

CHAPTER IV

FINDING AND DISCUSSION

1. Finding

It has been done in this study, the researcher would explained some things about the result that have been found when the research took place which would be drawn conclusion according to the important planning that has been written in the previous section. The researcher was doing the research approximately one month from October, 1st until 29th 2018. The topic of materials was about descriptive text. The researcher did treatment in 5 meeting but because in 1 meeting it had duration of 3 x 45 minutes then 1 meeting was considered 2 meetings. 1 meeting for pre-test and general introduction related to materials, 4 meeting for treatment as well as for post-test. The table below to explain related the topic taught by researcher.

Table 4.1 The Schedule of Treatment.

Meetin g	Date	Time	Materials
1	October, 1 st 2018	3 X 45 Minutes	Pre-Test
2			Descriptive Text
3	October, 8 th 2018	3 X 45 Minutes	Descriptive Text
4			
5	October, 15 th 2018	3 X 45 Minutes	Descriptive Text
6			
7	October, 22 th 2018	3 X 45 Minutes	Descriptive Text
8			
9	October, 29 th 2018	3 X 45 Minutes	Descriptive Text
10			Post-test

In conclusion the research, the researcher through to several steps for this research; the first was pre-test, the second was treatment using

Discovery Learning Strategies. The last step in this research was post-test. Before conducting the researcher had to first conducted validity and reliability test, to know the validity of an instrument can be used correlation coefficient by using *product moment* formula as follows:

$$r_{xy} = \frac{\sum_{i=1}^N XY - \frac{(\sum_{i=1}^N X)(\sum_{i=1}^N Y)}{N}}{\sqrt{N \sum_{i=1}^N X^2 - (\sum_{i=1}^N X)^2} \sqrt{N \sum_{i=1}^N Y^2 - (\sum_{i=1}^N Y)^2}}$$

Information:

r_{xy} = Product Moment correlation coefficient

N = Number of subject

X = Number of item scores

Y = Total score

The validity test of research instruments used *software Statistical Packages for Social Science (SPSS) for Windows Release 22*. There are 5 items measured in this research, they are: content, organization, vocabulary, syntax and mechanics. Validity test used two classes: Office Administration class 1 and Office Administration 2.

Table 4.2 Analysis of Validity Test in Office Administration class 1

No. Item	r_{xy}	r_{table}	Status
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1	0,860	0,423	Valid
2	0,941	0,423	Valid
3	0,904	0,423	Valid
4	0,924	0,423	Valid
5	0,590	0,423	Valid

The validity of test shows that the test was valid in Office administration class 1. The number of students was 20 and the table showed r_{count} was higher than r_{table} , which means that these data was valid.

Table 4.3 Analysis of Validity Test in Office Administration class 2

No. Item	r_{xy}	r_{table}	Status
1	0,873	0,423	Valid
2	0,866	0,423	Valid
3	0,875	0,423	Valid
4	0,865	0,423	Valid
5	0,868	0,423	Valid

The validity of test shows that the test was valid in Office administration class 2. The number of students was 20 and the table shows r_{count} was higher than r_{table} , which means that these data was valid

Table 4.4 Analysis of Reliability in Office Administration class 1

Reliability Statistics

Cronbach's Alpha	N of Items
.887	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Content	45.90	85.568	.773	.852
Organization	48.15	81.082	.902	.822

Vocabulary	49.20	77.853	.830	.837
Syntax	48.25	66.724	.844	.845
Mechanics	59.50	122.684	.547	.923

T test was reliable with value of Cronbach's Alfa more than 80. The table above shows the value was 887 with high category.

Table 4.5 Analysis of Reliability in Office Administration class 2

Reliability Statistics	
Cronbach's Alpha	N of Items
.880	5

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Content	42.65	36.555	.780	.838
Organization	45.80	37.011	.770	.841
Vocabulary	45.85	38.134	.793	.835
Syntax	45.05	34.576	.748	.852
Mechanics	56.25	52.829	.848	.891

T test was reliable with value of Cronbach's Alfa more than 80. The table above shows the value was 880 with high category.

