CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter presents findings and discussion of the study. The findings describe into A) The Description of Data, B) The Data Analysis, C) Hypothesis Testing, and D) Discussion.

A. The Description of Data

This chapter presents data and their analysis. This Research used pre-experimental design of the effectiveness of using Picture Word Inductive model in teaching descriptive text on reading ability at MTsN Bandung on 20th March – 15th April 2017.

The implementation of this research was divided into two classes, namely the try out class (VII B), and the experimental class (VII C). Before the activities were conducted, the materials and lesson plan were determined to the process of learning. Learning in the experimental class was conducted by using Picture word inductive model as the strategy in teaching descriptive text.

In this research, the data consist of the result of reading test. This part shows the general description of students' scores in the experimental class. The description is divided into two sections: the pre-test scores and post-test scores. There were 20 items reading test in multiple choices. Table 4.1 shows the students' score of pre-test and post-test.

1. **The Pre-test and Post-test Scores**

In this part, the researcher presented the result of pre-test and post-test. Table 4.1 reports the students' pre-test scores of the experimental class. It was to find out the interval achievement score of pre-test and post-test. There are 41 students in the experimental class. The calculation was shown in the table below:

Table 4.1. The Students' Interval Achievement of Pre-test and Post-test Scores.

NO.	STUDENTS' CODE	PRE-TEST (Y_1)	POST-TEST (Y_2)	$D=(Y_2-Y_1)$ Difference Score	D^2
1	E-1	65	75	10	100
2	E-2	70	75	5	25
3	E-3	65	75	10	100
4	E-4	65	80	15	225
5	E-5	50	70	20	400
6	E-6	65	70	5	25
7	E-7	80	85	5	25
8	E-8	70	80	10	100
9	E-9	60	75	15	225
10	E-10	70	80	10	100
11	E-11	70	90	20	400
12	E-12	50	70	20	400
13	E-13	70	80	10	100
14	E-14	65	75	10	100
15	E-15	65	75	10	100
16	E-16	60	75	15	225
17	E-17	60	80	20	400
18	E-18	55	80	25	625
19	E-19	50	75	25	625
20	E-20	70	85	15	225
21	E-21	80	85	5	25
22	E-22	65	70	5	25
23	E-23	75	80	5	25
24	E-24	60	75	15	225
25	E-25	65	80	15	225
26	E-26	60	80	20	400

27	E-27	55	80	25	625
28	E-28	70	75	5	25
29	E-29	60	90	30	900
30	E-30	60	75	15	225
31	E-31	55	70	15	225
32	E-32	65	75	10	100
33	E-33	75	80	5	25
34	E-34	60	75	15	225
35	E-35	60	85	25	625
36	E-36	55	75	20	400
37	E-37	80	90	10	100
38	E-38	60	75	15	225
39	E-39	65	70	5	25
40	E-40	65	75	10	100
41	E-41	70	85	15	225
	N=41	$\Sigma Y_1 = 2625$	$\Sigma Y_2 = 3195$	$\Sigma D = 560$	$\Sigma D^2 = 9500$

The table above shows the students' pre-test and post-test scores of the experimental class. The pre-test was given in the first meeting before giving any treatments and the post-test was given in the last meeting after giving the treatments. It also shows the different score between pre-test and post-test.

The interpretation of the table above shows the increasing of students' pre-test and post-test scores that is: there are 9 students have increased 5 points, 10 students have increased 10 points, 11 students have increased 15 points, 6 students have increased 20 points, 4 students have increased 25 points, 1 student has increased 30 points. It can be concluded that there is an increase from students' pre-test and post-test scores.

2. **The Students' Interval Mean Score of Pre-test and Post-test**

After two treatments were given to the students, there was a significant change of students' score between pre-test and post-test scores,

and the significant change can be seen from discusses of some important points, they are: Mean Y_1, Mean Y_2, Mean D, Median Y_1, Median Y_2, Mode Y_1, Mode Y_2, Max and min score. The calculation was shown in the table below:

Table 4.2. Descriptive Analysis of Pre-test, Post-test and Different score.

