## CHAPTER IV

## RESEARCH FINDINGS AND DISCUSSION

In this chapter the resarcher describes the research findings and discussion. It consists of description of data of students' pre-test and post-test score from experimental and control group, normality and homogeneity testing. This chapter covers the description of data, hypothesis testing, and discussion.

## A. Research Findings

The purpose of this study was to compare the ability of second grade students at Mts Darul Hikmah Mojokerto to graps vocabulary when they were taught using Scattergories game technique against when they were taught without it. The result of the students' vocabulary mastery on pre-test and post-test. It was given to VIII A as experimental group that considered 30 students and VIII C as control group that considered 30 students. Students in the experimental class were taught using the Scattergories gaming strategy, whereas students in the control class were taught using the usual strategy.

The goal of this study was to see how successful the Scattergories game was at improving students' vocabulary knowledge in second grade children at Mts Darul Hikmah Mojokerto. The data was gathered from the students' pre-test and post-test scores in the two classes. Then, if the Scattergories game strategy was successful or not, determine the significant difference in score. To know the students' achievement was good or not, the researcher used the criteria that adopted from H. Dauglas Brown (2003). The scores' criteria as follows:

## Table 4.1 The Scores' Criteria

| No | Criteria | Range of Score |
| :---: | :---: | :---: |
| 1. | Excellent | $90-100$ |
| 2. | Good | $80-89$ |
| 3. | Adequate | $70-79$ |
| 4. | Inadequate | $60-69$ |
| 5. | Failing | $<60$ |

## 1. The students' Scores of Control Class

a. Pre-test of Control Class

Control class is a class where traditional strategy is used instead of the Scattergories game approach. Before the researcher conduct teaching learning process, the researcher administrated a pre-test for the control group.

Table 4.2 The Students Score of Pre-Test

| No | Name | Score |
| :---: | :---: | :---: |
| 1. | Achamad Nararya Monda Nabastala N. | 92 |
| 2. | Ahmad Faizal Ubaid Nur Fuad | 96 |
| 3. | Ahmad Ian Raditya | 92 |
| 4. | Akhmad Mozaik Gabril | 93 |
| 5. | Amnati Fadhilah | 95 |
| 6. | Arfit Dafa Haqi | 95 |
| 7. | Azmi Kartika Sari | 93 |
| 8. | Bagas Aliyudin | 92 |
| 9. | Darajatal Aliatur Rohman | 97 |
| 10. | Dini Nauviliya Rohmah | 92 |
| 11. | Dwi Prasetya | 95 |
| 12. | Edi Tri Utomo | 94 |
| 13. | Imrotun Najihan | 95 |
| 14. | Intan Alfi Octavia | 93 |
| 15. | Khullatul Bariroh | 93 |
| 16. | Lailatuz Zuhriyah | 93 |
| 17. | Luthfiatus Sholikah | 94 |
| 18. | M. Rifki Maulana | 95 |
| 19. | Maulana Malikul Mulki | 95 |
| 20. | Medina Safira Salsabila | 91 |
| 21. | Meiysa Citra Dewi | 92 |
| 22. | Mokhammad Ainun Rofiq Febriansyah | 89 |
| 23. | Muhammad Wildan Nazarudin | 92 |
| 24. | Nur Syahid | 94 |
| 25. | Qurrotul Ilmi Citra | 97 |
| 26. | Rosa Bunga Cinta Isma | 94 |
| 27. | Shela Amanda Pratama | 96 |


| 28. | Taufik Suharta | 92 |
| :---: | :--- | :---: |
| 29. | Vina Maulidiyah | 100 |
| 30. | Zaskia Qoiratul Nisak | 95 |

Based on the table the pre-test was followed by VIII-C, which had a total of 30 students. The pre-test took roughly 30 minutes. The pre-test was in the form of filling in the puzzle that has been provided. The purpose of the test was to determine the students' vocabulary mastery abilities before the teacher taught them using traditional methods.The pre-test held on Tuesday, $25^{\text {th }}$ of May 2021.