1. Description about the students' writing ability before being treated using Discovery Learning based on the table scores

The researcher conducted the English writing test for the tenth grade at SMK Muhammadiyah 3 Banjarmasin on October 01st and 29th 2018 for the pre-test and post-test in X Multimedia class. The scoring was based on five slightly different categories given the following point value: content 30 point, organization 20 point, vocabulary 20 point, syntax 25 point, mechanics 5 point

and total 100 point. More information about the score of students can be seen in the table 4.6 the pre-test score in X Multimedia Class below:

Table 4.6 The pre-test score in X Multimedia Class

No	Name	Categories of writing rubrics					Score
		C	O	V	S	M	
1	Student 1	18	15	15	18	2	68
2	Student 2	12	12	13	14	2	53
3	Student 3	15	12	12	12	3	54
4	Student 4	17	16	15	16	3	67
5	Student 5	17	16	15	16	3	67
6	Student 6	12	10	12	12	2	48
7	Student 7	15	12	12	13	3	55
8	Student 8	17	15	15	18	3	68
9	Student 9	10	9	8	9	2	38
10	Student 10	18	15	17	15	3	68
11	Student 11	10	7	7	9	2	35
12	Student 12	15	12	13	12	3	55
13	Student 13	15	12	13	13	3	56
14	Student 14	15	12	13	14	2	56
15	Student 15	15	13	13	15	2	58
16	Student 16	13	13	12	12	2	52
17	Student 17	17	15	15	16	2	65
18	Student 18	9	9	12	10	2	42
19	Student 19	17	15	15	18	3	68
20	Student 20	15	13	12	13	3	56
21	Student 21	12	10	10	12	3	47
22	Student 22	12	12	13	13	3	53
23	Student 23	18	15	15	17	3	68
24	Student 24	12	12	13	12	2	51
25	Student 25	15	12	12	14	3	56
The Highest Score							68
The Lowest Score							35
Median							56
Mean							56.24

C : Content

O : Organization
 V : Vocabulary
 S : Syntax
 M : Mechanics

The table above showed the result of pre-test in X Multimedia class. The highest score was 68 and the lowest score was 35, the mean score was 56, 24 and then the median score was 56.

b. Description about the treatment process using the discovery learning strategies.

In this research, the researcher wants to know about the effectiveness of the discovery learning strategies to develop the students' ability in writing skill for the tenth grade especially Multimedia major in SMK Muhammadiyah 3 Banjarmasin. The materials were taught based on the 2013 curriculum and syllabus from the English teacher of SMK Muhammadiyah 3 Banjarmasin. In treatment the topic of materials that were discussed about descriptive text, which focuses on only two categories, there were describing people and describing places. The researcher gave the treatment in 4 meeting included pre-test and post-test, two meeting for pre-test and general explanation about descriptive text, the schedule was as follows; October 1st, 8th and 15th, 2018 and then two meeting for descriptive text related to general definition about descriptive text especially describing people included pre-test and describing places and post-test the schedule was as follows; October 22nd and 29th, 2018. The duration of each meeting and teaching activity was 3 times 45 minutes (135 minutes).

In learning process in the class, the researcher focused on the activities of students in learning process which was in accordance with the discovery learning strategies that the researcher used in teaching. In learning process that the researcher gave the opportunity for students to be active and discover the knowledge related to the materials from the relevant resources, but the researcher as teacher must be prepared all of the needs for learning process such as lesson plan and material, media, exercise and some quiz for ice breaking that will be implemented in learning using treatment with a discovery learning strategies. For the strategy, there were phase in which the teacher giving stimulation and the teacher guided students to identify problem, collecting data, processing data, etc. for students to found the solution and show the result.

The learning process based on Discovery Learning Strategy consisted of 6 phase in the while activity such as stimulation, problem statement or problem identification, data collecting, data processing, verification and generalization or concludes. Pre-activity and post-activity in the learning process will be explained by the researcher below:

a. Pre-activity

Part of the activity in this research was pre-activity. The first meeting that had been held on Monday, October 1st, 2018. This activity was before the researcher as teacher started of learning and in the pre-activity prepared the students to be ready for learning activity. In the beginning activity the researcher greeted the students, praying together, check the

attendance and condition of students, the teacher did apperception, the teacher conveys the benefits of learning about descriptive text materials for the first met and displayed several pictures related to the material using Slide Power Point media and then the teacher asked questions about descriptive texts. Below was example adapted from learning activity in the classroom.

