CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This research aims to investigate the effectiveness of jumbled paragraph game in teaching reading comprehension to the eleventh graders at SMAN 4 Sidoarjo. This chapter presents the result of the findings in the fields and to find out any differences between the use of jumbled paragraph game and traditional technique in teaching reading comprehension. This chapter is divided into three subheadings, they are: presentation of data, result of data analysis, and discussion.

A. Presentation of Data

This study was conducted to find out whether there is significant difference in the reading comprehension between the students who were taught by using jumbled paragraph game and those who were not taught by using jumbled paragraph game. The data were collected from the students' final test scores. The final test was administered after the second treatment to the experimental group. Before the treatment, the researcher administered pretest for all the students both in the experimental and the control groups. The result of the pretest informed that the students of XI IPA 4 and XI IPA 5 had similar ability in English reading comprehension.

1. The Result of Experiment Group Final Test

       The data was collected by giving test after the implementation of jumbled paragraph game to the experimental group. The test on the experimental group was held on July 24th, 2013. Before test was given, the treatments were done twice on July 23, 2013 and July 24, 2013. The first treatment used "The Lion and The Mouse" as the title of the text and second meeting was about "The Four Friends". The test was attended by 35 students on July 24th, 2013. The test consisted of a passaged and 10 question items with four alternatives. The alternatives includes one correct answer and three wrong answers. The result of the final test is summarized in table 4.1.

Table. 4.1 The Final Test Scores of Experimental Group

Group	N	Total	Mean
Experiment	35	2760	78.86

       Table 4.1 shows that the students of the experimental group got the total score 2760. This group consisted of 35 students, meaning that the mean is 78,86. This result was then grouped in four grades as presented in the following table 4.2.

Table. 4.2 The Final Test Scores of Experiment Group Grouped by Grades

Grade	Interval Range	The number of students
A	100 – 90	14
B	80 – 70	16
C	60 – 50	5
D	40 – 30	0
Total		35

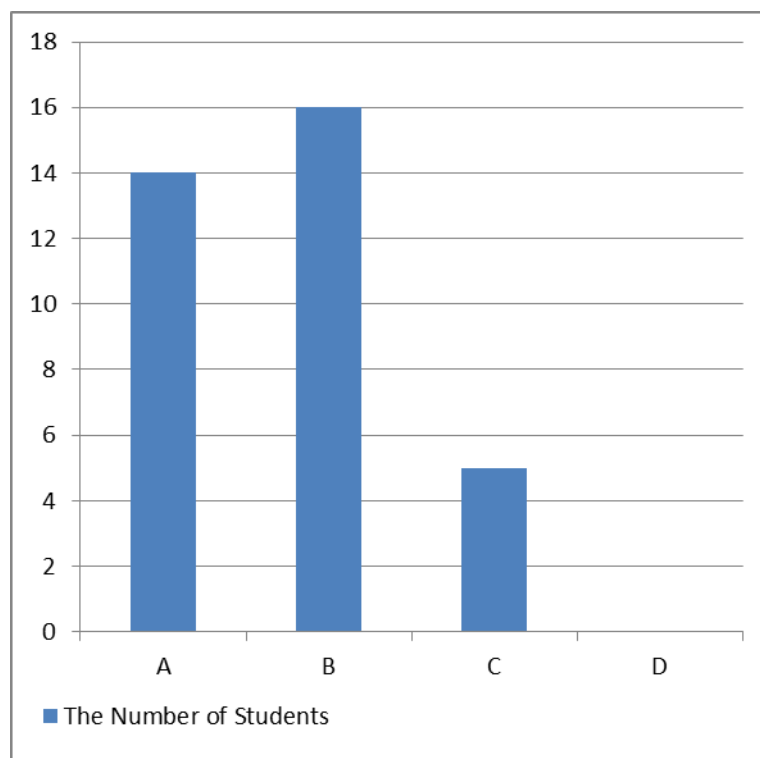The above interval can be figured in the following chart 4.1.

Figure. 4.1 Chart of the Final Test Scores of Experiment Group was Grouped by Grades

Table 4.2 shows that most students (30 out of 35) were scored either in grade A or B with 14 students in the range of 90-100 and 16 students in the range of 80-70. Only 5 students who got C in the range of 60-50 and no one got D in the range of 40-30 which is the lowest score.

2. The Result of Control Group Final Test

The test was also given to the class XI IPA 5 at SMAN 4 Sidoarjo as the control group. The control group was not given the treatment by using jumbled paragraph game but using silent reading, a technique that the teacher usually used to teach reading comprehension. The material was same with that of the experimental group. The test was given after two meetings on July 23rd, 2013 and July 24th, 2013. In the first meeting, the text used was "The Lion and The Mouse" and second meeting was "The Four Friends". The final test in the control group was attended by 35 students on July 24th, 2013, on the same day with the experimental group. The test used was also the same with that of the experimental group with a passage followed by 10 question items with four alternatives including one correct answer and three wrong answers. The result of the final test in the control group is presented in table 4.3.

