

CHAPTER IV

RESULT AND DISCUSSION

A. Result

The data that were taken from the scorers of the test of both groups were analyzed by using statistical calculation of t-test. There were some steps to analyze the data. First, the students' scores before and after using the treatments by using the situational pictures of experimental group.

Table. 1
The score of experimental group

No	induct	Name	Before (X ₁)	After (X ₂)
1	7837	AANG PRIYATNA	69	68
2	7839	ACHMAD ALIF. Y	67	70
3	7854	AJENG DWI. A	72	73
4	7859	ALIY AKBAR. H. A	75	73
5	7884	B. TRISNAMUKTI	72	72
6	7888	BRIAN GALANG. A	70	73
7	7901	DEWI NOVIYANTI	71	73
8	7902	D. KUMALASARI	69	70
9	7906	DICKY LISTIAN. V	72	74
10	7908	DIO NURDIN. S	75	75
11	7909	DIRGA PRAYA. W	73	76
12	7913	DWIJO KUNCORO. P	72	75
13	7920	EKA NOVA. P	70	72
14	7939	FANDHI NUR. A	67	68
15	7946	FEBRIAN FAJAR. I	62	63
16	7967	HARFIAN. A	60	60
17	7969	HENDRIK GHOZALI	61	60
18	7976	INTIHADH. W	60	63
19	7977	IRMA MAULIDINA	68	69
20	7989	KHUMAIRAH	70	72
21	8001	M. ALFIANDA. S	62	63
22	8021	M. BAGUS F. F	72	73

23	8024	M. AFIFI. R	62	64
24	8052	NANIS AYU. I	73	74
25	8055	NAUVAL ANABANI	65	68
26	8061	NORMALITA SARI	68	70
27	8068	NUR FAUZIYAH	67	70
28	8077	NYIMAS SINDI. S	77	80
29	8097	RATIH HARUM	70	75
30	8103	RIZA NUR. R	73	75
31	8105	RIZQI FITRIA. H	75	77
32	8108	RIZKY AKBAR. M	61	65
33	8117	SAJIDA BASWEDAN	75	78
34	8127	SRI WULANDARI	70	74
35	8135	TRI SUTRIANI	69	72
36	8138	VETY IFAYANI	70	72
37	8140	WAHID MUFIDHIN	68	74
38	8161	ZULFIA NURRAHMI	69	70
		Total	2624	2692
		M	69. 05	70. 86

Next, this is the students' scores before the treatments from the writer and without the treatments in control group.

Table. 2

The score of control group

No	induct	Name	Before (Y ₁)	Without(Y ₂)
1	7841	ACH. FAJAR. M	72	70
2	7846	ACHMAD YANI	66	64
3	7848	ADYATAMA. A	75	72
4	7876	ARETA ADIWIDIO	65	65
5	7885	BILLY. A. R	73	72
6	7887	BRAMANTIO. A. N	72	72
7	7914	DYAH AYU. K	74	73
8	7915	DYAH KURNIA. N	73	70
9	7922	ENGGAR PRATIWI	72	74
10	7927	ERLINA. M. S	72	72
11	7934	FADIL RIJAL	65	65
12	7948	FEBRIYANA. R. H	75	76
13	7972	IBNU WIRAWAN	60	61

