



CHAPTER IV

RESULT OF THE STUDY

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This chapter discussed the data which had been collected from the research in the field of study. The data were the result of experiment and control class, the result of post-test experiment and control class, and the result of data analysis.

A. Description of the Data

1. The result of Pre-Test score of the Control and Experiment Class

The Pre-Test was conducted to the first control class in XI IPA 4 room on august 27th, 2014, at 08.15-09.45 am. Then the experiment class was given pretest in XI IPA 2 room on august 26th, 2014, at 10.00-11.30 am. The Pre-test scores of the classes were presented in Table 4.1 and Table 4.2.

Table 4.1 the Pre-Test Score of Students Writing Ability of Experiment and Control Class

No	Control Class		Experiment Class	
	Students Code	Score	Students Code	Score
1	L1	84	C1	65
2	L2	60	C2	73
3	L3	60	C3	51
4	L4	67	C4	60
5	L5	52	C5	61
6	L6	64	C6	68
7	L7	60	C7	61
8	L8	64	C8	57
9	L9	55	C9	65
10	L10	82	C10	54

11	L11	59	C11	57
12	L12	63	C12	54
13	L13	48	C13	63
14	L14	57	C14	53
15	L15	65	C15	69
16	L16	61	C16	66
17	L17	59	C17	66
18	L18	60	C18	68
19	L19	62	C19	52
20	L20		C20	60
21	L21	54	C21	63
22	L22	64	C22	65
23	L23	56	C23	59
24	L24	61	C24	62
25	L25	61	C25	59
26	L26	56	C26	63
27	L27	46	C27	59
28	L28	65	C28	58
29	L29	58	C29	60
30	L30	56	C30	59
31	L31	64	C31	57
32	L32	55	C32	53
33	L33	54	C33	60
34	L34	57	C34	57
35	L35	65	C35	52
36			C36	70
SUM		2106		2179

Lowest score	46		51
Highest score	85		73
Mean	60.1714		60.5278
Standard deviation	7.48915		5.53165

To find the Sum, Lowest Score, Highest Score, Mean, and the Standard Deviation, researcher used manual calculation and SPSS 17.0.

Based on the result of research in class XI-IPA 4 as control class and XI-IPA 2 as experiment class before being taught by clustering technique in writing report text, the highest pre- test score of student control class was 85 and the lowest score of control class was 46 with sum of the data was 2106, mean was 60.1714, with standard deviation was 7.48915. In contrary, the highest score of experiment class was 73 and the lowest score of the experiment class was 51 with sum of the data was 2179, the mean was 60.5278 with Standard deviation was 5.53165.

Table 4.2 the Pre-Test Score of Students Writing Apprehension of Control Class And Experiment Class

No	Control Class		Experiment Class	
	Students Code	Score	Students Code	Score
1	L1	99	C1	84
2	L2	63	C2	83
3	L3	128	C3	89
4	L4	97	C4	78
5	L5	87	C5	72

6	L6	95	C6	73
7	L7	56	C7	77
8	L8	125	C8	85
9	L9	81	C9	82
10	L10	92	C10	80
11	L11	93	C11	91
12	L12	81	C12	74
13	L13	81	C13	81
14	L14	105	C14	81
15	L15	86	C15	81
16	L16	78	C16	94
17	L17	91	C17	109
18	L18	104	C18	97
19	L19	76	C19	67
20	L20	64	C20	105
21	L21	101	C21	70
22	L22	86	C22	77
23	L23	75	C23	91
24	L24	100	C24	89
25	L25	81	C25	87
26	L26	73	C26	76
27	L27	71	C27	82
28	L28	76	C28	65
29	L29	91	C29	87
30	L30	62	C30	105
31	L31	87	C31	96
32	L32	56	C32	80

33	L33	102	C33	82
34	L34	89	C34	92
35	L35	75	C35	86
			C36	75
SUM		3007		3023
Lowest score		56		65
Highest score		128		109
Mean		85.9143		83.97
Standard deviation		16.9143		10.305

To find the Sum, Lowest Score, Highest Score, Mean, and the Standard Deviation, researcher used manual calculation and SPSS 17.0.