Table. 4.3 The Final Test Scores of Control Group

Group	N	Total	Mean
Control	35	2210	63.14

Table 4.3shows that the students of the control group got score total of 2210. This group consisted of 35 students, meaning that the mean is 63,14. The result of the control group test score was grouped in four grades. It is presented in the following table 4.4.

Table. 4.4 Grouping of the Final Test Scores of Control Group

Grade	Interval Range	The number of students
A	100 – 90	0
B	80 – 70	15
C	60 – 50	19
D	40 – 30	1
Total		35

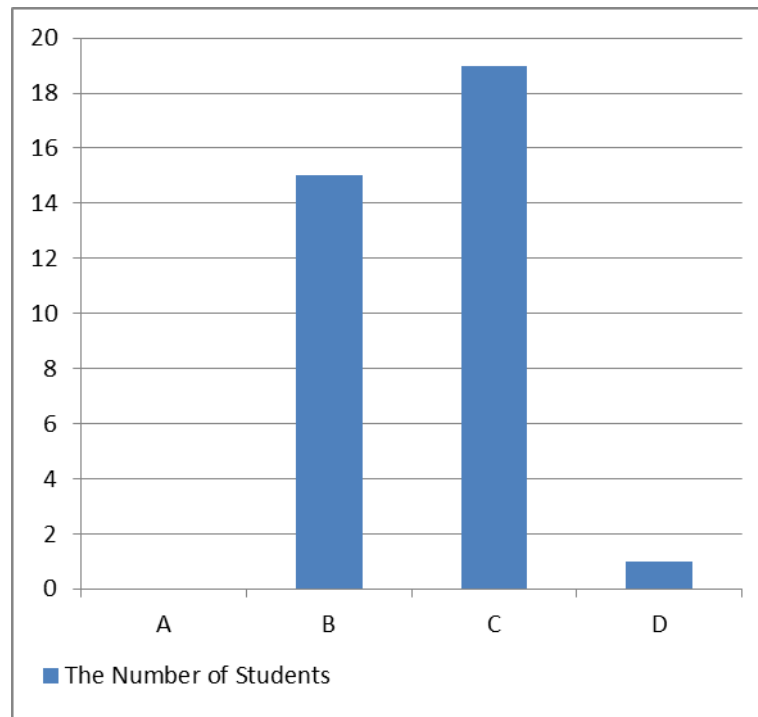This grouping can be described in the following chart 4.2.

Figure. 4.2 Chart of the Final Test Scores of Control Group was Grouped by Grades

Table 4.4 shows more than half of the students got C grade or were in the range of 60-50. While the highest score achieved in the experimental group was 100, the highest score in the control group was 80 or grade B. There were 15 students who got B in the range of 80-70 and a student got D in the range of 40-30 that the lowest score. None of the students in the control group was graded A.

B. Result of the Data Analysis

1. Comparing Means

After collecting the data by giving final test to the experimental and the control group, then the data was analyzed by calculating the mean of the scores of each group. The result of the test score and mean score of the experimental and control group are presented in following table 4.5.

Table. 4.5 The Final Test Scores of both Groups

Group	N	Total	Mean
Experiment	35	2760	78.86
Control	35	2210	63.14

The comparison of the scores and the means is presented in the following chart.
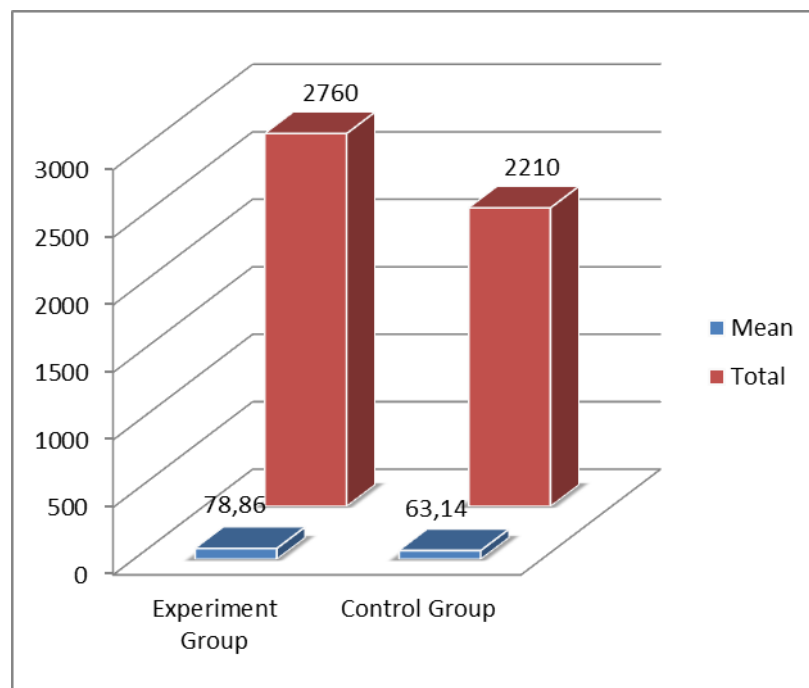