14	7975	INDHY PRADIPTA	70	65
15	7978	ISMA CHOIRIYAH	68	65
16	7982	JEFRY. S	63	60
17	7985	KHAFIDZ	67	65
18	7991	KRISNU TANTRA. Y	65	70
19	8019	M. ROBAKH	64	60
20	8020	M. ROZY. A	62	62
21	8030	M. FAUZAN	60	60
22	8033	M. IQMAL. F	69	68
23	8035	M. MAULANA. I. F	65	64
24	8042	M. SYAMSUL ARIF	62	60
25	8056	NIDA FITRIA. A	74	70
26	8074	NURUL FADLILAH	73	75
27	8079	PATRIUS ANDAN. W	70	72
28	8082	PUTRI AZIYANA	72	73
29	8086	PUTRI YUDHAWATI	73	75
30	8089	RACHMAD DYAS. S	75	73
31	8092	RAFIQAH ALFANI	69	65
32	8094	RAHMI DYAH. L	71	70
33	8100	RIA ALFA. S	69	71
34	8107	RIZKI WAHYU. U	63	68
35	8121	SARABYLA. I	75	72
36	8124	SILVY NUR. F	70	65
37	8141	WAHYI BA'DAL. F	75	76
		TOTAL	2558	2530
		M	69. 13	68. 37

Table. 3

The Calculation Scores of Experimental Group

No	induct	Name	Before (X ₁)	After (X ₂)	d	d ²
1	7837	AANG PRIYATNA	69	68	-1	1
2	7839	ACHMAD ALIF. Y	67	70	3	9
3	7854	AJENG DWI. A	72	73	1	1
4	7859	ALIY AKBAR. H. A	75	73	2	4
5	7884	B. TRISNAMUKTI	72	72	0	0
6	7888	BRIAN GALANG. A	70	73	3	9
7	7901	DEWI NOVIYANTI	71	73	2	4

8	7902	D. KUMALASARI	69	70	1	1
9	7906	DICKY LISTIAN. V	72	71	-1	1
10	7908	DIO NURDIN. S	75	75	0	0
11	7909	DIRGA PRAYA. W	73	70	-3	9
12	7913	DWIJO KUNCORO. P	72	75	3	9
13	7920	EKA NOVA. P	70	72	2	4
14	7939	FANDHI NUR. A	67	68	1	1
15	7946	FEBRIAN FAJAR. I	62	63	1	1
16	7967	HARFIAN. A	60	60	0	0
17	7969	HENDRIK GHOZALI	61	60	1	1
18	7976	INTIHADH. W	60	63	3	9
19	7977	IRMA MAULIDINA	68	69	1	1
20	7989	KHUMAIRAH	70	68	-2	4
21	8001	M. ALFIANDA. S	62	63	1	1
22	8021	M. BAGUS F. F	72	73	1	1
23	8024	M. AFIFI. R	62	64	2	4
24	8052	NANIS AYU. I	73	74	1	1
25	8055	NAUVAL ANABANI	65	68	3	9
26	8061	NORMALITA SARI	68	70	2	2
27	8068	NUR FAUZIYAH	67	70	3	9
28	8077	NYIMAS SINDI. S	77	80	3	9
29	8097	RATIH HARUM	70	75	5	25
30	8103	RIZA NUR. R	73	75	2	4
31	8105	RIZQI FITRIA. H	75	77	2	4
32	8108	RIZKY AKBAR. M	61	65	4	16
33	8117	SAJIDA BASWEDAN	75	78	3	9
34	8127	SRI WULANDARI	70	74	4	16
35	8135	TRI SUTRIANI	69	72	3	9
36	8138	VETY IFAYANI	70	72	2	4
37	8140	WAHID MUFIDHIN	68	65	-3	9
38	8161	ZULFIA NURRAHMI	69	70	1	1
		Total	2624	2692	56	211
		M	69.05	70.86	1.47	5.55

THE CALCULATION OF EXPERIMENTAL GROUP

$$Md = \frac{\sum d}{N} = \frac{56}{38} = \mathbf{1.47}$$

$$t = \frac{Md}{\sqrt{\frac{\sum X^2 d}{N(N-1)}}} = \frac{1.47}{\sqrt{\frac{128,48}{1406}}} = \frac{1.47}{0,091}$$