Based on the result of research in class XI-IPA 4 as control class and XI-IPA 2 as experiment class before being taught by clustering technique in writing report text, the highest pre- test score of student control class was 125 and the lowest score of control class was 56 with sum of the data was 2998, mean was 85.66, with standard deviation was 16.155. In contrary, the highest score of experiment class was 109 and the lowest score of the experiment class was 65 with sum of the data was 3023, the mean was 83.97 with Standard deviation was 10.305

2. Result of Post-Test of Control and Experiment Class

The test of Post- Test score at the control class had been conducted on September, 18th 2014 (Thursday, at time 12.15-13.45) in class XI-IPA 4 with the number of student was 35 students. Then the experiment class had been conducted on September, 20th 2014 (Saturday, at time 12.15-

13.45) in the class XI-IPA 2 with the number of student was 36 students. The Pre-test scores of both of class were presented in 4.3 and 4.4:

Table 4.3 the Posttest Score of Students Writing Ability of Control and Experiment Class

No	Control Class		Experiment Class	
	Students Code	Score	Students Code	Score
1	L1	70	C1	76
2	L2	67	C2	78
3	L3	55	C3	70
4	L4	54	C4	71
5	L5	57	C5	64
6	L6	63	C6	70
7	L7	65	C7	75
8	L8	81	C8	64
9	L9	60	C9	73
10	L10	65	C10	57
11	L11	63	C11	62
12	L12	58	C12	72
13	L13	63	C13	75
14	L14	58	C14	62
15	L15	66	C15	73
16	L16	55	C16	64
17	L17	59	C17	77
18	L18	61	C18	70
19	L19	55	C19	65

20	L20	76	C20	73
21	L21	60	C21	65
22	L22	68	C22	74
23	L23	57	C23	65
24	L24	63	C24	68
25	L25	72	C25	84
26	L26	62	C26	69
27	L27	63	C27	64
28	L28	70	C28	69
29	L29	65	C29	73
30	L30	56	C30	74
31	L31	62	C31	73
32	L32	64	C32	73
33	L33	64	C33	76
34	L34	64	C34	87
35	L35	64	C35	79
36			C36	76
SUM		2205		2560
Lowest score		54		57
Highest score		81		87
Mean		63.59951		71.1111
Standard deviation		5.99510		6.33709

To find Lowest Score, Highest Score, Mean, and the Standard Deviation, researcher used manual calculation and SPSS 17.0.

Based on the result of research in class XI-IPA 4 as control class which taught by listing technique, the highest pre-test score of students of control class was 81 and the lowest score was 54 with sum was 2205, so the mean is 63.59951 and standard deviation was 5.99510. Whereas, XI-IPA 2 as experiment class after being taught by clustering technique in writing report text. The highest score of students of experiment class was 87, and the lowest score was 57, with sum was 2560, so the mean is 71.1111 and Standard deviation was 6.33709.

Table 4.4 the Posttest Score of Students Writing Apprehension of Control and Experiment Class

No	Control Class		Experiment Class	
	Students Code	Score	Students Code	Score
1	L1	100	C1	92
2	L2	79	C2	93
3	L3	128	C3	96
4	L4	96	C4	85
5	L5	95	C5	86
6	L6	101	C6	91
7	L7	105	C7	83
8	L8	114	C8	94
9	L9	90	C9	89
10	L10	76	C10	95
11	L11	100	C11	107
12	L12	77	C12	105
13	L13	83	C13	84
14	L14	104	C14	89

15	L15	73	C15	108
16	L16	73	C16	104
17	L17	93	C17	122
18	L18	103	C18	101
19	L19	85	C19	76
20	L20	109	C20	113
21	L21	107	C21	77
22	L22	92	C22	83
23	L23	80	C23	104
24	L24	90	C24	99
25	L25	83	C25	101
26	L26	81	C26	81
27	L27	82	C27	83
28	L28	86	C28	95
29	L29	92	C29	103
30	L30	78	C30	128
31	L31	92	C31	101
32	L32	104	C32	103
33	L33	102	C33	93
34	L34	96	C34	96
35	L35	78	C35	103
36			C36	102
SUM		3227		3465
Lowest score		73		76
Highest score		128		128
Mean		92.20		96.25
Standard deviation		12.2000		11.6481

To find Lowest Score, Highest Score, Mean, and the Standard Deviation, researcher used manual calculation and SPSS 17.0.

Based on the result of research in class XI-IPA 4 as control class which taught by listing technique, the highest post-test score of students of control class was 128 and the lowest score was 73 with sum was 3227, so the mean is 92.20 and standard deviation was 12.840. Whereas, XI-IPA 2 as experiment class after being taught by clustering technique in writing report text. The highest score of students of experiment class was 112, and the lowest score was 65, with sum was 3079, so the mean is 88.03 and Standard deviation was 11.165.