Statistics

		Pretest score	Posttest score	Difference score
N	Valid	41	41	41
	Missing	0	0	0
Mean		64.27	77.93	13.66
Median		65.00	75.00	15.00
Mode		65	75	15
Minimum		50	70	5
Maximum		80	90	30

Based on the result above, valid shows 41, it means all of students have analyzed and missing is 0, it means there is no missing data on variable score which analyzed. In the pre-test the lowest individual score is 50 and the highest individual score is 80. The mean is 64.27. Meanwhile, the median of pre-test is 65 and the mode is 65.

While from the result of post-test, the students' lowest individual score is 70 and the highest individual score is 90. The mean is 77.93. Meanwhile, the median of post-test is 75 and the mode is 75.

It means that the mean shows that there is a significant change of students' score between pre-test and post-test scores. Where Mean Y_1=64.27 and Mean Y_2=77.93. So, it can be conluded that the implementation of picture word inductive model is effective and increase the students' achievement in descriptive text reading ability.

To make easier to understand, the researcher applied the students' interval mean score of pre-test and post-test as follows:

Table 4.3. The Students' Interval Mean Score of Pre-Test and Post-Test.

TEST	MEAN SCORE
Pre-test (Y_1)	64.27
Post-test (Y_2)	77.93
Difference Score (D)	13.66

3. **Criteria of Students' Score**

The score of the test is divided into five criteria. The data of students' score in pre-test and post-test can be seen in the table 4.4.

Table 4.4. The Criteria of Students' Score

| Score Criteria	Criteria	Frequency Y_1	Frequency Y_2
88-100	Very good	-	3
75-87	Good	5	32
62-74	Average	19	6
49-61	Poor	17	-
<49	Very poor	-	-
ΣF		41	41

The percentage of the criteria of students' score of pre-test and post-test can be seen in the table below:

Table 4.5. The Percentage of the Criteria of Students' Score

Score Criteria	Criteria	% F Y_1	% F Y_2
88-100	Very good	-	7.32%
75-87	Good	12.20%	78.05%
62-74	Average	46.34%	14.63%
49-61	Poor	41.46%	-
<49	Very poor	-	-
Σ%F		100%	100%

To make easier to understand, the researcher applied the criteria of students' pre-test and post-test scores into figure as follows:

Figure 4.1. The Criteria of Students' Score.
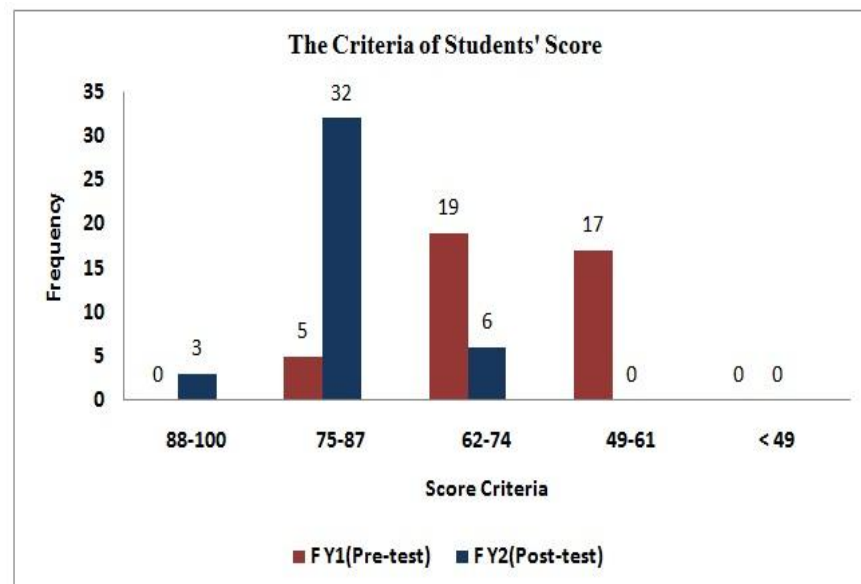
The mean of pre-test is 64.27. Based on the table, the students get different achievement of scores in which 5 students (12.20%) are good, 19 students (46.34%) are average, and 17 students (41.46%) are poor. From the table can be seen that no one student in very good and very poor ability.