Teacher : “*Assalamu’alaikum wr, wb.*”

Students : “*Walaikumumsalam wr, wb*”

Teacher : “Good morning class and how are you?”

Students : “Morning, Miss, I am fine and you?”

Teacher : “I am fine too, Thank you. Before we start learning today, let’s begin our lesson today by praying together.”

Students : “Yes, Miss” (Praying together).

In the first meeting, during pre-activity the researcher gave an example before and general definition related to materials by *Power Point*. In the second meeting the researcher reviewed and asked the students related to the previous materials. The third meeting, after reviewing the material researcher asked to students read and analysis the text about describing people and describing places. The fourth until fifth meeting in the pre-activity was the same as the second meeting in which the researcher gave an overview of the material to be learned related to descriptive meeting.

b. While-activity

The while-activity was the core activity in the learning process and the researcher did the treatment in this research using Discovery Learning Strategies, there were 6 phases that must be passed by students in the learning activity. The first phase was stimulation.

Teacher : “Can you guess the text related to the picture, what is the text about?”

Students : “About picture miss”

Teacher : “who of you can explain what the text means?”

Student : “I am, Miss”

Teacher : “Yes, Please”

Students explained the text based on their knowledge and experiences.

The second phases in the discovery learning is problem statement, in this phase the researcher as teacher guided the students to identify the problem and organize the students to study into the group work. In the second phase the researcher as teacher divided students into the group work and ask students search the picture related describing place.

Teacher : “Does each group get the picture?”

Students : “Yes, Miss”

Teacher : “Okay, please every group makes the question about the place, where is the place?, what is the condition of place?....etc.

Student : “Okay, Miss”

The next phase was data collection for this phase the researcher as teacher gave students the opportunity to collect information / data as possible from various sources (books, magazines / newspapers, internet) to answer questions that were in accordance with indicators of achievement of competencies. In this phase the researcher gave the permission for the students open their smartphone and got another references in library related their pictures.

The fourth phase was data processing, in this phase, the teacher guided students to process the data from the collecting the data and the teacher guided students to mention, explain and presentation the result in their group related to the materials.

Teacher : “Where is this place”

Students : “Tanah Bumbu, Miss

Teacher : “Why you choose this place?

Student : “Because this place is beautiful, Miss”.

The fifth phase in discovery learning was verification, in this phase the students present or communicate the results of group discussions (presentation media) in a class discussion forum to obtain responses or suggestion from other groups,

Teacher : “Who wants to be the first to present the group's work?”

Students : “We, miss!

Teacher : “Good!, yes, please!, give applause for your friend”

The one of students in each group present the result of their groups and the teacher guided students to conduct questions and answers for discussion. In this phase the teacher monitored group presentation activities and provides feedback on answers to questions and opinions expressed by students by referring to the key and helps students to reflect or evaluate their activities during teaching and learning.

The last phase generalization was the teacher guided each group to conclude the results of the discussion about descriptive text and students compiled reports about describing text.

c. Post-Activity

Then the final activity that conducted in all of meeting for treatment was same. The students and teacher did reflection on the learning activity and the teacher encouraging students to always be grateful for all the creation of God Almighty that was beneficial to life. In this activity teacher and the students do feedback on the learning process and results by post testing to measure students' understanding of the overall materials and teacher gave the reward for students who can answer questions and present the material well.

The teacher and students prayed together and closed the activity. Before closing the activity the teacher explained what students would did in the next meeting. Below was the example adapted from learning activity in the classroom

Teacher : “For the next meeting, please looking for the example related to the descriptive text and analysis the text generic structure, adjective word and etc.