3. Comparison Result of Pre-Test and Post- Test Score of Experiment Class

a. The Comparasion of Pre-Test and Post-Test Scores in Writing Ability of Experiment Class

The comparison between students' pre-test and post-test after doing the experiment can be seen in the following Table 4.5.

Table 4.5 the Comparison Result of Pre- Test and Post- Test Score of Writing Ability Experiment Class

No	Test	Students Code	Experiment Class		Improvement
			Pre-test	Post-test	
1		C1	65	76	11
2		C2	73	78	5
3		C3	51	70	19

4	Writing Ability	C4	60	71	11
5		C5	61	64	3
6		C6	68	70	2
7		C7	61	75	14
8		C8	57	64	7
9		C9	65	73	8
10		C10	54	57	3
11		C11	57	62	5
12		C12	54	72	18
13		C13	63	75	12
14		C14	53	62	9
15		C15	69	73	4
16		C16	66	64	2
17		C17	66	77	10
18		C18	68	70	2
19		C19	52	65	13
20		C20	60	73	13
21		C21	63	65	1
22		C22	65	74	9
23		C23	59	65	6
24		C24	62	68	6
25		C25	59	84	25
26		C26	63	69	6
27		C27	59	64	5
28		C28	58	69	9
29		C29	60	73	13
30		C30	59	74	15

31		C31	57	73	16
32		C32	53	73	16
33		C33	60	76	16
34		C34	57	87	30
35		C35	52	79	27
36		C36	70	76	6
	Sum		2179	2560	-
	Highest score		73	87	-
	Low score		51	57	-
	Mean		60.5278	71.1111	-
	Standard deviation		5.53165	6.33709	-

Based on data above, mean of pre-test were 60.52 in pretest to 71.11 in post-test. It could be concluded that the students writing ability of experiment class was increased from pre-test to post-test.

b. The Comparison of Pre-Test and Post-Test Scores in Writing Apprehension of Experiment Class

The comparison between students' pre-test and post-test after doing the experiment can be seen in the following Table 4.6.

Table 4.6 the Comparison Result of Pre- Test and Post- Test Score of Students Writing Apprehension Experiment Class

No	Test	Students Code	Experiment Class		Improvement
			Pre-test	Post-test	
1		C1	84	92	8
2		C2	83	93	10

3	Writing Apprehension	C3	89	96	7
4		C4	78	85	7
5		C5	72	86	14
6		C6	73	91	18
7		C7	77	83	6
8		C8	85	94	9
9		C9	82	89	7
10		C10	80	95	15
11		C11	91	107	17
12		C12	74	105	31
13		C13	81	84	3
14		C14	81	89	8
15		C15	81	108	27
16		C16	94	104	10
17		C17	109	122	14
18		C18	97	101	4
19		C19	67	76	9
20		C20	105	113	8
21		C21	70	77	7
22		C22	77	83	6
23		C23	91	104	13
24		C24	89	99	10
25		C25	87	101	15
26		C26	76	81	5
27		C27	82	83	1
28		C28	65	95	30
29		C29	87	103	26

30		C30	105	128	23
31		C31	96	101	5
32		C32	80	103	23
33		C33	82	93	11
34		C34	92	96	4
35		C35	86	103	27
36		C36	75	102	22
	Sum		3023	3465	-
	Highest score		65	76	-
	Low score		109	128	-
	Mean		83.97	96.25	-
	Standard deviation		10.305	11.6481	-

Based on data above, mean of pre-test were 83.97 in pretest to 96.25 in post-test. It could be concluded that the students writing apprehension of experiment class was reduced from pre-test to post-test.

B. Testing Normality and Homogeinity

1. Normality Test

In this study, researcher used One-Sample Kolmogorov-Smirnov Test to test the normality.

a. Testing of Normality Writing Ability of Pre- Test Control and Experiment Class

Table 4.7 Testing of Normality One-Sample Kolmogorov-Smirnov Test

	Control	Experiment
N	35	36
Normal Parameters ^{a, b} Mean	60.1714	60.5278

	Std. Deviation	7.48915	5.53165
Most Extreme Differences	Absolute	.174	.094
	Positive	.174	.094
	Negative	-.091	-.068
Kolmogorov-Smirnov Z		1.028	.561
Asymp. Sig. (2-tailed)		.241	.911

a. Test distribution is Normal.

b. Calculated from data.

