

CHAPTER IV

THE RESULT AND DISCUSSION

A. Description of Data

In this chapter the writer would like to present the description of the data obtained. As writer stated at the previous chapter that the population of the student of SMA Negeri 1 Baros and the subject of this research is the tenth grade students. In this research, the writer divided them into two classes, 30 students as experimental class, it is from class X MIPA 1, and 29 students as control class, it is from X MIPA 2.

To find out the effectiveness of Moodle, the writer identified some result, they are: the score of student before treatment, and the score of student after treatment, the differences between pre-test and post-test scores of students and from the students' condition between the students who are learning by making a project and the students who are not learning by making a Moodle.

To know the effectiveness of Moodle in Teaching Descriptive Writing, the writer gave the test to students as the sample both at the experimental class and at control class. The test used in this research divided into two types, there are pre-test and post-test, the pre-test is the test that is given before treatment, and the post-test is given after treatment.

The maximum score of contents/ ideas was 30, the maximum score of organization was 20, the maximum score of vocabulary was 20, the maximum score of language use was 25,

and the maximum score of mechanic was 5. The highest total score of all criteria as 100, and the lowest score of all criteria was 34. The writer describes the data at experimental and control class as bellow:

1. Experimental Class

The writer described the result of a pre-test at the experimental class by the table as follow:

Table 4.1

The Students' score of pre-test at the experimental class

No.	Respondents	CRITERIA					Score
		Content	Organization	Vocabulary	Language Use	Mechanics	
1	AP	20	13	12	11	3	59
2	ADJ	16	10	9	10	2	47
3	ARI	13	7	7	5	2	34
4	ARO	21	13	11	13	3	61
5	AD	18	13	12	10	2	55
6	AF	23	14	15	13	3	68
7	BR	15	10	10	9	2	46
8	DM	20	15	14	15	3	67
9	EN	19	15	17	17	3	71
10	ES	23	15	14	13	3	68
11	FR	18	17	16	16	2	69
12	HN	15	10	13	14	2	54
13	II	14	9	8	7	2	40
14	IR	22	17	17	20	3	79
15	KM	20	15	17	15	3	70

16	LA	25	18	17	19	3	82	
17	MK	16	16	14	15	2	63	
18	MF	16	11	10	10	2	49	
19	NH	13	7	7	5	2	34	
20	NS	17	10	15	17	2	61	
21	PA	23	14	14	13	3	67	
22	RM	17	15	18	15	3	68	
23	SN	20	13	14	12	2	61	
24	SD	15	14	13	13	2	57	
25	SG	22	14	13	12	3	64	
26	SDW	20	14	12	13	3	62	
27	SM	20	15	14	14	2	65	
28	TS	25	16	15	13	3	72	
29	VQ	17	15	15	16	3	66	
30	W K	14	7	7	5	2	35	
N = 30		Total Score					1794	
		Average					59.8	

The *Table 4.1* above showed that the result of the students' pre-test scores on the criteria in writing on descriptive text at the experimental class. The data showed that the maximum score was 82 and the minimum score was 34. One student who got the maximum and two students who got the minimum score. The average score of the pre-test was 59,8.

While the result of a post-test score at the experimental class got better. It can be describe as follow:

Table 4.2*The Students' score of post-test at the experimental class*

No.	Respondents	CRITERIA					Score
		Content	Organization	Vocabulary	Language Use	Mechanics	
1	AP	22	15	16	13	4	70
2	ADJ	20	17	15	16	3	71
3	Ari	19	16	17	15	3	70
4	ARo	24	17	17	16	4	78
5	AD	19	13	14	14	3	63
6	AF	25	20	20	17	4	86
7	BR	19	13	15	14	3	64
8	DM	23	18	15	15	3	74
9	EN	22	15	17	17	3	74
10	ES	25	18	17	17	4	81
11	FR	20	17	16	17	3	73
12	HN	18	16	14	14	3	65
13	II	20	17	15	11	3	66
14	IR	24	18	18	20	4	84
15	KM	26	19	20	16	3	84
16	LA	28	19	18	22	4	91
17	MK	19	17	15	16	3	70
18	MF	22	18	17	17	4	78
19	NH	17	11	10	10	2	50

20	NS	19	17	16	17	3	72	
21	PA	25	19	19	17	4	84	
22	RM	19	16	18	17	3	73	
23	SN	26	19	17	17	4	83	
24	SD	19	16	17	15	3	70	
25	SG	25	19	19	17	4	84	
26	SDW	25	18	17	18	4	82	
27	SM	26	18	18	17	4	83	
28	TS	28	19	19	23	4	93	
29	VQ	22	17	17	16	3	75	
30	WK	19	17	15	16	3	70	
N = 30		Total Score					2261	
		Average					75.36	

The *Table 4.2* above showed that the results of the students' post-test scores on the criteria of writing descriptive text at the experimental class. The data showed that the maximum score was 93, and the minimum score was 50.