Meanwhile, the mean of post-test is 77.93. From the table, it can be seen the difference achievement of students' score in which 3 students (7.32%) are very good, 32 students (78.05%) are good, and 6 students (14.63%) are average. There is no one students in poor and very poor ability.

From the result above, it can be concluded that very good criteria has increased (0% tobe 7.32%), good criteria has increased (12.20% to be 78.05%), average criteria has decreased (46.34% to be 14.63%) and poor criteria has decreased (41.46% tobe 0%).

So, in conclusion, the percentage of students' pre-test and post-test score show that the students score after being taught by using picture word inductive model has increased.

4. **Frequency Distribution**

   a. The data of pre-test

   Based on the result of research of experimental class before being taught by using picture word inductive model in teaching descriptive text on reading ability the highest score achieved is 80 and the lowest score is 50.

The calculation as follows:

Number of students (n) = 41

Range (R) = X_{max} - X_{min} = 80 - 50 = 30 – 1 = 29

Number of class = 1 + 3.3 log n = 1 + (3.3 x log 41) = 1 + (3.3 x 1.613) = 7

Interval of class = Range : Number of class = 29 : 7 = 5

Based on the calculation it shows that the range (R) is = 29, the number of class is 7 and the interval of the class is 5. The result of the calculation above inputted into the frequency distribution as follows:

Table 4.6. Frequency Distribution of Students' Pre-test Scores.

No.	Interval Class	Frequency (f_i)	%
1	50-54	3	7.32%
2	55-59	4	9.75%
3	60-64	10	24.39%
4	65-69	11	26.83%
5	70-74	8	19.51%
6	75-79	2	4.88%
7	80-84	3	7.32%
	Σf_i	41	100%

To make easier to understand, the researcher applied the frequency distribution of students' pre-test scores into figure as follows:

Figure 4.2. Frequency Distribution of Students' Pre-test Scores.
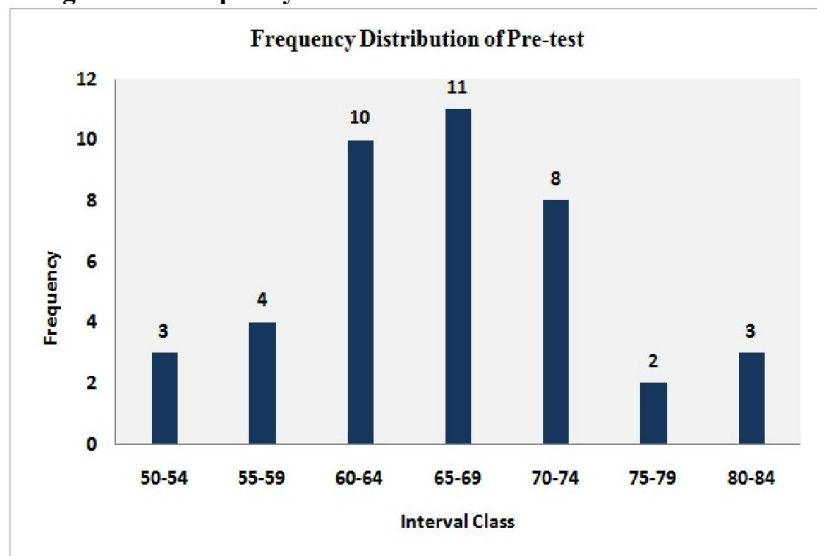
From the calculation, students mean score in pre-test is 64.27 which is be in range 60-64 in which 24.39%. 7.32% of the students place in range 50-54. This range belongs to low score. 9.75% owned by range 55-59. Next, the rest of the percentages are on range 65-69 belongs to 26.83%, 70-74 reaches 19.51% and 75-79 reaches 4.88%. The highest score reaches 80 be in range 80-84 and it is 7.32% of the total students doing the test well, while the lowest score reaches 50 which is got by 3 students.

b. The data of post-test

Based on the result of research of experimental class after being taught by using picture word inductive model in teaching descriptive text reading ability the highest score achieved is 90 and the lowest score is 70.