The descriptive statistic and the percentage of students who scored well on the pre-test were calculated using SPSS 23. The percentage was divided into five criteria: excellent, good, average, poor, and very poor (see table 4.1). The result of calculation as follow:

Table 4.3 Descriptive Statistic of Pre-Test

a. Multiple modes exist. The smallest value is shown

Based on Table 4.3, there were 30 students in the control class. It revealed that themean pre-test score was 93.87 . The median score from the pre-test was 94.00 , which was determined from half of the data sample. The data employed mode score to determine the most frequently appearing number, and the most frequently appearing number was 92 . The pre-test standard deviation was 2.161 . The pre-test range was 11 points. Furthermore, the lowest and maximum scores were 89 and 100, respectively. The total number of questions in the pre-test was 2816 . Then, in the pre-test,
a number of scores appeared, the researcher presents frequency distribution as follow:

### 4.4 Frequency Distribution of Score Pre-Test

| N_C |  |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | :---: | :---: |
|  |  |  |  |  |  |  |

Based on the Table 4.4, showed that from 30 students the frequency of pre-test score after being distributed there were 1 students $(3,3 \%)$ got 89 , 1 students (3,3\%) got 91, 7 students (23,3\%) got 92 , 5 students ( $16,7 \%$ ) got 93,4 students $(13,3 \%)$ got 94,7 students $(23,3 \%)$ got 95,2 students $(6,7 \%)$ got 96, 2 students $(6,7 \%)$ got 97 , and 1 students $(3,3 \%)$ get 100 .

### 4.1 Histogram Descriptive Statistic of Pre-Test



Based on the histogram above, so that the mean was 93.87 , the standard deviation was 2.161 and the total students was 30 .
b. Post-Test of Control Class

Although the teaching learning process did not use the Scattergories game approach, a post-test in vocabulary mastery was given to the control group to see if the students' skill in vocabulary mastering had improved.

### 4.5 The Students' Scores of Post-Test

| No | Name | Score |
| :---: | :---: | :---: |
| 1. | Achamad Nararya Monda Nabastala N. | 96 |
| 2. | Ahmad Faizal Ubaid Nur Fuad | 98 |
| 3. | Ahmad Ian Raditya | 95 |
| 4. | Akhmad Mozaik Gabril | 92 |
| 5. | Amnati Fadhilah | 97 |
| 6. | Arfit Dafa Haqi | 90 |
| 7. | Azmi Kartika Sari | 93 |
| 8. | Bagas Aliyudin | 97 |
| 9. | Darajatal Aliatur Rohman | 94 |
| 10. | Dini Nauviliya Rohmah | 92 |
| 11. | Dwi Prasetya | 96 |
| 12. | Edi Tri Utomo | 94 |
| 13. | Imrotun Najihan | 88 |
| 14. | Intan Alfi Octavia | 97 |
| 15. | Khullatul Bariroh | 96 |
| 16. | Lailatuz Zuhriyah | 96 |
| 17. | Luthfiatus Sholikah | 97 |
| 18. | M. Rifki Maulana | 96 |
| 19. | Maulana Malikul Mulki | 88 |
| 20. | Medina Safira Salsabila | 96 |
| 21. | Meiysa Citra Dewi | 97 |
| 22. | Mokhammad Ainun Rofiq Febriansyah | 97 |
| 23. | Muhammad Wildan Nazarudin | 94 |
| 24. | Nur Syahid | 95 |
| 25. | Qurrotul Ilmi Citra | 96 |
| 26. | Rosa Bunga Cinta Isma | 88 |


| 27. | Shela Amanda Pratama | 92 |
| :--- | :--- | :---: |
| 28. | Taufik Suharta | 93 |
| 29. | Vina Maulidiyah | 92 |
| 30. | Zaskia Qoiratul Nisak | 92 |

According to the table above, the post-test was followed by VIII-C, which resulted in a total of 30 students. The post-test took roughly 30 minutes, according to the researcher. The post-test consisted of completing the puzzle that was presented. The purpose of the test was to determine the students' capacity to master terminology after the teacher had taught them using a traditional technique. The post-test held on Friday, $28^{\text {th }}$ of May 2021.

