

CHAPTER IV

FINDING AND DISCUSSION

A. Findings

In this chapter, the writer presents the data description of the seventh grade at SMPN 4 Sampit about teaching learning process by using Cooperative Learning. There are two class that the writer uses as research class. They are seventh grade R2 as experiment class who use Cooperative Learning and VII R3 as control class who do not use Cooperative Learning. To find out more about the students' reading comprehension achievement by using Cooperative Learning. The writer had given the both of class pre-test and post-test. So, in this chapter, the writer describes about result of the research of the seventh grade at SMPN 4 Sampit who taught using Cooperative Learning and who taught without Cooperative Learning.

The writer did the research on April 2018 until June. Here, the writer describes about the result of the research on the field that collected by techniques of data collection, that were observation, test, and documentary. English learning process at SMPN 4 Sampit for seventh grade student has been done one time in a week. It is on Friday for class VII R2 and Saturday for class VII R3 which taught by Mrs. Noorina S.Pd.

To find out the reading comprehension achievement of students who taught using Cooperative Learning and taught without using Cooperative Learning, the writer used the test which conducted when before and after the treatment were given. Here were the result of students test in reading comprehension.

1. Description about the students' Reading Comprehension Achievement by Using Cooperative Learning in Pre-test of class VII R2.

To know the reading comprehension achievement of students who taught using Cooperative Learning between pre-test and post-test of the seventh grade at SMPN 4 Sampit, the writer use SPSS 22 to make easier to count.

Based on the data the highest pre-test score of the students in the experiment class was 50, and the lowest was 30. Meanwhile, the highest post-test score was 92 and the lowest score in the experiment class was 80. After the writer collect the data in SPSS 22 the writer got the mean score of pre-test was 43.06 and the mean score of post-test was 86.47.

As the result, there is an increase on students' reading comprehension achievement between pre-test and post-test who taught by using Cooperative Learning of the seventh grade R2 at SMPN 4 Sampit academic year 2017/2018.

2. Description about the Students' Reading Comprehension Achievement without Using Cooperative Learning in Pre-test and Post-test of Class VII R3.

To know reading comprehension achievement of students who taught using Cooperative Learning pre-test and post-test of the seventh grade at SMPN 4 Sampit, the writer use SPSS 22 to make easier to count.

The highest pre-test score in the controlled class was 50 and the lowest was 30. Meanwhile, the highest post-test score in the control class was 84 and the lowest was 55. After the collect the data in SPSS 22 the mean score of pre-test was 40.72 and the mean score of post-test was 68.09.

As the result, there is an increase on students' reading comprehension achievement between pre-test and post-test who taught without using Cooperative Learning of the seventh grade R3 academic year 2017/2018.

As the result, there is significant difference on students' reading comprehension achievement between pre-test and post-test who taught without using Cooperative Learning of the seventh grade R3 academic year 2017/2018.

This result of students' reading comprehension achievement using Cooperative Learning of the seventh grade at SMPN 4 Sampit. To know the students' reading comprehension achievement between who using Cooperative Learning and without using Cooperative Learning.

- a. H_a : Students' reading comprehension achievement that use Cooperative Learning.
- b. Mean score of students' reading comprehension achievement that use Cooperative Learning:

$$Mx_1 = \frac{2.751}{32}$$

$$Mx_1 = 85.97$$

- c. Mean score of students' reading comprehension achievement without use Cooperative Learning:

$$Mx_2 = \frac{1.900}{32}$$

$$Mx_2 = 59.37$$

As a result is significant difference on students' reading comprehension achievement who taught by using Cooperative Learning and without using Cooperative Learning of the seventh grade at SMPN 4 Sampit academic year 2017/2018. Furthermore, mean score of experiment class 85.97 and control class 59.37.

The writer concludes from the result that have been obtained, that the experiment class almost as same increase as the control class reading comprehension achievement.

3. Data testing

In this research, the normality test is performed before the calculation of t_{test} value to determine if the data set is well-modeled by a normal distribution and compute how likely it is for a random variable underlying the data set to be normally distributed. The data is analyzed by the use of SPSS Statistic 22. The result of the test can be seen as follow:

a. Normality test

Hypothesis :

Ho : the data distributed normally

Ha : the data not distributed normally

The data could be said completed the hypothesis if;

Significance score > 0.05 , so, Ho was accepted and Ha was rejected.