Students : “Yes, Miss”

Teacher : “Before we closing the lesson today, let’s close by reciting *Alhamdulillah*”

c. Description about the students’ writing ability after being treated using Discovery Learning Strategy based on post-test.

Then the final step after treatment, the researcher gave the post-test as an evaluation material. In this case, test was same as pre-test. The researcher conducted the English writing test for the tenth grade at SMK Muhammadiyah 3 Banjarmasin on October 29th in Multimedia (MM) class. Post-test aim was to know the progress of material they got during the fifth meetings. The scoring was based on five slightly different categories given the following point values: Content 30 points, Organization 20 points, Vocabulary 20 points, Syntax 25 points, Mechanics 5 points and total 100 points. More information about the scores can be seen in the table 4.7 the post-test score in X Multimedia Class below:

Table 4.7 The post-test score in X Multimedia Class

No	Name	Categories of writing rubrics					Score
		C	O	V	S	M	
1	Student 1	17	15	15	16	3	66
2	Student 2	15	13	13	14	2	57
3	Student 3	17	17	18	16	4	72
4	Student 4	25	19	19	23	4	90
5	Student 5	20	17	18	21	4	80

6	Student 6	17	14	16	17	3	67
7	Student 7	28	19	19	20	4	90
8	Student 8	18	17	18	18	4	75
9	Student 9	15	14	13	13	2	57
10	Student 10	21	18	17	18	4	78
11	Student 11	15	13	13	14	3	58
12	Student 12	15	13	13	12	2	55
13	Student 13	16	12	13	15	4	60
14	Student 14	15	15	16	17	3	66
15	Student 15	15	17	16	18	2	68
16	Student 16	12	11	10	12	2	47
17	Student 17	14	13	13	15	3	58
18	Student 18	17	15	15	16	4	67
19	Student 19	20	17	17	18	4	76
20	Student 20	10	11	10	12	2	45
21	Student 21	25	18	19	23	4	89
22	Student 22	15	13	12	14	2	56
23	Student 23	16	17	17	18	4	72
24	Student 24	15	16	15	17	3	66
25	Student 25	12	13	13	15	3	56
The Highest Score							90
The Lowest Score							45
Median							66
Mean							66.84

C : Content
 O : Organization
 V : Vocabulary
 S : Syntax
 M : Mechanics

This table showed the result of post-test score in X Multimedia class. The highest score was 90 and the lowest score was 45. The mean score was 66, 84 and the median score was 66.

d. Description about effectiveness students' writing ability by using Discovery Learning Strategy in pre-test and post-test.

**Table 4.8 The difference between the pre-test and post-test score in X
Multimedia Class**

NO	NAME	DIFFERENT		SCORE
		PRE-TEST	POST-TEST	
1	Student 1	68	66	-2
2	Student 2	53	57	4
3	Student 3	54	72	18
4	Student 4	67	90	23
5	Student 5	67	80	13
6	Student 6	48	67	19
7	Student 7	55	90	35
8	Student 8	68	75	7
9	Student 9	38	57	19
10	Student 10	68	78	10
11	Student 11	35	58	23
12	Student 12	55	55	0
13	Student 13	56	60	4
14	Student 14	56	66	10
15	Student 15	58	68	10
16	Student 16	52	47	-5
17	Student 17	65	58	-7
18	Student 18	42	67	25
19	Student 19	68	76	8
20	Student 20	56	45	-11
21	Student 21	47	89	42
22	Student 22	53	56	3
23	Student 23	68	72	4
24	Student 24	51	66	15
25	Student 25	56	56	0

The table 4.8 the difference between the pre-test and post-test score in X Multimedia Class showed the differences of score between pre-test and post-

test. Among the 25 students sampled, there were 4 students got a higher pre-test score than post-test. However, generally it can be concluded that the students' score after treatment with Discovery Learning Strategy improved when compared with students before treatment.

Inferential analysis was aimed at testing the research question and hypothesis. Those tests were used to analyze whether the hypothesis using parametric or non-parametric research. The researcher did normally and homogeneity test by using One-sample Kolmogorov-Smirnov SPSS version 22.