Based on the calculation used SPSS program, the asymptotic significance normality of control class was 0.241 and experiment class 0.911. Then the normality both of class was consulted with table of Kolmogorov- Smirnov with the level of significance 5% ($\alpha=0.05$). Because asymptotic significance of control = $0.854 \geq \alpha = 0.05$, and asymptotic significance of experiment = $0.949 \geq \alpha = 0.05$. It could be concluded that the data was normal distribution.

b. Testing of Normality Writing Apprehension for Pre-test of Control Class and Experiment

4.8 Testing of Normality One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test

		Control	Experiment
N		35	36
Normal Parameters ^{a,b}	Mean	85.9143	83.9722
	Std. Deviation	16.76195	10.30530
Most Extreme Differences	Absolute	.072	.104
	Positive	.072	.104
	Negative	-.057	-.063
Kolmogorov-Smirnov Z		.429	.622
Asymp. Sig. (2-tailed)		.993	.834

a. Test distribution is Normal.

b. Calculated from data.

Based on the calculation used SPSS program, the asymptotic significance normality of control class was 0.993 and experiment class 0.834. Then the normality both of class was consulted with table of Kolmogorov- Smirnov with the level of significance 5% ($\alpha=0.05$). Because asymptotic significance of control = $0.993 \geq \alpha = 0.05$, and asymptotic significance of experiment = $0.834 \geq \alpha = 0.05$. It could be concluded that the data was normal distribution.

c. Testing of Normality Writing Ability for Post-test of Control Class and Experiment

4.9 Testing of Normality One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test

		Control	Experimnet
N		35	36
Normal Parameters ^{a,b}	Mean	63.0000	71.1111
	Std. Deviation	5.99510	6.33709
Most Extreme Differences	Absolute	.141	.117
	Positive	.141	.110
	Negative	-.071	-.117
Kolmogorov-Smirnov Z		.833	.703
Asymp. Sig. (2-tailed)		.492	.706

a. Test distribution is Normal.

b. Calculated from data.

Based on the calculation used SPSS program, the asymptotic significance normality of control class was 0.492 and experiment class 0.706. Then the normality both of class was consulted with table of Kolmogorov- Smirnov with the level of significance 5% ($\alpha=0.05$). Because asymptotic significance of control = $0.492 \geq \alpha = 0.05$, and asymptotic significance of experiment = $0.706 \geq \alpha = 0.05$. It could be concluded that the data was normal distribution.

d. Testing of Normality Writing Apprehension for Post-test of Control Class and Experiment

4.10 Testing of Normality One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test

		Control	Experiment
N		35	36
Normal Parameters ^{a, b}	Mean	92.2000	96.2500
	Std. Deviation	12.84019	11.64811
Most Extreme Differences	Absolute	.106	.087
	Positive	.106	.087
	Negative	-.071	-.075
Kolmogorov-Smirnov Z		.627	.524
Asymp. Sig. (2-tailed)		.826	.946

a. Test distribution is Normal.

b. Calculated from data.

Based on the calculation used SPSS program, the asymptotic significance normality of control class was 0.826 and experiment class 0.946. Then the normality both of class was consulted with table of Kolmogorov- Smirnov with the level of significance 5% ($\alpha=0.05$). Because asymptotic significance of control = $0.826 \geq \alpha = 0.05$, and asymptotic significance of experiment = $0.946 \geq \alpha = 0.05$. It could be concluded that the data was normal distribution.

2. Homogeneity Test

In this study, researcher used Levene Test Statistic to test the homogeneity of variance.

4.11 Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
.916	7	276	.307

Based on the calculating used SPSS 17.0 program, the data showed the significance was 0.307. The significant of the levene test statistic was higher than 0.05 ($0.307 \geq 0.05$). It meant that the scores were not violated the homogeneity.

3. Testing Hypothesis

The researcher used One - Ways Anova to test the hypothesis with significance level $\alpha = 0.05$. The researcher used manual calculation and SPSS 17.0 Program to test the hypothesis using One - ways Anova. The criteria of H_0 is accepted when $F_{\text{value}} \leq F_{\text{table}}$, and the H_0 is refused when $F_{\text{value}} \geq F_{\text{table}}$. Then the criteria H_a is accepted when $F_{\text{value}} \geq F_{\text{table}}$, and H_a is refused when $F_{\text{value}} \leq F_{\text{table}}$. Or The criteria of H_0 was accepted when the significant value ≥ 0.05 , and H_0 was refused when the significant value ≤ 0.05 .

To make sure the manual calculation, SPSS 17.0 statistic program was conducted in this research.