Significance score < 0.05 , so, Ho was rejected and Ha was accepted.

1. Normality of the pre-test

Table 4.1 test of Normality Data of Pre-test

One-Sample Kolmogorov-Smirnov Test			
		Experiment	Control
N		32	32
Normal Parameters ^{a,b}	Mean	43.06	64.56
	Std. Deviation	4.751	4.859
Most Extreme Differences	Absolute	.166	.161
	Positive	.092	.089
	Negative	-.166	-.161
Test Statistic		.166	.161
Asymp. Sig. (2-tailed)		.025 ^c	.034 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

From the table above Table 4.1 above, it can be seen that the Lo in significance scores of data for pre-test 0.025 in experiment class and significance

scores of data pre-test 0.034 in control class. That is mean $0.025 > 0.05$ and $0.034 > 0.05$. So, H_0 was accepted, the distributed normally.

2. Normality of the Post-test

Table 4.2 test of Normality Data of Post-test

One-Sample Kolmogorov-Smirnov Test			
		Experiment	Control
N		32	32
Normal Parameters ^{a,b}	Mean	86.47	68.09
	Std. Deviation	3.350	7.969
Most Extreme Differences	Absolute	.119	.133
	Positive	.096	.093
	Negative	-.119	-.133
Test Statistic		.119	.133
Asymp. Sig. (2-tailed)		.200 ^{c,d}	.161 ^c

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

From the table above Table 4.2 above, it can be seen that the L_0 in significance scores of data for post-test 0.200 in experiment class and significance scores of data post-test 0.161 in control class. That is mean $0.200 > 0.05$ and $0.161 > 0.05$. So, H_a was accepted, the distributed normally.

b. Homogeneity test

Hypothesis:

Ho: the data distributed homogeneity

Ha: the data not distributed homogeneity

The data could be said completed the hypothesis if;

Significance score > 0.05 , so Ho was accepted and Ha was rejected.

Significance score < 0.05 , so Ho was rejected and Ha was accepted.

1. Homogeneity of the pre-test

Table 4.3 Test of Homogeneity Data of Pre-test

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
.016	1	62	.898

The writer used homogeneity test via SPSS 22t. from the table above Table 4.3 above, it can be seen that the Fo in significance column was 0.898. mean while, the Ftable was 0,05. It can be concluded that $0.898 > 0.05$ and it means the data was homogeny.

2. Homogeneity of Post-test

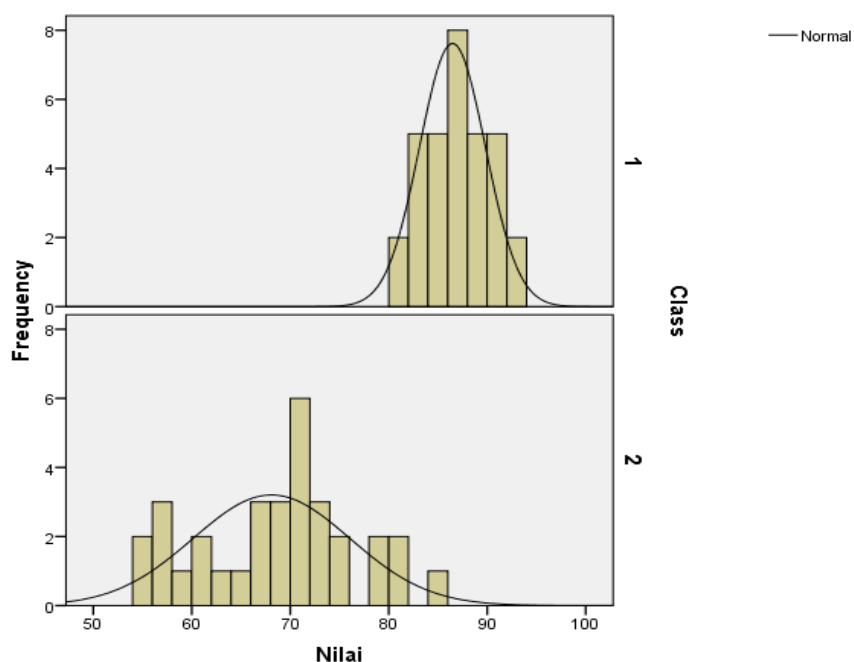
Table 4.4 Test of Homogeneity Data of Post-test

