there was a significant difference in students' achievement in writing procedure text between the students taught by using Collaborative Writing strategy than those who were taught by conventional strategy. In other words, the students taught by using Collaborative Writing strategy had better achievement in writing procedure texts than those who were taught by conventional strategy.

b. Hypothesis Testing 2

After testing the first hypothesis, the researcher then investigated the second hypothesis about effect of personality styles differences on the students' writing achievement. The formulas of the second null and alternative hypotheses were described as follows.

Null Hypothesis 2(H_0)₂:

The writing achievement of students with extrovert personality is not better than one of those with introvert personality.

Alternative hypotheses 2 (H_a)₂:

The writing achievement of students with extrovert personality is better than one of those with introvert personality.

The criteria of significance are stated in the formulas: (1) if $\text{Sig} \leq 0.05$, significant different: (2) if $\text{Sig} \geq 0.05$, not significance different.

The hypotheses are:

Null Hypothesis : the data was significantly different or ≤ 0.05

Alternative Hypothesis : the data was not significantly different or
 ≥ 0.05

Table 4.14 The Result of Two Way ANOVA Analysis on The Difference of Students' Writing With Different Personality Styles ANOVA.

Tests of Between-Subjects Effects

Dependent Variable: writing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1150.918 ^a	3	383.639	30.919	.000
Intercept	278579.584	1	278579.584	22451.850	.000
method	660.571	1	660.571	53.238	.000
personality	440.917	1	440.917	35.535	.000
method * personality	1.016	1	1.016	.082	.776
Error	570.762	46	12.408		
Total	283572.000	50			
Corrected Total	1721.680	49			

a. R Squared = .668 (Adjusted R Squared = .647)

The result of the SPSS computation of the above two-ways ANOVA reveals that the obtained significant value for the effect of personality styles was .000. The result shows that the obtained significant value was higher than the accepted significant level ($\text{sig}.000 \leq \text{sig}.0.05$). It means that there was enough evidence to reject the null hypothesis. Therefore, there was significant difference on students' achievement in writing procedure text across students' personality styles.

Table 4.15 The Result Analysis on The Difference of Students' Writing Achievement Score in The Experimental and Control Groups.

Descriptive Statistics	Experimental		Control		Both Groups	
	Extrovert	Introvert	Extrovert	Introvert	Extrovert	Introvert
N	14	12	12	12	26	24
Minimum	76	68	68	66	72	67
Maximum	88	80	78	72	84	75
Mean	81.57	75.57	74.00	68.50	78.57	71.25
SD	3.659	4.014	3.717	2.111	3.836	2.914

Based on the Table 4.15, the result of the SPSS computation of the analysis reveals that students having extrovert personality demonstrate a significantly different result in their learning from the ones having introvert personality. The mean score of students having extrovert personality (78.57) is higher than the one of those having introvert personality (71.25). Therefore, it means that the achievement of teaching writing to the students having extrovert personality is better than the one to the students having introvert personality.

c. Hypothesis Testing 3

The last hypothesis to be tested was the interaction effect between the strategy and the students' personality styles on the students' writing achievement. The formulas of the second null and alternative hypotheses are described as follows:

Null hypotheses 3(H_0)₃ :

There was no interaction between the teaching strategy and the students' personality styles on the students' writing achievement.

Alternative hypotheses 3 (H_a)₃ :

There was an interaction between the teaching strategy and the students' personality styles on the students' writing achievement.

The criteria of significance are stated in the formulas: (1) if $\text{Sig.} \leq .05$, significant different: (2) if $\text{Sig.} \geq .05$, not significance different.

The hypotheses are:

Null Hypothesis : the data was significantly different or $\leq .05$

Alternative Hypothesis : the data was not significantly different or $\geq .05$

Table 4.13 The Result of Interaction Between Teaching Strategy and Learning Styles

Tests of Between-Subjects Effects

Dependent Variable: writing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1150.918 ^a	3	383.639	30.919	.000
Intercept	278579.584	1	278579.584	22451.850	.000
method	660.571	1	660.571	53.238	.000
personality	440.917	1	440.917	35.535	.000
method * personality	1.016	1	1.016	.082	.776
Error	570.762	46	12.408		
Total	283572.000	50			
Corrected Total	1721.680	49			

a. R Squared = .668 (Adjusted R Squared = .647)

The result of the SPSS computation of the above two-ways ANOVA reveals that the obtained significant value for the interaction effect between Collaborative strategy and personality styles was .776. The result shows that the obtained significant value was higher than the accepted significance level ($\text{sig.} .776 \geq .05$). It means that there was no enough evidence to reject the null hypothesis. Therefore,

there was no interaction between Collaborative strategy and personality styles on students' achievement in writing procedure texts.