Based on the explanation above, it is showed the result of post-test at the experimental class got the significant improvement after giving treatment, it is seen from the average of the post-test was better than the average of the pre-test, that $59,8 < 75.36$.

2. Control Class

The writer describes the result of a pre-test at the control class by the table below:

Table 4.3

The Students' score of pre-test at the control class

No.	Respondents	CRITERIA					SCORE
		Content	organization	Vocabulary	Language Use	mechanics	
1	AN	23	12	13	18	3	69
2	AM	16	13	14	10	3	56
3	AL	17	15	15	17	3	67
4	AA	22	15	13	11	4	65
5	AM	16	13	10	11	3	53
6	AN	15	10	14	12	3	54
7	BR	16	10	10	13	3	52
8	EA	14	7	8	8	2	39
9	EN	13	7	7	5	2	34
10	FM	15	14	13	10	4	56
11	HR	13	7	7	5	2	34
12	IAA	24	16	15	18	3	76
13	IY	15	10	13	10	3	51
14	LR	16	10	10	13	3	52
15	LS	13	7	8	5	2	35
16	MR	14	8	7	5	2	36
17	MN	13	10	7	5	2	37
18	NW	17	12	10	13	3	55
19	NAF	18	13	14	15	3	63
20	PD	13	7	8	5	2	35
21	RN	14	8	8	7	2	39
22	SA	14	10	8	8	2	42

23	SN	15	13	14	15	3	60
24	SH	15	13	11	12	3	54
25	SD	16	10	10	11	3	50
26	SM	16	14	13	10	2	55
27	TM	20	15	13	13	3	64
28	VK	21	13	10	14	4	62
29	WWS	13	7	7	5	2	34
N = 29		Total Score					1479
		Average					51

The *Table 4.3* showed that the results of the students' pre-test scores on the criteria in writing descriptive text at the control class. That the data showed the maximum score was 76, and the minimum score was 34. One student who got the maximum and three students who got the minimum score. The average of score of the pre-test was 51. While the result of a post-test at the control class got better score. It can be described as follow:

Table 4.4

The Students' score of post-test at the control class

No.	Respondents	CRITERIA					SCORE
		Content	organization	vocabulary	Language use	mechanics	
1	AN	24	15	14	18	4	75
2	AM	16	14	14	11	3	58
3	AL	20	16	15	16	3	70
4	AA	25	17	14	12	4	72

5	AM	20	15	13	17	3	68
6	AN	17	11	12	15	3	58
7	BR	22	17	15	13	4	71
8	EA	15	10	8	8	3	44
9	EN	15	13	11	12	3	54
10	FM	17	15	13	10	3	58
11	HR	15	7	7	6	2	37
12	IAA	27	18	18	18	4	85
13	IY	17	11	13	12	3	56
14	LR	20	16	15	15	3	69
15	LS	15	10	10	11	2	48
16	MR	14	11	10	9	3	47
17	MN	16	14	10	7	2	49
18	NW	20	13	11	15	3	62
19	NAF	23	16	15	16	4	74
20	PD	15	8	8	7	3	41
21	RN	15	13	12	13	3	56
22	SA	15	14	10	8	3	50
23	SN	21	14	11	12	4	62
24	SH	16	13	10	14	3	56
25	SD	17	12	11	10	4	54
26	SM	16	14	12	12	3	57
27	TM	21	15	14	13	3	66
28	VK	17	16	15	14	3	65
29	WWS	16	10	9	10	3	48
N = 29		Total Score					1710
		Average					58.96

The *Table 4.4* showed that the results of the students' post-test scores on the criteria in writing descriptive text at the control class. That the data showed the maximum score was 85 and the minimum score was 37. One student who got the

maximum score and one student who got the maximum score. The average score of the post-test was 58,96.

Based on the explanation above, it showed that the result of post-test at the control class got the significant improvement after giving treatment without using Moodle approach. It is seen from the average of the post-test got better than the pre-test, that $51 < 58,96$.