The calculation as follows:

Number of students (n) = 41

Range (R) = X_{max} - X_{min} = 90 - 70 = 20 – 1 = 19

Number of class = 1 + 3.3 log n = 1 +(3.3 x log 41) = 1 + (3.3 x 1.613) = 7

Interval of class = Range : Number of class = 19 : 7 = 3

Based on the calculation it shows that the range (R) is = 19, the number of class is 7 and the interval of the class is 3. The result of the calculation above inputted into the frequency distribution as follows:

Table 4.7. Frequency Distribution of Students' Post-test Scores.

No.	Interval Class	Frequency (f_i)	%
1	70-72	6	14.63%
2	73-75	16	39.02%
3	76-78	-	-
4	79-81	11	26.83%
5	82-84	-	-
6	85-87	5	12.20%
7	88-90	3	7.32%
	Σf_i	41	100%

To make easier to understand, the researcher applied the frequency distribution of students' post-test scores into figure as follows:

Figure 4.3. Frequency Distribution of Students' Post-test Scores.
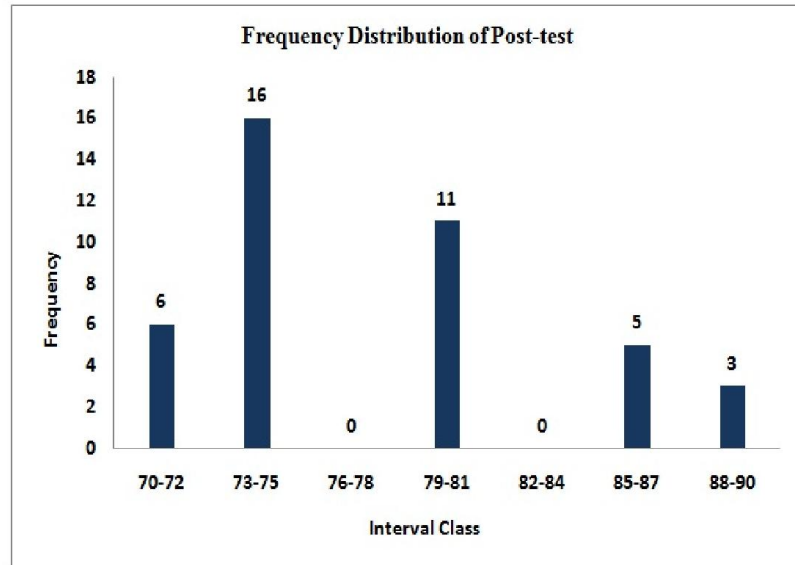
From the calculation, students mean score in post-test is 77.93 and none of the students place in the mean score in range 76-78 and neither in the range 82-84. 14.63% of the students place in range 70-72. This range belongs to low score. 39.02% owned by range 73-75. Next, the rest of the percentages are lie on range 79-81 belongs to 26.83% and 85-87 reaches 12.20%. The highest score reaches 90 be in range 88-90 and it is 7.32% of the total students doing the test well, while the lowest score reaches 70 which is got by 6 students.

B. Data Analysis

This section is intended to answer the research question whether picture word inductive model is effective to improve students' descriptive text reading ability at the seventh graders of MTsN Bandung. T-test was used to answer the research question by using SPSS 16.0. The data were analyzed by using *T-test* because the purpose of the data analysis is to compare the result of students' descriptive text reading ability before and after being taught by using picture word inductive model.

Table 4.8. T-test Paired Samples Statistics

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	64.27	41	7.710	1.204
	Posttest	77.93	41	5.587	.873

Based on the table 4.8 shows that the *Mean* of pre-test is 64.27 and post-test 77.93, while *N* for each cell there are 41. Besides, the Standard Deviation for pre-test is 7.710 and post-test 5.587. The last is Standard *Error Mean* for pre-test is 1.204 and post-test .873.

Table 4.9. T-test Paired Samples Correlations

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pretest & Posttest	41	.515	.001

Output Paired Samples Correlations show the correlation between both of samples (scores of pre-test and scores of post-test), where it can be seen from the correlation value of pre-test and post-test 0.515 and the significant value 0.001. For the interpretation of decision based on the result of probability which achieved as follow:

a. If probability > 0.05 the null hypothesis (H_0) is accepted.

b. If probability < 0.05 the null hypothesis (H_0) is rejected.