D. Discussion of the Findings

This research is one of the efforts to generate some improvement in teaching writing to the eleventh grade students of the vocational high school students. It has been discussed in the previous chapter that Collaborative Writing is one of the alternatives to obtain the intention. The following is the elaboration discussions of the research findings.

1. There is significant difference between Collaborative Writing strategy and Conventional teaching for teaching writing.

Based on the findings of the study, the researcher draws a conclusion that the implementation Collaborative Writing is effective to help in generating and organizing the ideas for writing texts. Writing is usually considered the most difficult skill of English to master. One of the major problems is how to generate ideas and how to organize the ideas well. Heaton (1988: 135) states that writing skills are complex, requiring mastery not only of grammatical and rhetorical devices but also conceptual and judgmental elements. He also states that one of the many and varied skills necessary for good writing is treatment of content: the ability to think creatively and develop thoughts and excluding all irrelevant information. To overcome the problem, an outlining strategy in the form of Collaborative Writing strategy is proposed to be applied in teaching writing. It is relevant to Janes Bauwens and Jack J. Hourcade (1977:81) that state collaborative writing method offers

an authentic learning environment where students do not only develop their writing skills but also critical thinking and decision making skills. As members of a group work together to write, they share ideas, debate with one another, and make decisions. An individual tries to process and understand information based on his/her existing knowledge, which helps determine how the topic or issue is approached. When students' ideas vary, disagreement may arise and explanation becomes very important. Besides Harmer (2007:328) said that in collaborative writing method, there are two or more students who work together in writing. The purpose of collaborative writing is the students can generate the ideas, review, and evaluate their writing together so that they can share their ideas in writing process. As a result, they brave to express their ideas in written form confidently. Students become increasingly motivated to complete a writing task as their ideas emerge in organized form. Many students find writing difficult, and they find getting started the most difficult part of writing. Collaborative Writing reduces the difficulty by giving students an organizing strategy to get them started.

From regarding on the result of data analysis, it found that collaborative writing method is effective to teach writing. The previous researcher also had proved that collaborative writing method can be effective and improve in students' writing skill Such as the previous research which conducted in pre-experimental design by Purnomo (2014) showed that collaborative writing is effective in descriptive text at eight grade, Ramadhani (2017) used quasi experimental research that collaborative writing is effective in experiment class. From the previous studies above, the teacher can use this method as

alternative way in teaching English. Hence, the class will more live because the students' active to participate in the study so that they will not feel bored. So the teachers can use this method for their class based on some certain learning objective in Vocational High School level.

2. The writing achievement of students with extrovert personality is better than the one of those with introvert personality.

According to Gazzaniga and Heatherton (2002) as cited in Travolta et al., (2018) personality is someone's characteristic with feelings, thoughts, and behaviors that are formed by the time and the experience of the individual. It believes that each person has their unique because there is no one person is truly alike or exactly the same. Jung as cited in Laney (2002) defined the personality into two types; introversion and extraversion. Introversion is an individual's characteristic which orientates of ideas, emotions, and impressions (Laney, 2002). They can be categorized as closed-minded students. It means that they prefer working independently instead of staying in a group. While, extroversion is an individual's characteristic which orientates of people, activities, and things out of the individual (Laney, 2002). They have open-minded characteristics. They are actively involved with a group of people because they tend to be talkative in their daily life. Therefore, Suparman (2010:68) stated that the extrovert students tend to be better speakers than the introverts.

In this study, extrovert were better than introvert students. There was significant difference in students' writing achievement and in writing procedure text across students' personality styles. The mean of extrovert

personality styles students post-test score was 78.57, it was higher than introvert personality styles students which was 71.25. In other words, the extrovert students have better achievement in writing procedure text than introvert students. It is a contrast to (Revola: 2015) stated that students of introvert type had better result than extrovert type in writing skill.

3. There is no interaction between teaching strategy and students personality

The result of the SPSS computation of the above two-way ANOVA reveals that the obtained significant value was higher than the accepted significant level ($\text{sig} .776 \geq \text{sig}.0.05$). It means that there was no enough evidence to reject the null hypothesis. Therefore, there was no interaction between Collaborative Writing strategy and personality styles on students' achievement in writing procedure texts.