B. Data Analysis

1. Experimental Class

The writer analysis the data by comparing students' score in pre-test and post-test in experimental class. It is explained by the table as follow:

Table 4.5

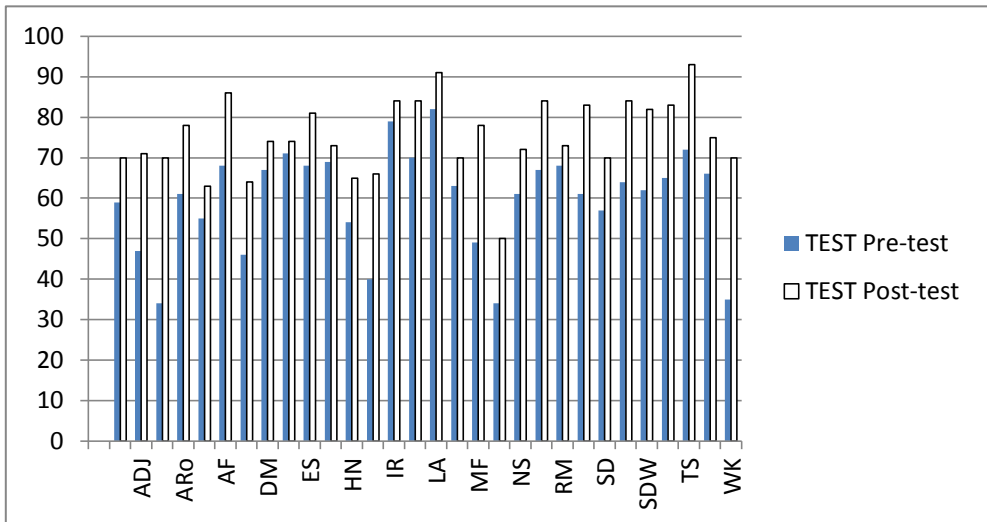
The different score between pre-test and post-test at experiment class

No.	Respondents	TEST		Deviation ($X_2 - X_1$)	Squarred Deviation (X_2)
		Pre-test (X_1)	Post-test (X_2)		
1	AP	59	70	11	121
2	ADJ	47	71	24	576
3	ARI	34	70	36	1296
4	ARO	61	78	17	289
5	AD	55	63	8	64
6	AF	68	86	18	324
7	BR	46	64	18	324
8	DM	67	74	7	49
9	EN	71	74	3	9

10	ES	68	81	13	169
11	FR	69	73	4	16
12	HN	54	65	11	121
13	II	40	66	26	676
14	IR	79	84	5	25
15	KM	70	84	14	196
16	LA	82	91	9	81
17	MK	63	70	7	49
18	MF	49	78	29	841
19	NH	34	50	16	256
20	NS	61	72	11	121
21	PA	67	84	17	289
22	RM	68	73	5	25
23	SN	61	83	22	484
24	SD	57	70	13	169
25	SG	64	84	20	400
26	SD	62	82	20	400
27	SM	65	83	18	324
28	TS	72	93	21	441
29	VQ	66	75	9	81
30	WK	35	70	35	1225
Total		$\Sigma X_1 = 1794$	$\Sigma X_2 = 2261$	$\Sigma X = 467$	$\Sigma X^2 = 9441$

Table 4.5 above showed that the score difference between pre-test and post-test at the experimental class. The difference score was the results from the post-test scores subtract with pre-test score. There was significant difference score between pre-test and post-test at the experimental class, the biggest difference score was 36 and the lowest difference score was 3. It is described by the graphic below:

Graphic 4.1
The difference score between pre-test and post-test of the experimental class



Graphic 4.1 above showed that the results of students' pre-test and post-test scores on the criteria in writing descriptive text at the experimental class. Data showed the pre-test score, the maximum score was 82, and the minimum score was 34. One student who got the maximum and two student who got the minimum score. For the post-test score, the maximum score was 93 and the minimum score was 50. There is a student who got the maximum score and a student who got the minimum score.