The significant value 0.001 is lower than 0.05. It means that the hypothesis which states that there is no correlation between pretest and posttest is rejected. In the other word that between pre-test and post-test there is significant correlation.

Table 4.10. T-test Paired Samples Test

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	Pretest – Posttest	-13.659	6.803	1.062	-15.806	-11.511	-12.856	40	.000

The table 4.10 shows the compare analysis by using T-test. *Output Paired Samples Test* shows *mean* of pre-test and pos-test is -13.659, Standard Deviation 6.803, and Standard *Error Mean* 1.062. The lower difference of both 15.806, while the upper difference 11.511. The resulf of t_{count} is 12.856 with df (41-1= 40) and significant value 0.00.

The interpretation of data can be done by two methods. The interpretation as follows:

1. Comparing the result of t_{count} and t_{table}.

   The score of t_{count} is 12.856 and to know the result of t_{table} can be seen from *t* table. Based on the score of T-test by compare t_{count} with t_{table}, where df = 40, the score of t_{table} on *t* table gain value 2.02 at the 0.05 level of significance. It means that t_{count} is higher than t_{table} (12.856 > 2.02) means null hypothesis (H_0) is rejected and the alternative hypothesis is accepted (H_a). So, it can be concluded that there is a significant difference score of students' descriptive text reading ability before and after being taught by using picture word inductive model.

2. Based on the results of significance level. The decision based on the assumption are:

   a. If sig > 0.05 the null hypothesis (H_0) is accepted.

   b. If sig < 0.05 the null hypothesis (H_0) is rejected.

   With significant 0.00 means the level of significance is lower than 0.05. It means that the hypothesis which states that there is no difference score of students' descriptive text reading ability before and

after being taught by using picture word inductive model (H_0) is rejected. In the other word, there is a significant difference score of students' descriptive text reading ability before and after being taught by using picture word inductive model. Where the differences of mean shows that mean of post-test (77.93) higher than mean of pre-test (64.27). It can be concluded that the use of picture word inductive model is effective in teaching descriptive text on reading ability.

C. Hypothesis Testing

The hypothesis testing of this study are as follows:

1. If the value of $t_{count} > t_{table}$ in df = 40 with the significant level 0.05, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. It means there is a significant difference score of students' descriptive text reading ability before and after being taught by using picture word inductive model.

2. If the value of $t_{count} < t_{table}$ in df = 40 with the significant level 0.05, the null hypothesis (H_0) is accepted and the alternative hypothesis (H_a) is rejected. It means that there is no a significant difference score of students' descriptive text reading ability before and after being taught by using picture word inductive model.

   Based on the statistical calculation by using SPSS 16.0 the researcher gave the interpretation to t_{count}. The t_{count} in this case is 12.856

by df (41-1=40). The degree of freedom shown in the table with the critical value for t at the 0.05 level of significance is 2.02.

The t_{count} calculated for the differences score between students's descriptive text reading ability before and after being taught by using picture word inductive model was 12.856 and that value is bigger than the critical value found in the *t* table at 0.05 level of significance is 2.02. The result reports that the t_{count} is bigger than t_{table} (12.856 > 2.02).

Because t_{count} > t_{table} (12.856 > 2.02) it means that H_0 is rejected and H_a is accepted. It means there is a significant difference score of students' descriptive text reading ability before and after being taught by using picture word inductive model.

It can be defined that teaching descriptive text on reading ability by using picture word inductive model is effective. In the other words, teaching descriptive text on reading ability by using picture word inductive model gives positive influence on the students' achievement of the seventh graders in MTsN Bandung.

D. Discussion

The objectives of this study is to find out the effectiveness of using picture word inductive model in teaching descriptive text on reading ability at the seventh graders of MTsN Bandung in academic year 2016/2017.

Before the students being taught by using picture word inductive model, tryout was done to measure that the instrument had validity and reliability. After the data was analyzed, it showed that 20 items were valid.