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
15.209	1	62	.000

The writer used homogeneity test via SPSS 22, especially used one-way Anova test. From the table above 4.4 above, it can be seen that the F_o in significance column was 0.000. Meanwhile, the F_{table} was 0,05. It can be conclude that $0.000 < 0.05$ and it means the data was not homogeny.

After the writer calculate the data of post-test using homogeny test and the results obtained was not significant so the writer use Mann Whitney Test or U Test and obtain the following results:



From two histograms above, where the shape of width and height are both different, which means the form and distribution of data of the two groups are different, The purpose of the writer test Mann Whitney U Test is to test whether the significance difference is meaningful or not. What if the shape and distribution of the histogram are not the same? is it still possible to do this test? The answer is "Yes", but the writer is no longer testing the difference of experiment class and control class, but testing the significance difference only.

4 Analysis of the data

1. Determining mean of variable x (variable 1) with the formula:

$$Mx = \frac{\Sigma}{N}$$

$$Mx = \frac{2.751}{32}$$

$$Mx = 85.97$$

2. Determining mean of variable y (variable 2) with the formula:

$$My = \frac{\Sigma}{N}$$

$$My = \frac{1.900}{32}$$

$$My = 59.37$$

3. Determining standar deviation of variable x (variable 1) with the formula:

$$SDx = \frac{\sqrt{\Sigma x^2}}{N}$$

$$SDx = \frac{7.568.001}{32}$$

$$SDx = \sqrt{236.500}$$

$$SDx = 15.37$$

4. Determining standar deviation of variable y (variable 2) with the formula:

$$SDy = \frac{\sqrt{\Sigma y^2}}{N}$$

$$SDy = \frac{3.610.000}{32}$$

$$Sdy = \sqrt{112.812}$$

$$Sdy = 10.62$$

5. Determining standar error of variable x (variable 1) with the formula:

$$SE_{MX} = \frac{SDx}{\sqrt{N_1-1}}$$

$$SE_{MX} = \frac{15.37}{\sqrt{32} - 1}$$

$$SE_{MX} = \frac{15.37}{\sqrt{31}}$$

$$SE_{MX} = \frac{15.37}{5.56}$$

$$SE_{MX} = 2.76$$

6. Determining standar error of variable y (variable 2)with the formula:

$$SE_{My} = \frac{SD_y}{\sqrt{N_1-1}}$$

$$SE_{My} = \frac{10.62}{\sqrt{32-1}}$$

$$SE_{My} = \frac{10.62}{\sqrt{31}}$$

$$SE_{My} = \frac{10.62}{5.56}$$

$$SE_{My} = 1.91$$

7. Determining standar error of the different mean between variable x and variable y with the formula:

$$SE_{MX} - M_y = \sqrt{SE_{MX}^2 + SE_{My}^2}$$

$$= \sqrt{2.76^2 + 1.91^2}$$

$$SE_{MX} - M_y = \sqrt{7.61 + 3.64}$$

$$SE_{MX} - M_y = \sqrt{11.25}$$

$$SE_{MX} - M_y = 3.35$$

8. Determining test observationwith the formula:

$$t_o = \frac{M_x - M_y}{SE_{MX} - M_y}$$

$$t_o = \frac{85.97 - 59.37}{3.35}$$

$$t_o = \frac{26.2}{3.35}$$

$$t_o = 7.94$$

9. Determining T-Table in significance of level 5% with df.

$$Df = (N1 - N2) - 2$$

$$Df = (32-32) - 2$$

$$Df = 64 - 2$$

$$Df = 62$$

- a. Ha (Alternative Hypothesis): there a significance effect of using Cooperative Learning towards students reading comprehension at seventh grade SMPN 4 Sampit.