2. Control Class

The writer analyzed the data by comparing student' score in pre-test and post-test at the control class, explaining by the table below:

Table 4.6***The different score between pre-test and post-test at control class***

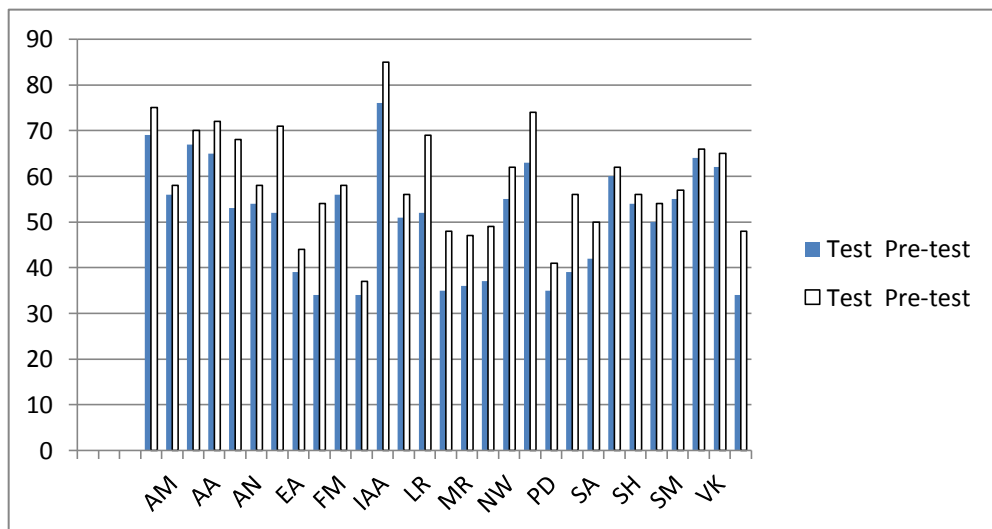
No.	Respondents	Test		Deviation ($Y=Y_2-Y_1$)	Squarred Deviation (Y^2)
		Pre-test (Y_1)	Post-test (Y_2)		
1	AN	69	75	6	36
2	AM	56	58	2	4
3	AL	67	70	3	9
4	AA	65	72	7	49
5	AM	53	68	15	225
6	AN	54	58	4	16
7	BR	52	71	19	361
8	EA	39	44	5	25
9	EN	34	54	20	400
10	FM	56	58	2	4
11	HR	34	37	3	9
12	IAA	76	85	9	81
13	IY	51	56	5	25
14	LR	52	69	17	289
15	LS	35	48	13	169
16	MR	36	47	11	121
17	MN	37	49	12	144
18	NW	55	62	7	49
19	NAF	63	74	11	121
20	PD	35	41	6	36
21	RN	39	56	17	289
22	SA	42	50	8	64
23	SN	60	62	2	4
24	SH	54	56	2	4
25	SD	50	54	4	16

26	SM	55	57	2	4
27	TM	64	66	2	4
28	VK	62	65	3	9
29	WWS	34	48	14	196
Total		$\Sigma Y1=$ 1479	$\Sigma Y2=$ 1710	$\Sigma Y=$ 231	$\Sigma Y^2=$ 2763

Table 4.6 above showed that the score difference between pre-test and post-test at the control class. The difference score was the results from the post-test score subtract pre-test score. There was significant difference scores between pre-test and post-test at the control class, the biggest difference score was 20, and the lowest different was 2.

Graphic 4.2

The different score between pre-test and post-test of control class



Graphic 4.2 above showed that the results of the students' pre-test and post-test scores on the criteria in writing descriptive text at the control class. The Data showed in the pre-test score the maximum was 76, and the minimum was 34. There are a student who got the maximum score and three students who got the minimum score. From the post-test score, the maximum score is 85 and the minimum score is 37. A student who got the maximum score and one student who got the minimum score.

C. Statistical Hypothesis Testing

To test the hypothesis the data obtained from both pre-test and post-test are analyzed and calculated by using formula. From the above data is gotten, the writer t-test calculated using steps as follow:

1. Determine mean of score experimental class (MX), with formula:

$$\begin{aligned} M_x &= \frac{\sum X}{N} \\ &= \frac{467}{30} \\ &= 15,57 \end{aligned}$$

The result above showed about the average score (mean) of the experimental class. The writer got the data from Σx_1 , Σx_2 , and Σx . Afterwards the researcher calculated the data based on the formula above.

2. Determine mean of score control class (MY), with formula:

$$\begin{aligned} M_Y &= \frac{\sum Y}{N} \\ &= \frac{231}{29} \\ &= 7,96 \end{aligned}$$

The result above showed about the average score (mean) of the experimental class. The writer got the data from $\sum Y_1$, $\sum Y_2$, and $\sum Y$. Afterwards the researcher calculated the data based on the formula above.