$$= \frac{1.47}{0,302} = \mathbf{4.86}$$

$$\begin{aligned} \sum X^2 d &= \frac{\sum d^2}{N} - \frac{(\sum d)^2}{N} \\ &= \frac{211}{38} - \frac{(56)^2}{38} \\ &= \frac{211}{38} - \frac{3136}{38} \\ &= \frac{211 - 3136}{38} = \mathbf{128.48} \end{aligned}$$

$$\begin{aligned} df &= N - 1 \\ &= 38 - 1 = \mathbf{37} \end{aligned}$$

$$t \text{ table} = \mathbf{1,697}$$

$$t \text{ value} > t \text{ table} = \mathbf{128,48 > 1.697}$$

$$SD \text{ exp. Group} = \sqrt{\frac{\sum d^2}{N}}$$

$$= \sqrt{\frac{211}{38}} = 5.55 = 2.35$$

$$M_x = \frac{\sum X}{N} = \frac{2692}{38} = 70.84$$

$$\sum X^2 = \sum X^2 - \frac{(\sum X)^2}{N} = 191729 - \frac{(2692)^2}{38} = 1022.052$$

Table 4.

The calculation scores of control group

No	induct	Name	Before (Y ₁)	Without(Y ₂)	d	d ²
1	7841	ACH. FAJAR. M	72	70	-2	4
2	7846	ACHMAD YANI	66	64	-2	4
3	7848	ADYATAMA. A	75	72	-3	9
4	7876	ARETA ADIWIDIO	65	65	0	0
5	7885	BILLY. A. R	73	72	-1	1
6	7887	BRAMANTIO. A. N	72	72	0	0
7	7914	DYAH AYU. K	74	73	-1	1
8	7915	DYAH KURNIA. N	73	70	-3	9
9	7922	ENGGAR PRATIWI	72	74	2	4
10	7927	ERLINA. M. S	72	72	0	0
11	7934	FADIL RIJAL	65	65	0	0
12	7948	FEBRIYANA. R. H	75	76	1	1
13	7972	IBNU WIRAWAN	60	61	1	1
14	7975	INDHY PRADIPTA	70	65	-5	25
15	7978	ISMA CHOIRIYAH	68	65	-3	9
16	7982	JEFRY. S	63	60	-3	9
17	7985	KHAFIDZ	67	65	-2	4
18	7991	KRISNU TANTRA. Y	65	70	5	25
19	8019	M. ROBAKH	64	60	-4	16
20	8020	M. ROZY. A	62	62	0	0
21	8030	M. FAUZAN	60	60	0	0
22	8033	M. IQMAL. F	69	68	-1	1

23	8035	M. MAULANA. I. F	65	64	-1	1
24	8042	M. SYAMSUL ARIF	62	60	-2	4
25	8056	NIDA FITRIA. A	74	70	-4	16
26	8074	NURUL FADLILAH	73	75	2	4
27	8079	PATRIUS ANDAN. W	70	72	2	4
28	8082	PUTRI AZIYANA	72	73	1	1
29	8086	PUTRI YUDHAWATI	73	75	2	4
30	8089	RACHMAD DYAS. S	75	73	-2	4
31	8092	RAFIQAH ALFANI	69	65	-4	16
32	8094	RAHMI DYAH. L	71	70	-1	1
33	8100	RIA ALFA. S	69	71	2	4
34	8107	RIZKI WAHYU. U	63	68	5	25
35	8121	SARABYLA. I	75	72	-3	9
36	8124	SILVY NUR. F	70	65	-5	25
37	8141	WAHYI BA'DAL. F	75	76	1	1
		TOTAL	2558	2530	-28	242
		M	69.13	68.37	-0.75	6.54