Table. 4.12 One-Way ANOVA manual calculation

	Sum of Squares	Df	Mean Square	F	Sig.
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Between Groups	27608.834	3	9202.945	97.829	.000
Within Groups	12981.906	138	94.072		
Total	40590.739	141			

Based on the SPSS 17.0 statistic program calculation, the result showed that Degree of Freedom Between Groups (DFb)= 3 and Degree of Freedom Within Groups (DFw)= 138 ($F_{table}=2.75$). Then F_{value} was 97.829. It showed F_{value} was higher than F_{table} ($97.829 \geq 2.75$). So, H_0 was refused and H_a was accepted. There was significant differences among groups after doing the treatment, with $F_{value} = 97.829$ and the significant level was lower than alpha (α) ($0.00 \leq 0.05$).

Knowing that there was a significant difference among groups after doing the treatment, researcher needed to test the hypotheses. Because ANOVA was only to know that there was significant differences among groups, not to know where the differences among groups are, to answer the research problems and test the hypotheses, researcher applied **Post Hoc Test**.

Table 4.13 Post Hoc

(I) Subjects	(J) Subjects	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
CG Writing Ability	EG Writing Ability	-8.11111*	2.30236	.001	-12.6636	-3.5586
	CG Writing App	-29.20000*	2.31852	.000	-33.7844	-24.6156
	EG Writing App	-33.25000*	2.30236	.000	-37.8025	-28.6975
EG Writing Ability	CG Writing Ability	8.11111*	2.30236	.001	3.5586	12.6636
	CG Writing App	-21.08889*	2.30236	.000	-25.6414	-16.5364
	EG Writing App	-25.13889*	2.28609	.000	-29.6592	-20.6186
CG Writing App	CG Writing Ability	29.20000*	2.31852	.000	24.6156	33.7844
	EG Writing Ability	21.08889*	2.30236	.000	16.5364	25.6414
	EG Writing App	-4.05000	2.30236	.081	-8.6025	.5025
EG Writing App	CG Writing Ability	33.25000*	2.30236	.000	28.6975	37.8025
	EG Writing Ability	25.13889*	2.28609	.000	20.6186	29.6592
	CG Writing App	4.05000	2.30236	.081	-.5025	8.6025

*. The mean difference is significant at the 0.05 level.

The criteria of H_0 is accepted when the significant value is higher than alpha (α) (0.05), and H_0 is refused when the significant value is lower than alpha (α) (0.05).

1. First, based on the calculation above used manual calculation and SPSS program of Post Hoc Test, Experiment Group of writing ability showed the significant value (0.01) was lower than the alpha (0.05). It meant that there was significant effect of clustering technique on students writing ability. Thus, H_a that state Using clustering technique gives

significant effect for experimental class in writing report text at eleventh grade students at MAN Model Palangka Raya was accepted and H_0 that state using clustering technique does not have a statistically significant effect of the eleventh grade students of MAN Model Palangka Raya was rejected.

2. Second, on the calculation above used manual calculation and SPSS program of Post Hoc Test, Experiment Group of writing apprehension showed the significant value (0.01) was lower than the alpha (0.05). It meant that there was significant effect of clustering technique on students writing apprehension. Therefore, H_a that state using clustering technique give significances effect for experiment class in writing apprehension of the eleventh grade students of MAN model Palangka Raya was accepted and H_0 that state using clustering technique does not have a statically significant effect on writing apprehension of the eleventh grade students of MAN Model Palangka Raya was rejected.
3. Third, on the calculation above used manual calculation and SPSS program of Post Hoc Test, Experiment Group of writing ability and apprehension showed the significant value (0.00) was lower than the alpha (0.05). It meant that there was significant effect of clustering technique on students writing ability and apprehension. Therefore, H_a that state using clustering technique give significances effect for experiment class in writing apprehension of the eleventh grade students of MAN model Palangka Raya was accepted and H_0 that state using clustering technique does not have a statically significant effect on writing apprehension of the eleventh grade students of MAN Model Palangka Raya was rejected.

4. Interpretation of The F-Ratios

Based on the result of the research, researcher interpreted that:

1. Teaching using clustering technique was more effective on students' writing ability than teaching writing without giving the clustering technique. It was shown that the result showed significant value was lower than alpha ($0.00 \text{ lower} \leq 0.05$).
2. Teaching using clustering technique was more effective on students writing apprehension than teaching writing without giving clustering technique. It was shown that the result showed significant value was lower than alpha ($0.01 \text{ lower} \leq 0.05$).
3. There was any different effect between teaching writing using clustering technique using on students' writing ability and apprehension, It was based on the calculation used SPSS 17.0 statistic program, the result showed significant value was higher than alpha ($0.81 \geq 0.05$).