Figure 4.3. Chart of Final Test Total Score and Mean in both Groups

From table 4.5 it can be seen that the mean score of the experimental group is 78,68 and the mean score of control group is 63.14. The results of the test shows that there are differences in mean scores between the experimental group and the control group. It means that the students of the two groups had different of scores after the treatment was given to the experimental group. Students' mean score of the experimental group is higher than that of control group.

2. T-test

The researcher used t-test to know if the difference in score is significant or not, i.e. the data is not a chance alone. Before calculating the significance with t-test, the researcher did normality test and homogeneities test. The normality test was used to check whether the final test score of experimental group and control group were normally distributed. The homogeneity test was used to calculate the homogeneity of variance of both experimental and control group final test score. The researcher tested the data whether the data had shown normal distribution or not in order that the data can then be calculated using statistical parametric. The result of the data is shown in the following table 4.6.

Table 4.6. The result of normality test

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Experiment	35	78.8571	12.07122	50.00	100.00
Control	35	63.1429	10.78436	40.00	80.00

One-Sample Kolmogorov-Smirnov Test

		Experiment	Control
N		35	35
Normal Parameters[a]	Mean	78.8571	63.1429
	Std. Deviation	12.07122	1.0784E1
Most Extreme Differences	Absolute	.222	.195
	Positive	.149	.157
	Negative	-.222	-.195
Kolmogorov-Smirnov Z		1.313	1.152
Asymp. Sig. (2-tailed)		.063	.141

a. Test distribution is Normal.

The normality test used was Kolmogorov-Smirnov test with (α) test by comparing the absolute value of D with the critical value of D* from statistical table. The hypothesis used are:

H_0 : the data is a normal distribution

H_a : the data is not a normal distribution

Level of significance : $\alpha = 0.05$

Test criteria : H_0 is accepted if $D < D * (\alpha)$

D value is equal to 0.222 for the experimental group and 0.195 for the control group, and D* values ($\alpha = 0.05$, n = 35) were obtained from statistical tables is equal to 0.224. Therefore, $0.222 < 0.224$ or $D < D* (\alpha)$ then H_0 is accepted which means that the data of the experimental group is in normal distribution. The result in the control group is $0.195 < 0.224$ or D <

D^* (α) then H_0 is accepted which means that the data of control group is normally distributed.

From the table above, it can be inferred that both the data of the experimental and the control group were normal. So, the data can be calculated with statistical parametric. The normality of the data also proves that the sample represents the population.

After the data was statistically proven to be normal, the researcher conducted the homogeneity test to demonstrate that the differences that occur in parametric statistical tests were really the result of differences between groups, rather than as a result of differences inside of the group.

After calculating the variances of experiment and control group, f-value was found 1.217. And the result of the test showed that f-value is lower than f-table, it means that the data is homogeneous. The result was 1.772 by checking at the critical value of f-test at 0.05 level of significance with df (degree of freedom) = 34 for numerator and 34 for denominator. From the calculation, it can be seen that f-value is lower than f-table $1.217 < 1.772$(see Appendix 10).

After getting the result of f-test, the researcher calculatedthe data with t-test to know the significance of the difference.

Table 4.7. Data of Experiment group and Control group

	N	Mean	Variance
Experiment	35	78.86	141.55
Control	35	63.14	116.24

Table 4.7 shows the difference mean and variance scores between students in the experimental group and the control group that were obtained in final test. The mean score of the experiment group is 78.86 whereas the mean scores of control group is 63.14. The variance of experiment group is 141.55 and control group is 116.24. This results show that the experiment group has a greater value than the control group, indicating in better performance of students in reading comprehension after the treatments.

In chapter I of this research, there are two hypotheses, null hypothesis (Ho) and alternative hypothesis (Ha) that should be proved. The finding of the study is then based on the result of this t-test that was calculated based on hypotheses.

- **Testing hypothesis**

  The hypothesis of this research states that:

  Ho: teaching reading comprehension using jumbled paragraph game is not more effective than silent reading to the second grade students at SMAN 4 Sidoarjo.