THE CALCULATION SCORE OF CONTROL GROUP

$$Md = \frac{\sum d}{N} = \frac{-28}{37} = -0.75$$

$$\begin{aligned} \sum X^2 d &= \sum d^2 - \frac{(\sum d)^2}{N} \\ &= 242 - \frac{(-28)^2}{37} \\ &= 242 - 21.18 = \mathbf{220.82} \end{aligned}$$

$$\begin{aligned}
 t &= \frac{Md}{\sqrt{\frac{\sum X^2 d}{N(N-1)}}} = \frac{-0.75}{\sqrt{\frac{220.82}{1332}}} = \frac{-0.75}{\sqrt{0.165}} \\
 &= \frac{-0.75}{0.40} = -1.891
 \end{aligned}$$

$$\begin{aligned}
 df &= N - 1 \\
 &= 37 - 1 = 36
 \end{aligned}$$

$$t_{\text{table}} = 1.697$$

$$t_{\text{value}} < t_{\text{table}} = -1.891 < 1.697$$

$$\begin{aligned}
 \text{SD cont. Group} &= \frac{\sum d^2}{N} \\
 &= \frac{242}{37} = 6.54 = 2.55
 \end{aligned}$$

$$\begin{aligned}
 t &= \frac{X_1 - X_2}{\sqrt{\frac{(SDe_g^2) - (SDc_g^2)}{N_1 - 1} - \frac{(SDe_g^2) - (SDc_g^2)}{N_2 - 1}}} = \frac{2692 - 2530}{\sqrt{\frac{2.35}{37} - \frac{2.55}{36}}} \\
 &= \frac{162}{\sqrt{6.35 - 0.07}} = \frac{162}{2.37} = 68.35
 \end{aligned}$$

$$df = df EG + df CG = 37 + 36 = 73$$

$$t \text{ table} = 1,671$$

$$t \text{ value} > t \text{ table} = 68,35 > 1,671$$

B. Discussion

From the result above, it could be shown that the differences of the pre mean scores of two groups are not quite far. The experimental groups' score (70.86) was higher than control groups' score (68.37). It means that at beginning, the students of the two groups had a little difference in their writing ability. While, the score of the experimental group was higher than the control group amount (2.49).

After finding out the difference of the test scores between experimental group and control group, the next step was to find out whether there was an increase in the whole scores before and the test scores in both groups. The scores and the calculation could be seen in the table.

The increased of the scores in control group was lower than in the experimental group. There was an effect between the scores before the treatment and the writers' test after using the situational pictures.

C. Hypothesis Testing

Table. 5

The result of t-test calculation.

df	T value	T table	Significant level
73	68,35	1,671	0.05

Table.6

The calculation final scores of experimental group and control group.

No	EG (X)	CG (Y)	X ²	Y ²
1	68	70	4624	4900
2	70	64	4900	4096
3	73	72	5329	5184
4	73	65	5329	4225
5	72	72	5184	5184
6	73	72	5329	5184
7	73	73	5476	5329
8	70	70	4900	4900
9	74	74	5476	5476
10	75	72	5625	5184
11	76	65	5776	4225
12	75	76	5625	5776
13	72	61	5184	3600
14	68	65	4624	4900
15	63	65	3969	4225
16	60	60	3600	3600
17	60	65	3600	4225
18	63	70	3969	4900
19	68	60	4624	3600
20	72	62	5184	3844
21	63	60	3969	3600
22	73	68	5329	4624
23	64	64	4096	4096
24	74	60	5476	3600
25	68	70	4624	4900
26	70	75	4900	5625
27	70	72	4900	5184

28	80	73	6400	5329
29	75	75	5625	5625
30	75	73	5625	5329
31	77	65	5929	4225
32	65	70	4225	4900
33	78	71	6084	5041
34	74	68	5476	4624
35	72	72	5184	5184
36	72	65	5184	4900
37	74	76	5476	5776
38	70	-	4900	-
T	2692	2530	191729	162110
M	70.86	68.37	5045.5	4381.35

Table 7.

The scores of experimental and control group

Group	N	Mean		Standard devise	T value	T table
		X	Y			
Exp. group	38	69.05	70.86	2.35	128,48	1,697
Cntrol. group	37	69.13	68.37	2.55	-1891	1,697