The researcher used SPSS 23 version to know the descriptive statistic and the percentage of students' score of post-test. The percentage was divided into five criteria: excellent, good, average, poor, and very poor (see table 4.1). The result of calculation as follow:

## Table 4.6 Descriptive Statistic of Post-Test

| Statistics |  |  |  |
| :--- | :--- | ---: | ---: |
|  |  | VIII_C | N_C |
| N | Valid | 30 | 30 |
|  | Missing |  | 0 |
| Mean |  | 0 |  |
| Std. Error of Mean |  | 94.13 |  |
| Median |  | .531 |  |
| Mode |  | 95.00 |  |
| Std. Deviation |  | 96 |  |
| Variance |  |  | 2.909 |
| Range |  |  | 8.464 |
| Minimum |  |  | 10 |
| Maximum |  |  | 88 |
| Sum |  |  | 98 |
| Percentiles | 25 |  | 92.00 |
|  | 50 |  | 95.00 |
|  |  |  |  |
|  |  |  |  |

According to Table 4.6, there were 30 students in the control class. It revealed that the mean post-test score was 94.13 . The median score from the post-test was 95.00 , which was determined from half of the data sample. The data employed mode score to determine the most frequently appearing number, and the most frequently appearing number was 96 . The post-test standard deviation was 2.909 . The post-test range was 10 . Furthermore, the lowest and highest scores were 88 and 98, respectively. The total number of questions in the pre-test was 2824 . Then, number of score appeared in pretest, the researcher presents frequency distribution as follow:

Table 4.7 Frequency Distribution of Score Post-Test

| N_C |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | :---: |
|  |  |  |  |  |  |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |  |
| Valid | 88 | 3 | 10.0 | 10.0 |  |

Based on the Table 4.7, showed that from 30 students the frequency of post-test score after being distributed there were 1 students ( $3,3 \%$ ) got 88 , 1 students (3,3\%) got 90, 5 students ( $16,7 \%$ ) got 92,2 students $(6,7 \%)$ got 93, 3 students ( $10,0 \%$ ) got 94,2 students ( $6,7 \%$ ) got 95,7 students ( $23,3 \%$ ) got 96, 6 students $(20,0 \%)$ got 97 , and 1 students $(3,3 \%)$ get 98.

### 4.2 Histogram Descriptive Statistic of Post-Test



Based on the histogram above, so that the mean was 94.13 , the standard deviation was 2.909 and the total students was 30 .

## 2. The Students' Scores of Experimental Class

a. Pre-Test of Experimental Class

The experimental group is a group of students who were given a Vocabulary Mastery treatment utilizing the Scattergories game technique. A pre-test of the experimental group was given by the researcher before the treatment was given.

Table 4.8 The Students' Scores of Pre-Test

| No | Name | Score |
| :--- | :--- | :---: |
| 1. | Abidatul Lailiyah | 90 |
| 2. | Ahmad Dafa Aqila Zanefa | 89 |
| 3. | Al Fairiz Zahirah Zulfa | 88 |
| 4. | Antika A'isyah Al Chumairah | 94 |
| 5. | Aulia Afiatul M. | 95 |
| 6. | Aunika Rahma Salsabila | 94 |


| 7. | Azizah Ulya Yahdini | 93 |
| :--- | :--- | :---: |
| 8. | Diana Nur Safitri | 88 |
| 9. | Dina Ainur Rahma | 90 |
| 10. | Dzuhrrotun Navisa | 92 |
| 11. | Fatikha Zidna Azizah | 94 |
| 12. | Febrian Azzahra | 88 |
| 13. | Hikma Aisrul Ilmia | 96 |
| 14. | M. Fardan Al Firdaus | 90 |
| 15. | M. Fatkhan Setyo Budiyono | 95 |
| 16. | Moh. Deva Ariansyah | 92 |
| 17. | Moh. Misbakhul An Nas | 91 |
| 18. | Muchammad Zamzami | 85 |
| 19. | Muhammad Hamid Irwansyah | 73 |
| 20. | Muhammad Rafi Al Hakim | 85 |
| 21. | Nabila Nur Aini | 90 |
| 22. | Nadhifatul Asror | 93 |
| 23. | Naila Nanda M | 93 |
| 24. | Niswatun Nadliroh Putri Romli | 99 |
| 25. | Putri Ayunda Lifasa | 98 |
| 26. | Putri Zahra Ramadhania | 90 |
| 27. | Rahma ‘Alia | 98 |
| 28. | Rahma Dama Yanti | 92 |
| 29. | Saidatul Munadhifah | 80 |
| 30. | Syafira Sinta Chumairoh | 80 |
|  |  |  |