Ha: teaching reading comprehension using jumbled paragraph game is not more effective than silent reading to the second grade students at SMAN 4 Sidoarjo.

Related to the hypothesis and the summary result of t-test (see Appendix 10), it can be seen that the t- value is t = 6,000. Ho is rejected and Ha is accepted. To determine it, the t-table was consulted by checking at the critical value of t-test at 0,05 level of significance with df (degree of freedom) of 68 and the result is 1,995. From the calculation, it can be seen the observed of t-test is higher than t-table 6,000 > 1,995. So, based on calculation of t-test above, it shows that the difference of the mean is significant. It means that the data data is not obtained by chance. And the result of t-test proves that H_o is rejected, so that H_a is accepted.

C. Discussion

This section is intended to discuss the research findings. All data collected from the research instrument that has provided basic information about the object in this research. This study is about the effectiveness of jumbled paragraph game in teaching reading comprehension. This study used quasi-experimental method that compares two techniques in teaching reading comprehension, umbled paragraph game as the new technique and traditional technique (silent reading) as the usual technique used by teacher in teaching

reading comprehension in both classes. Class IPA 4 as the experimental group wastaught by Jumbled paragraph game and class IPA 5 as the control group was taught by traditional technique (silent reading).

The result of students' achievement could be seen from final test result. The result of both groups final test shows different scores. Most students of experimental group (30 out of 35) were scored either in grade A or B with 14 students in the range of 90-100 and 16 students in the range of 80-70. While, more than half of the students of control group got C grade or were in the range of 60-50. Moreover, the highest score achieved in the experimental group was 100, the highest score in the control group was 80 or grade B. the mean score of the experimental group is 78,68 and the mean score of control group is 63.14. The experimental group got higher improvement than control group. Because the score of experimental group was higher than the score of control group, So it means that the teaching reading comprehension using jumbled paragraph game more effective than using silent reading.

From the calculation, it can be seen that the observed t-test is higher than t-table, i.e. 6,000 > 1,995. It proves that the data is not obtained by chance. And the result of t-test also proves that H_o is rejected, so that H_a is accepted. This means that teaching reading comprehension using jumbled paragraph game is more effective than silent reading to the second grade students at SMAN 4 Sidoarjo.

The result of this research shows that using jumbled paragraph game could help the English teacher in teaching reading. This might be because teaching technique that uses jumbled paragraph game is so fun[1]. The higher score in the post treatment test suggests that the students who played this game could understand the lesson more easily in an enjoyable way. In jumbled paragraph game the students are required to cooperate to achieve the goal and this make them capable of achieving the target more easily through their social interaction[2]. In other words, by cooperation they will be easier to achieve what they want. While, the teaching technique that used silent reading was too monotonous. As described in Chapter 3 that the students did not have many activities in the class and they were required to work individually. So, it made them bored. Unfortunately, reading became quite difficult to be taught. It could be concluded that teaching reading by using silent reading could make the students feel bored and were not interested to the learning process.

Therefore, the teacher needs a new technique that involves students to actively participate and feels comfortable in the learning process. So, the students do not accept the explanation from the teacher only. Through this study, jumbled paragraph game proves to be able to make learning interesting and fun so that the

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[1] Aliza Ali, Zahara Aziz and Rohaty Majzub, *Teaching and Learning Reading Through Play*, (Malaysia: Universiti Kebangsaan Malaysia, World Applied Sciences Journal 14 (Learning Innovation and Intervention for Diverse Learners): 15-20, 2011), p. 17

[2] Eka Nurul Hayat, *Teaching the present perfect tense by using the game (find someone who),* (Thesis, Department of English Education, the Faculty of Tarbiyah and Teachers' Training, Syarif Hidayatullah State Islamic University Jakarta, 2011), p. 16

students are interested to read. It is through reading that the students can add their new vocabularies and help them to develop their knowledge and improve their English skills.

As noted earlier that the problem of low students' comprehension in reading is due to low interest in reading books and lack of vocabulary.[3] This makes the students have difficulties in reading comprehension. Then, the problem can be overcome by using jumbled paragraph game in teaching reading comprehension. This is because, as the finding of this study, the implementation of jumbled paragraph game is effective for teaching reading comprehension. This teaching technique can also improve the score of the students in reading comprehension test through game or fun activities that make students interested in reading and easily memorize vocabulary they have from reading.

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[3] Zahrotul Faizah, *The Effect of KWL Strategy to Students' Competence in Reading Comprehension at SMP Negeri 1 Kemlagi, Mojokerto* (Surabaya: State Institute of Islamic Studies, 2012), p. 4