Table 4.9 The Result of Normality Test

One-Sample Kolmogorov-Smirnov Test		Pre Test	Post Test
N		25	25
Normal Parameters ^{a,b}	Mean	56.16	66.84
	Std. Deviation	9.612	12.435
Most Extreme Differences	Absolute	.150	.121
	Positive	.147	.121
	Negative	-.150	-.091
Test Statistic		.150	.121
Asymp. Sig. (2-tailed)		.148 ^c	.200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

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

The result of normality test based on Kolmogorov-Smirnov, data were distributed normal when sig. score was above 0.05. In the table showed that both pre-test and post-test had normal distribution data. The significant pre-test score was 0.148 and the significant of post-test was 0.200. Researcher concluded the data was normal because the pre-test and post-test score is higher than 0.05.

Homogeneity test was used to test whether the data from the two groups have the same variant in order that the hypotheses can be tested by t-test. Like normality test, this kind of test also used SPSS version 22 software.

Homogeneity test was calculated by using Levene. The following tables contained the result of test of homogeneity between both of the pre-test and post-test score.

Table 4.10 The Result of Homogeneity test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Hasil_B elajar	Equal variances assumed	1.602	.212	3.398	48	.001	-10.680	3.143	-17.000	-4.360
	Equal variances not assumed			3.398	45.134	.001	-10.680	3.143	-17.011	-4.349

The homogeneity test score used the SPSS version 22 showed the homogeneity data score of the pre-test and post-test were 0.212. These score was bigger than 0.05 which means that these data had homogeneity distribution data.

In this study, the researcher used Paired Sample T-test in this test which was conducted on two paired samples. Paired samples can be interpreted as samples with the same subject but subject to different treatment.

Table 4.11 The Result of Paired Sample T-test

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Test	56.16	25	9.612	1.922
	Post_Test	66.84	25	12.435	2.487

In the result of analyzed of paired samples test there were result of two samples for pre-test and post-test data. The value of pre-test obtained the mean of learning outcome of 56.16 and the value mean of post-test is 66.84. The number of respondents or students who were sampled was 25 students.

Table 4.12 The Result of Paired Sample T-test

Paired Samples Test									
		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_Test - Post_Test	-10.680	12.796	2.559	-15.962	-5.398	-4.173	24	.000

The table 4.12 the Result of Paired Sample T-test showed the result of pre-test and post-test that has been done on 25 students as a sample in this research. The t-test statistics was -4.173 and df in this result was 24. While the value of sig. (2-tailed) is $0.000 \leq 0.05$ it means the sig value (2-tailed) is 0.000 and it was smaller than 0.05. Then it can be concluded that used Discovery Learning strategies is effective for the subjects of English writing in students of X Multimedia class.

B. Discussion

From the statistic measurement above showed that H_0 (null hypothesis) was rejected and H_a (alternative hypothesis) was accepted. The value of T_{count} was high than of T_{table} (value of critic "t"). It can be concluded:

1. There was significant differences in students' writing ability used Discovery Learning Strategies in Descriptive Text teaching the Tenth grade of Multimedia class at SMK Muhammadiyah 3 Banjarmasin

2. Using Discovery Learning Strategies in Descriptive Text teaching was effective to improve students' writing ability at the tenth grade of Multimedia class at SMK Muhammadiyah 3 Banjarmasin.

Based on the result of the test there were different highest and lowest score of the test. The highest test score of students when using Discovery Learning Strategy was 90. While the lowest score of the students when using Discovery Learning Strategy was 45. The lowest score of the students before using Discovery Learning Strategy was 35 and the highest score was 68. It could be concluded that Discovery Learning Strategy helps students in improving students' writing ability in Descriptive Text material.

Based on the table 4.7, students' writing ability who used Discovery Learning Strategy with objective the score based on five categories, there are 30 point for content, 20 point for organization, 20 point for vocabulary, 25 point for syntax and for mechanics 5 point this categories adapted from Brown (2010).