3. Determine the total square of error in experimental class, with formula:

$$\begin{aligned} \sum x^2 &= \sum x^2 - \frac{(\sum x)^2}{N} \\ &= 9441 - \frac{(467)^2}{30} \\ &= 9441 - \frac{218089}{30} \\ &= 9441 - 7269,63 \\ &= 2171,37 \end{aligned}$$

The result above showed about the score quadrates at the experimental class. The writer got the data from $\sum x_1$, $\sum x_2$, $\sum x$ and $\sum x^2$. Afterwards she calculated the data based on the formula above.

4. Determine the total square of error in control class, with formula:

$$\begin{aligned}
\Sigma Y^2 &= \Sigma Y^2 - \frac{(\Sigma Y)^2}{N} \\
&= 2763 - \frac{(231)^2}{29} \\
&= 2763 - \frac{53361}{29} \\
&= 2763 - 1840,03 \\
&= 922,97
\end{aligned}$$

The result above showed about the score quadrates at the control class. The writer got the data from ΣY_1 , ΣY_2 , ΣY and ΣY^2 . Afterwards she calculated the data based on the formula above.

5. Calculate the T-test

$$\begin{aligned}
t &= \frac{M_x - M_y}{\sqrt{\left(\frac{\Sigma x^2 + \Sigma y^2}{N_x + N_y - 2}\right) \left(\frac{N_x + N_y}{N_x \cdot N_y}\right)}} \\
&= \frac{15,57 - 7,96}{\sqrt{\left(\frac{2171,37 + 922,97}{30 + 29 - 2}\right) \left(\frac{30 + 29}{30 \cdot 29}\right)}} \\
&= \frac{7,61}{\sqrt{\left(\frac{3094,34}{57}\right) \left(\frac{59}{870}\right)}} \\
&= \frac{7,61}{\sqrt{(54,28) (0,06)}}
\end{aligned}$$

$$= \frac{7,61}{\sqrt{3,2568}}$$

$$= \frac{7,61}{1,80}$$

$$= 4,22$$

6. Determine the t_{table} with significance 5%

$$\begin{aligned} Df &= N_X + N_Y - 2 \\ &= 30 + 29 - 2 \\ &= 57 \\ &= 2.00 \end{aligned}$$

Based on the calculation above is known that t_{table} with significant 5% = 2.00, $t_{observation}=4,22 > t_{table}=2,00$. it is conclude that the writer rejected $H_0:t_0<$: it means there is no significant effect of Moodle approach on students' writing ability in descriptive text. And accepted $H_a:t_0> t_t$: it means there is significant effect of Moodle on students' writing ability in descriptive text.

From the result of the calculation is obtained the value of the test t_0 4,22. The writer uses degree of significance of the t_{table} of 5%. it can be seen that on the $df= 57$ and on the degree of significance of 5% the value of the degree significance is 2,00, comparing the t_0 with value of degree significance, the result $t_{count}= 4,22 > t_{table} = 2,00$. Since t_0 from score obtained from the result of calculating, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected.

D. Interpretation of Data

The analysis is aimed to know the effectiveness of Moodle on students' writing ability in descriptive text. We have already known that the mean score of experimental class is 59,8 in pre-test and 75,36 in post-test. But the mean score of control class is 51 in pre-test and 58,96 in post-test. Based on the calculation above, the experiment class gets better than control class

Before deciding the result of hypothesis, the writer purposes the interpretation toward procedure as follow:

- a. If $t_{\text{observation}} > t_{\text{table}}$: it means there is significant effectiveness between students' writing ability in descriptive text and using graffiti technique.
- b. If $t_{\text{observation}} < t_{\text{table}}$: it means there is no effectiveness between students' writing ability in descriptive text using graffiti technique.

According to the data, the value of $t_{\text{observation}}$ is bigger than t_{table} . $t_{\text{observation}} = 4,22 > t_{\text{table}} = 2,00$ (5%) or $t_{\text{observation}} 4,22 > t_{\text{table}} = 2,66$ (1%), so H_0 is rejected and H_a is accepted.

From the result above, the writer give conclusion that it means there is a significant effectiveness Moodle approach on students' writing ability. It can be seen that the student got better score by Moodle approach. This could be seen after

comparing the score of pre-test (before using Moodle) and post-test (after using Moodle).

Moodle can be effective because it emphasizes student activity for an in-depth investigation of a topic, students do inland-based research-based learning, so that in this learning the student must see the real case (authentic) of a given topic, deepen the information with analyze the data in collaboration to create various forms of learning outcomes / projects, so that solutions can be found with the creation of an interesting,` the result of the student's own creativity. From the activities that the students do, students become easier to describe something in writing, because students have been exploring and digging information actively and independently. So, the idea of writing to describe something can be easily stated.