- b. If $t_0 \leq t_{table}$, in significant degree of 5%, the Null Hypothesis (H_0) is accepted and the Alternative Hypothesis (H_a) is rejected. It means that there is not effect of using Cooperative Learning on students' reading comprehension at seventh grade in SMPN 4 Sampit.
- c. If $t_0 \geq t_{table}$, in significant degree of 5%, the Null Hypothesis (H_0) is rejected and the Alternative Hypothesis (H_a) is accepted. It means that there is an effect of using Cooperative Learning on students' reading comprehension at seventh grade in SMPN 4 Sampit.

According to the statistical calculation above, the value of t_0 was 7.94 and the degree of freedom is 62 with 5% degree of significant used by the writer. Based on the significance, it can be seen that on $df = 62$ in significance 5% the value of the t_{table} is 1.66980. By comparing the result of t_{table} and t_0 , in the degree of significance of 5%, $t_0 > t_{table} = 7.94 > 1.66980$. According that result, it can be concluded that the Null Hypothesis (H_0) is rejected and the Alternative Hypothesis (H_a) is accepted. It means there are significance achievement in reading comprehension between students who taught by using Cooperative Learning and who taught without using Cooperative Learning.

B. Discussion

After all obtained data are presented, they are also needed to be interpreted. To interpret the data, the writer describe the description based on result of the research and conformity with the problem statement which are stated on the chapter I. The results of the research were used to prove whether the use of Cooperative Learning will improve students' reading comprehension achievement in the teaching and learning process. Everyone was free to express their opinions, feelings, and suggestions related to the

implemented actions. During the research process, the writer observed the teaching learning English process of the seventh grade at SMPN 4 Sampit. The writer chose the descriptive text as a material, also for taking the test that's using descriptive text. During the observation process, the writer got some information. First, the process of teaching and learning in both classes, experiment class and control class are the students who generally have the same level of achievement. To know how the students' reading comprehension achievement in experiment and control class, it can be seen on the description below:

1. Students' Reading Comprehension Achievement in Control Class

During the writer observed in the control class, the control class was very different with the experiment class. After got the pre-test, the teacher gave the explanation about the material. During the teaching learning process, the teacher did not special treatment to teach English. Next, all of the exercises and practice were finished individually. No discussion, no sharing, etc. The high achievers and low achiever students work individually without any interaction. Then the teacher's role is as the leader in the class. Students cannot learn actively. The teacher dominates the learning process. Students cannot explore their difficulties with the others. They also cannot share their idea to solve the problems. The exercises from was only answer the question of descriptive texts. It looks like conventional drills. When the writer compared the pre-test and post-test score, many students got higher score, and lower score.

Based on the observation in control class during teaching and learning process, the writer could see that there are some problems happened in the class, for example:

- a. Some the students got confuse the lesson.

- b. They also were too worried when the teacher gave them task about reading comprehension.
- c. Almost all of the students in the class just played and did not do the task.
- d. Some of them looked bored and lost so much time because they did not focus when they had more times.
- e. The students just answered some of the tasks.

2. Students' Reading Comprehension Achievement In Experiment Class

During the teaching learning process in the class, the teacher gave the students an explanation of descriptive text. Next, the students should be able to identification its structure. They also should be able to decide where the main ideas are. All of the students paid much attention with the text. This text has special text structures; they are general classification and description. After explanation session, the writer divided the students in the experiment class into eight groups. Each group consisted of four or five members. Each of the groups got a same descriptive text to read. The writer gave the time for students to read along 10 minutes.

The writer observed them during the reading process. Their eyes were focus in the text, and their brain of course tried to work to know the text content. The writer believed, it was what the Harmer (1991, p.190) said about reading process. He said that reading is an exercise dominated by the eyes and the brain. The eyes tried to receive the messages and the brain then has to work out the significance of these messages. These reading purposes are one of the kinds of reading purposes like what Grabe stated. Grabe (2002, p.6) said that there are some purposes of reading; reading to search for simple information, reading to skim quickly, reading to learn from texts, reading to integrate information, reading to write,

reading to critique texts, and reading for general comprehension. The students were guided to comprehend the text which they read.