According the result of this research, the students who used Discovery Learning Strategy improved their writing ability than before using Discovery Learning Strategy even though the difference in scores was not very different because writing was thinking process especially writing in English they afraid to make mistakes in starting to write because of the lack of vocabulary and problems in composing words and when they did their pre-test and post-test under different conditions, for example when their pre-test was fine but when post-test some students were sick or bad condition. In

addition Prawerti, (2014, p. 24-26), Discovery learning does not stress getting the right answer. The focus is learning and just as much learning can be done through failure as success. In fact, if a student does not fail while learning, he or she probably has not learned something new.

Based on the result in the table 4.10, showed the different score of pre-test and post-test score. Among the 25 students sampled, the researcher found 4 students got a higher pre-test score than post-test score. It happened because several students not seriously to write in post-test and some were in bad condition such as sick and had problem in themselves, but overall of the result it could be concluded that the students' score after treatment with Discovery Learning Strategy improved when it was compared to students before treatment.

In treatment the researcher using Discovery Learning Strategies. 4 meetings counted 8 meetings because one meeting was 3 X 45 minutes. The treatments conducted in Tenth Multimedia Class. The material of treatment was Descriptive Text related to describing People and Describing Places. The activity in treatment has divided into 3 activity such as pre-activity, while-activity and post-activity. The researcher as teacher used various media for example slide power point, picture, paper sheet, and outline, the researcher also used the quiz for ice breaking.

The opinions of some expert about Discovery Learning Strategy, namely; The teacher must provide opportunities for students to be active in learning as stated by Schunk (as cited in Sofeny, 2017, p.43) Discovery

learning is when a student obtains knowledge by him/herself. It involves constructing and testing hypotheses rather than passively reading or listening to teacher presentations. It can be concluded that Discovery Learning Strategy was a teacher process to guide students thinking and helping students to develop self-learning ability.

In general, writing skill is difficult than other skills such as listening, speaking and reading in English lesson. It happened also with students at SMK Muhammadiyah 3 Banjarmasin especially for the tenth graders of Multimedia class. Students assumed English lesson is very difficult such as writing text, pronunciation, translation, etc. It made students had a negative impact because several students lazy to learn English lesson. Based on the situation the researcher used the Discovery Learning Strategy to teach English lesson especially writing text in the material about descriptive text. This strategy made the students more active in learning process to search knowledge with themselves and students making a text according with the materials.

Writing skill is the one of four skills in English learning and it is very important in learning process of students. The role of a teacher who can guide students is needed to develop students' writing skill. Writing is considered a productive skill along with speaking (Harmer, 2001, p. 265). Since ideas thoughts are abstract things that come from our mind, it is not easy to turn them into understandable or readable forms. To be successful, writers need an understanding of the components of a quality text as well as

knowledge of writing strategies that can be used to shape and organize the writing process (Marten, 2010, p. 8). From the two theories above how a teacher made students to understand the materials, component and knowledge in order that to be a good writer.

Prawerti, (2014, p. 24-26) explained the fifth principle of expert about Discovery Learning and the one of the principle that in discovery learning, students are active in learning and find solutions from a problem and then discover the new knowledge (Mosca & Howard, 1997). Based on the principle, how the researcher made student to be active learner to discover the knowledge and gave them motivation, provide the relevant materials and gave they opportunity to develop their English skill independently with guidance of teacher.

The materials for the treatment class was descriptive text related to describing people and describing places, Susanti (2017, p.14) state descriptive text has a function to describe something in detail in order to enable the readers to see, hear, feel and touch it directly involve themselves in the event. Students would be described their favorite person and places of the daily life. The generic structure of descriptive text was identification and description. Identification has aimed at introducing and identifying specific participant such as a person, a thing, a place, an animal, and or an event. Description, on the other side, is structured to describe that participant from its characteristics, appearances, personality, and habits or qualities. The purpose of this research was not only to develop writing ability of students

but to make students understand the way to write and known about the structure of the text.

The result in this thesis showed the effectiveness of Discovery Learning Strategies to develop students' writing ability. The score of pre-test and post-test showed the different although not far different score in the tenth grade of Multimedia class at SMK Muhammadiyah 3 Banjarmasin. It means, after using Discovery Learning Strategies, the students improve their writing ability.