Based on the table above the pre-test was followed by VIII-A, which had a total of 30 students. The pre-test took roughly 30 minutes, according to the researcher. The pre-test was in the form of filling in the puzzle that
has been provided. It was done before treatment process using Scattergories game strategy. The test was intended to know the students' ability in vocabulary mastery before the students get the treatment. The post-test held on Tuesday, $25^{\text {th }}$ of May 2021.

The researcher used SPSS 23 version to know the descriptive statistic and the percentage of students' score of pre-test. The percentage was divided into five criteria: excellent, good, average, poor, and very poor (see table 4.1). The result of calculation as follow:

## Table 4.9 Descriptive Statistic of Pre-Test

| Statistics |  |  |  |
| :--- | :--- | ---: | ---: |
|  |  | Nama_VIIIA | Nilai_VIIIA |
| N | Missing | 30 | 30 |
|  |  | 0 | 0 |
| Mean |  | 90.20 |  |
| Std. Error of Mean |  | .990 |  |
| Median |  | 90.50 |  |
| Mode |  | 90 |  |
| Std. Deviation |  | 5.423 |  |
| Variance |  | 29.407 |  |
| Range |  |  | 25 |
| Minimum |  |  | 73 |
| Maximum |  |  | 98 |
| Sum |  |  | 2706 |
| Percentiles | 25 |  | 90.00 |
|  | 50 |  | 94.00 |

Based on the Table 4.9, it showed that were 30 students of experimental class. It showed the mean score of pre-test was 92.57 . Then, the half number of data sample which determined as median score from pretest was 93.00. To know the most frequently appeared number, the data used mode score and most appeared number was 92 . The standard deviation of pre-test 5.418. The range of pre-test was 26 . In addition, the minimum score was 73 and the maximum score was 99 . The sum of pre-test was 2777 . Then, number of score appeared in pre-test, the researcher presents frequency distribution as follow:

Table 4.10 Frequency Distribution of Score in Pre-Test

| Nilai_VIIIA |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: |
|  | Frequency | Percent | Valid <br> Percent | Cumulative <br> Percent |
| Valid 73 | 1 | 3.3 | 3.3 | 3.3 |
| 85 | 2 | 6.7 | 6.7 | 10.0 |
| 87 | 1 | 3.3 | 3.3 | 13.3 |
| 88 | 2 | 6.7 | 6.7 | 20.0 |
| 90 | 1 | 3.3 | 3.3 | 23.3 |
| 91 | 2 | 6.7 | 6.7 | 30.0 |
| 92 | 2 | 6.7 | 6.7 | 16.7 |
| 93 | 2 | 6.7 | 6.7 | 46.7 |
| 94 | 2 | 6.7 | 6.7 | 53.3 |
| 95 | 2 | 6.7 | 6.7 | 60.0 |
| 96 | 5 | 16.7 | 16.7 | 66.7 |
| 97 | 1 | 3.3 | 3.3 | 73.3 |
| 98 | 30 | 100.0 | 100.0 | 80.0 |
| 99 |  |  | 96.7 |  |
| Total |  |  | 100.0 |  |
|  |  |  |  |  |

Based on the Table 4.10, showed that from 30 students the frequency of post-test score after being distributed there were 1 students (3,3\%) got 73 , 2 students (6,5\%) got 85,1 students (3,2\%) got 86,1 students (3,3\%) got 87 , 2 students ( $6,7 \%$ ) got 88,1 students (3,3) got 90,2 students $(6,7 \%)$ got 91 , 5 students ( $16,7 \%$ ) got 92 , 2 students ( $6,7 \%$ ) got 93,2 students $(6,7 \%)$ got 94, 2 students ( $6,7 \%$ ) got 95,2 students ( $6,7 \%$ ) got 96,2 students ( $6,7 \%$ ) got 97, 5 students $(16,7 \%)$ got 98,1 students $(3,3 \%)$ got 99 , and 1 students (3,3\%) got 100 .