In order to gain the objectives of the study, after doing the tryout, the researcher conducts an experiment research with a pretest and posttest design were given to the students in experimental class. The research procedures are divided into three steps. First step was administering the pre-test by giving descriptive text reading test to know the score of students' descriptive text reading ability before got the treatment. The second step is giving treatment and applying the picture word inductive model to the same students. The researcher divided the students into groups. One group consists of two students. The students enthusiastic in study descriptive text reading during the treatment. The researcher conducted the treatment twice. The last step was administering post-test to the students after they got two treatments by using picture word inductive model. It was to know the students' descriptive text reading ability after they were treated by using picture word inductive model.

After the data was collected, it was analyzed statistically by using T-test formula. Based on the result of T-test, the ouput of paired samples statistics shows mean of pre-test is 64.27 and post-test has increased 77.93. Based on the result of mean score, the mean score of the students after being taught by using picture word inductive model is higher than the mean score of the students before being taught by using picture word

inductive model with the different is 13.659. It means that there is a significant difference of students' descriptive text reading ability before and after being taught by using picture word inductive model.

Based on the result of the statistical computation using T-test, the results show that there is significant improvement of students' score between pre-test and post-test. The result of t_{count} is 12.856. When t_{count} is compared to t_{table} with the df (41-1=40) as stated in hypothesis testing, the t_{count} is bigger than the t_{table} (12.856 > 2.02). Based on the hypothesis testing, H_0 is rejected and H_a is accepted. It has been found that there is significant difference score of students' descriptive text reading ability before and after being taught by using picture word inductive model.

Based on the result of analysis by using T-test formula it can be concluded that picture word inductive model is effective in teaching descriptive text on reading ability at the seventh graders of MTsN Bandung in academic year 2016/2017.

So, it means that the implementation of picture word inductive model in teaching and learning process motivates the students and gives a positif effect on the students' achievement in descriptive text reading ability. Moreover, by discovering words from a picture they increased their vocabularies. They can study descriptive text reading easily. The PWIM creates fun and pleasure activity in the classroom, so the students are happy and have confidence to be more active. During the process of teaching descriptive text on reading ability by using picture word inductive

model, the students are enthusiastic and they are interested. They are active to label the picture. They felt enjoy to find objects and actions in the picture. Besides that, the students feel confidence to answer the questions which given by the teacher.

Meanwhile according to Calhoun (1999), using picture word inductive model gives many advantages. First, this picture word inductive model gives the interesting visual in order to makes it easier for the students to learn new words and find what the information they get from the picture. Second, because the students are using pictures related to topic or material labeling the picture together, they will feel that they are as a part of the classroom community and confidence to participate in class activities. The students as a part the community can have confidence and will be happy participate in the classroom. Third, the students are assisted in seeing the patterns and relationship of the English language, enabling them to apply this learning to newly encounter words. The picture word inductive model can help the teacher to provide a better curricular and instructional balance by focusing lesson on composing and comprehending the subject. However, by using picture word inductive model will give opportunity for the students to be active in a fun way. This finding is also related with Joyce (2002:153) contents that the Picture Word Inductive Model is a teacher facilitated process, in which the teachers lead children to discover words from a picture, increase the number of words in their

sight-reading vocabularies and apply observation and logical thinking analysis to their reading.

The finding above is related with the previous study. Yuniyarsih (2014) has proven the implementation of picture word inductive model strategy seems more effective, enjoyable and useful for students. Moreover, Yuliana (2011) has proven that the implementation of picture word inductive model more effective to improve the students' understanding than by using of non picture word inductive model technique (explanation only). The last study was conducted by Prastama (2013) has proven that the role of picture word inductive model indicates that the students' achievement was better and it was found that they have good motivation in teaching and learning process. The applying of PWIM is highly effective to develop the students' achievement. Those previous studies conducted support the belief that picture word inductive model have a positif effect on descriptive text reading ability.

Based on the explanation above, teaching descriptive text on reading ability is good to increase students' descriptive text reading ability at the seventh grader of junior high school. From the result of data analysis, there is significant difference score of students in descriptive text reading ability before and after being taught by using picture word inductive model. So, it can be concluded that picture word inductive model is effective to teach descriptive text on reading ability at the seventh graders of MTsN Bandung.