This is because reading as an activity will be a meaningful activity by comprehending. Without understanding the text, the reader only did reading as meaningless process. They cannot get the message from the author. After finishing their reading, each group did a discussion with their members. The group was modified by the teacher. Each group contains of the high achiever students, medium achiever, and also low achiever students. The students who were low achiever and got some difficulties will ask the help from their friend in a group who were high achiever students along the discussion process. The lower achiever students would make question about what the part of the text that they did not know. The difficulties that the lower students feel were the problems in reading commonly.

Reading text in foreign language makes some students get difficulties, hence some of them can do it well. The low achiever students must get more attention from the teacher. Actually it was because they need more treatment or helping. However, the guidance here, not always only come from the teacher. It also can come from the other students. That is why the next step was clarifying. Overall, this step is the students' high achiever responsibility. They must help their friend and give the clarification. Moreover, all of the steps above actually are the Cooperative Learning.

Based on the observation during teaching and learning process, the writer can conclude some points, they are:

The students seemed enthusiastic when teacher announced about Cooperative Learning.

- a. The students enjoyed their reading comprehension when they discussed in groups.

- b. The students got more focus when they discussed in groups.
- c. The students seen enthusiastic when they did answer the questions.
- d. The students more understood about the material that they learned while teaching and learning reading comprehension process.

It was supported by Prasetyo (2012, p. 4) as one of the teaching strategy in teaching and learning process, Cooperative Learning. Cooperative Learning has some advantages as follow:

- 1) Students are more active during the learning process.
- 2) Students will better mastery in the material provided.
- 3) Improve the student communication skill to each other.
- 4) Learning process will be more attractive.
- 5) Improving the teaching quality.

It can be concluded that teaching learning process using Cooperative Learning, the students more active and more attractive.

3. The Use of Cooperative Learning to Improve Students' Reading Comprehension Achievement.

Based on statistical measurement above, it shows:

- a. Based on the data above, students was taught with Cooperative Learning in experiment class show better perform than control class. Research findings above show that in the post test, students from experimental class show better score than students from control class. It can be seen from the result of the average score of post-test of controlled class and experimental class. The average score of post-test of controlled class is 68.9. While, the average score of post-test of experimental

class is 86.47. So the average score of post-test of experimental class higher than average score of post-test of controlled class. $86.47 > 68.9$.

- b. Afterward, the experiment class and control class students' gain score illustrates that the average gain score for experiment class students is higher than the average gain score for controlled class students. The average gain score of experimental class is 85.9687. while the average gain score of controlled class is 59.375.
- c. From the result of statistical calculation above, the value of t_0 was 7.94 and the degree of freedom is 62 with 5% degree of significant used by the writer. Based on the significance, it can be seen that on $df = 62$ in significance 5% the value of the t_{table} is 1.66980. By comparing the result of t_{table} and t_0 , in the degree of significance of 5%, $t_{table} < t_0 = 1.66980 < 7.94$. According those results, it can be concluded that the Null Hypothesis (H_0) is rejected and the Alternative Hypothesis (H_a) is accepted. It means:
 1. If the result of t observation is higher than t table ($t_0 < t_{table}$), the null hypothesis (H_0) is accepted and the alternative hypothesis (H_a) is rejected. It means that there is no a significant difference achievement between students who taught by using Cooperative Learning and students who taught without using Cooperative Learning.
 2. If the result of t observation is higher than t table ($t_0 > t_{table}$), the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. It means that there is a significant difference achievement between students who taught without using Cooperative Learning and students who taught by using Cooperative Learning.

Based on the result of the research, the writer gives the interpretation that Cooperative Learning can improve students' reading comprehension achievement in experiment class besides students' reading comprehension achievement in experiment class besides students' reading comprehension without using Cooperative Learning also increased. Therefore, it can be concluded that Cooperative Learning can adapted as a teaching and learning strategy to improve students' reading comprehension achievement and make students more active and students can be centered in learning reading process. So, teachers do not just use a monotonous way. Moreover, as stated in chapter II, Cooperative Learning do not just improve students' reading skill but also develop their social skills, through reading and composition they learn how to cooperate and to compete.