### 4.3 Histogram Descriptive Statistic of Pre-Test



Based on the histogram above, so that the mean was 92.57 , the standard deviation was 5.418 and the total students was 30 .
b. Post-Test of Experimental Class

Administering a post-test in vocabulary mastery for experimental group was done to know the improvement of students' ability after got the treatment by using Scattergories game strategy.

Table 4.11 The Students' Scores of Post-Test

| No | Name | Score |
| :---: | :---: | :---: |
| 1. | Abidatul Lailiyah | 100 |
| 2. | Ahmad Dafa Aqila Zanefa | 92 |
| 3. | Al Fairiz Zahirah Zulfa | 93 |
| 4. | Antika A'isyah Al Chumairah | 100 |
| 5. | Aulia Afiatul M. | 100 |
| 6. | Aunika Rahma Salsabila | 94 |
| 7. | Azizah Ulya Yahdini | 98 |
| 8. | Diana Nur Safitri | 96 |
| 9. | Dina Ainur Rahma | 94 |
| 10. | Dzuhrrotun Navisa | 95 |
| 11. | Fatikha Zidna Azizah | 94 |
| 12. | Febrian Azzahra | 96 |
| 13. | Hikma Aisrul Ilmia | 95 |
| 14. | M. Fardan Al Firdaus | 93 |
| 15. | M. Fatkhan Setyo Budiyono | 95 |
| 16. | Moh. Deva Ariansyah | 97 |
| 17. | Moh. Misbakhul An Nas | 95 |
| 18. | Muchammad Zamzami | 91 |
| 19. | Muhammad Hamid Irwansyah | 97 |
| 20. | Muhammad Rafi Al Hakim | 90 |
| 21. | Nabila Nur Aini | 93 |
| 22. | Nadhifatul Asror | 100 |
| 23. | Naila Nanda M | 100 |
| 24. | Niswatun Nadliroh Putri Romli | 100 |
| 25. | Putri Ayunda Lifasa | 98 |


| 26. | Putri Zahra Ramadhania | 100 |
| :--- | :--- | :---: |
| 27. | Rahma ‘Alia | 98 |
| 28. | Rahma Dama Yanti | 98 |
| 29. | Saidatul Munadhifah | 94 |
| 30. | Syafira Sinta Chumairoh | 92 |

Based on the table above the post-test was followed by VIII-A, which had a total of 30 students. The pre-test took roughly 30 minutes, according to the researcher. The post-test was in the form of filling in the puzzle that has been provided. It was done after treatment by using Scattergories game strategy. The test was intended to know the students' ability in vocabulary mastery after the students get the treatment. The post-test held on Thursday, $27^{\text {th }}$ of May 2021.

The researcher used SPSS 23 version to know the descriptive statistic and the percentage of students' score of pre-test. The percentage was divided into five criteria: excellent, good, average, poor, and very poor (see table 4.1). The result of calculation as follow:

Table 4.12 Descriptive Statistic of Post-Test

| Statistics |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  | VIII_A | N_A |
| $N$ | Valid | 30 | 30 |
|  | Missing | 0 | 0 |
| Mean |  |  | 95.93 |
| Std. Error of Mean |  |  | . 557 |
| Median |  |  | 95.50 |
| Mode |  |  | 100 |
| Std. Deviation |  |  | 3.051 |
| Variance |  |  | 9.306 |
| Range |  |  | 10 |
| Minimum |  |  | 90 |
| Maximum |  |  | 100 |
| Sum |  |  | 2878 |
| Percentiles | 25 |  | 93.75 |
|  | 50 |  | 95.50 |
|  | 75 |  | 98.50 |

Based on the Table 4.12, it showed that were 30 students of experimental class. It showed the mean score of post-test was 95.93. Then, the half number of data sample which determined as median score from post-test was 95.50. To know the most frequently appeared number, the data used mode score and most appeared number was 100 . The standard deviation of post-test 3.051. The range of post-test was 10 . In addition, the minimum score was 90 and the maximum score was 100 . The sum of pre-test was 2878 . Then, number
of score appeared in pre-test, the researcher presents frequency distribution as follow:

Table 4.13 Frequency Distribution of Score in Post-Test

| N_A |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Frequency | Percent | Valid Percent | Cumulative <br> Percent |
| Valid | 90 | 1 | 3.3 | 3.3 | 3.3 |
|  | 91 | 1 | 3.3 | 3.3 | 6.7 |
|  | 92 | 2 | 6.7 | 6.7 | 13.3 |
|  | 93 | 3 | 10.0 | 10.0 | 23.3 |
|  | 94 | 4 | 13.3 | 13.3 | 36.7 |
|  | 95 | 4 | 13.3 | 13.3 | 50.0 |
|  | 96 | 2 | 6.7 | 6.7 | 56.7 |
|  | 97 | 2 | 6.7 | 6.7 | 63.3 |
|  | 98 | 4 | 13.3 | 13.3 | 76.7 |
|  | 100 | 7 | 23.3 | 23.3 | 100.0 |
|  | Total | 30 | 100.0 | 100.0 |  |

Based on the Table 4.13, showed that from 30 students the frequency of post-test score after being distributed there were 1 students ( $3,3 \%$ ) got 90,1 students (3,3\%) got 91, 2 students (6,7\%) got 92, 3 students (10,0\%) got 93, 4 students ( $13,3 \%$ ) got 94,4 students ( $13,3 \%$ ) got 95,2 students ( $6,7 \%$ ) got 96,2 students ( $6,7 \%$ ) got 97 , 4 students ( $13,3 \%$ ) got 98 , and 7 students $(23,3 \%)$ get 100.

### 4.4 Histogram Descriptive Statistic of Post-Test



Based on the histogram above, so that the mean was 95.93 , the standard deviation was 3.501 and the total students was 30 .

## B. Data Analysis

## 1. Comparison of Statistical Data in Post-Test of Control Class and

## Experimental Class

The researcher examined students' post-test scores in vocabulary mastery from both groups (control and experimental), which included the highest, lowest, and mean scores. The researcher then calculated the score of each group based on the students' post-test scores to determine whether the students were getting worse, similar, or different. The following table shows the difference in statistical data between the control and experimental groups after the post-test;

Table 4.14 Descriptive Statistics of Post-Test Control and Experimental Group

|  |  | EXP_VIIIA | CON_VIIIC |
| :--- | :--- | ---: | ---: |
| N | Valid | 30 | 30 |
|  | Missing | 0 | 0 |
| Mean |  | 95.93 | 94.13 |
| Median |  | 95.50 | 95.00 |
| Mode | 100 | 96 |  |
| Minimum |  | 90 | 88 |
| Maximum |  | 100 | 98 |
| Percentiles | 25 | 95.50 | 92.00 |
|  | 50 | 98.50 | 95.00 |
|  | 75 |  | 96.25 |

Based on the Table 4.14, it can be seen the difference of the students score in post-test of control and experimental group in vocabulary mastery. In post-test of control group showed that the highest score was 98 , the lowest score was 88 and the mean score was 94.13 , while in post-test of experimental group showed that the highest score was 100 , the lowest score was 90 and the mean score was 95.93.

The experimental group who was taught vocabulary mastery using Scattergories game strategy outperformed the control group who was taught vocabulary mastery without using the Scattergories game method. Based on these findings, it can be stated that students who are taugh using the

Scattergories game method score much higher than Scattergories game in terms of vocabulary mastery. In other words, using the Scattergories game technique to teach vocabulary mastery proved to be useful in teaching writing to the second grades of Mts Darul Hikmah Mojokerto.

## C. Normality and Homogeneity Testing

The researcher attempted to find both normality and homogeneity of the data during the data testing. The results of those analyses were utilized to determine the following step, and that was hypothesis testing. Below are the results of assessing both normality and homogeneity.

1. Normality

The normality of both pre-test and post-test data was measured by SPSS 23 versions using the formula of One Sample Kolmogorov-Smirnov Test. The result was shown as below:

Table 4.15 Control Group Normality Testing

|  | Kolmogorov-Smirnov ${ }^{\text {a }}$ |  |  | Shapiro-Wilk |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Statistic | df | Sig. | Statistic | df | Sig. |
| PRE_CON | . 133 | 30 | . 183 | . 950 | 30 | . 174 |
| POST_CON | . 206 | 30 | . 002 | . 884 | 30 | . 004 |

a. Lilliefors Significance Correction

Table 4.16 Experimental Group Normality Testing

|  | Kolmogorov-Smirnov ${ }^{\text {a }}$ |  |  | Shapiro-Wilk |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Statistic | df | Sig. | Statistic | df | Sig. |
| Pre_Score | . 185 | 30 | . 010 | . 893 | 30 | . 006 |
| Post_Score | . 142 | 30 | . 126 | . 929 | 30 | . 046 |

a. Lilliefors Significance Correction

Based on the output of Kolmogorov-Smirnov test in SPSS 23 at Table
4.15 and 4.16, it result the normality between pre-test and post-test. In pre-test. In pre-test, it found that the significance of experimental variable was 0.010 and control variable 0.183 . Then in the post-test, it found that the significant of experimental variable is 0.126 and control variable is 0.002 . From those data, all significance variables both of pre-test and post-test indicated that the result were more than 0.05 .
2. Homogeneity

Homogeneity testing was carried out after ensuring that the data were normally distributed. To assess whether the data is homogeneous or heterogenous. The researcher uses SPSS 23 version to determine the homogeneity of Levene Statistics. The final result can be seen in the table below.

Table 4.17 Result of Homogeneity Test
Test of Homogeneity of Variances
Variable

| Levene Statistic | df1 | df2 | Sig. |
| ---: | :---: | :--- | :--- |
| .255 |  | 1 |  |
| 27 | .615 |  |  |

The significance value shown in number 0.615 describe the homogeneity data above. Because the significance value was greater than, this indicate if the data was homogeneous $\alpha$ (0.05). When the significance of a value is greater than $0.05(\alpha>0.05)$, the data is said to be homogeneous. However, the significance value was $0.077>0.05$, as seen in the preceding result. As a result, the data is homogeneous data. Because the data was homogeneous, the researcher utilized the Paired Sample Test formula to test the hypothesis.

## D. Hypothesis Testing

According to Cresswell (2012:188) hypothesis testing is analyzes a sample given data with a populations vaue to see whether there is a relationship r link between the two. The following were the hypotheses tested in this study:

1. $\mathrm{H}_{0}$ : There is no significant difference of students' score before and after being taught using Scattergories game.
2. $\mathrm{H}_{\mathrm{a}}$ : There is significant difference of students' score before and after being taught using Scattergories game.

Then, the computation was used to know the effectiveness of Scattergories game in vocabulary mastery. The researcher used SPPS 23 using formula of Paired Sample Test. The result was shown as below:

Table 4.18 Group Statistics of Two Groups

|  |  | Statistics |  |
| :--- | :--- | ---: | ---: |
| N | EXP_VIIIA | CON_VIIIC |  |
|  | Missing | 30 | 30 |
| Mean | 0 | 0 |  |
| Std. Error of Mean | 95.93 | 94.13 |  |
| Std. Deviation | .557 | .531 |  |
| Percentiles | 25 | 3.051 | 2.909 |
|  | 50 | 93.75 | 92.00 |
|  | 75 | 95.50 | 95.00 |
|  |  | 98.50 | 96.25 |

Based on Table 4.18 it showed that the students' score who were taught by using Scattergories game strategy as experimental group and the students' score who were taught without Scattergories game strategy as control group. The result showed that member of students ( N ) in the experimental group was 30 students and the member of students in the control group was 30 students. The mean of the experimental group was 95.93 while the control group was 94.13 . Standard deviation of experimental group was 3.501 and the control group was 2.909 . Then the standard error of mean of experimental group was 0.557 and the control group was 0.531 .

## Table 4.19 Independent Samples Correlations

|  |  | Group Statistics |  |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: |
| \begin{tabular}{\|ll|r|r|}
\hline
\end{tabular} | Std. <br> Std. Error <br> MODE | Mean | Deviation | Mean |  |
| HASIL | Control Class | 30 | 94.13 | 2.909 | .531 |
|  | Experimental class | 30 | 95.93 | 3.051 | .557 |

The output of Independent Samples Correlation is shown in Table 4.19. The number of samples students ( N ) in the control class was 30 students and the experimental class was 30 students. The mean of the control class was 94.13 and the mean of the experimental class was 95.93. Standard deviation of control class was 2.909 but in the experimental class was 3.051 . The standard error of mean of control class was 0.531 and experimental class 0.557. The formula for interpreting the significance value is given below:
a. If sig $>0.05$, there is no influence of giving treatment toward pre-test and post-test score.
b. If $\operatorname{sig}<0.05$, there is influence of giving treatment toward pre-test and post-test score.

Table 4.20 Independent Sample Test

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{10}{|c|}{Independent Samples Test} \\
\hline \multirow[t]{3}{*}{} \& \multicolumn{2}{|l|}{\begin{tabular}{l}
Levene's \\
Test for \\
Equality of \\
Variances
\end{tabular}} \& \multicolumn{7}{|c|}{t-test for Equality of Means} \\
\hline \& \& \& \& \& \begin{tabular}{l}
Sig. \\
(2-
\end{tabular} \& Mean Differ \& \begin{tabular}{l}
Std. \\
Error \\
Differ
\end{tabular} \& \multicolumn{2}{|l|}{\begin{tabular}{l}
\[
95 \%
\] \\
Confidence Interval of the Difference
\end{tabular}} \\
\hline \& F \& Sig. \& t \& df \& tailed) \& ence \& ence \& Lower \& Upper \\
\hline \begin{tabular}{l}
HAS Equal \\
IL variance \\
S \\
assumed \\
Equal \\
variance \\
s not \\
assumed
\end{tabular} \& . 269 \& \[
\begin{array}{r}
.60 \\
6
\end{array}
\] \& \[
\begin{aligned}
\& -2.339 \\
\& -2.339
\end{aligned}
\] \& \begin{tabular}{l}
\[
58
\] \\
57.870
\end{tabular} \& \[
.023
\]
\[
.023
\] \& \[
\begin{aligned}
\& -1.800 \\
\& -1.800
\end{aligned}
\] \& .770

.770 \& -3.341

-3.341 \& -.259

.- .259 <br>
\hline
\end{tabular}

From the Table 4.20, it showed that in Levene's Test for Equality of Variances F was 0.289 and sig was 0.606 . In the T-test for equality of means that t was -2.339 and -2.339 . The df was 58 and 57.870. The sig. (2-tailed) was 0.023 and 0.023 . The mean difference was -1.800 and -1.800 . The standard error difference was 0.770 and $0.770 .95 \%$ Confidence Interval of the Difference in lower was -3.341 and -3.341 . And in the upper was -259 and -259.

Based on the hypothesis testing rules, if sig < 0.05 it indicates there is influence of giving treatment toward pre-test and post-test score. If sig $>0.05$
it indicates there is no influence of giving treatment toward pre-test and posttest score.

From the explanation above, the score in this research was 0.023 , which means that the sig was more than $0.05(0.023<0.05)$. To put another way, the hypothesis saying that there is significant difference of students' score implementing Scattergories Game was $\mathrm{H}_{0}$ rejected and $\mathrm{H}_{\mathrm{a}}$ is accepted. Therefore, it can be interpreted that there was significant difference score of Scattergories Game on students' vocabulary mastery and those taught by using conventional method. It can be concluded using Scattergoories game technique in teaching vocabulary of the second grade at Mts Darul Hikmah Mojokerto was effective.

## E. Discussion

In this study, the teaching and learning process was broken down into three parts. The researcher began by administering a pre-test by administering a vocabulary exam. It used to be that the students' previous vocabulary mastery was known before they were treated. The students were treated with the second. In this case was to teach vocabulary through the Scattergories game. Students were more active and passionate about learning language after receiving therapy. The final stage was to administer a post-treatment test to the students.

According to the findings, the output data of Independent Samples Test output data indicate a mean of pre-test 90.20 and post-test 95.93 . The mean is the average
of pre-test and post-test scores. The students' vocabulary achievement after being taught by the Scattergories game was found to be higher than their vocabulary mastery before being taught by the Scattergories game. Furthermore, the result of Independeny Sample Test that the significance value (2-tailed) was 0.023. It mean that the significance level was less than $0.05(0.001 \leq 0.05)$ which meant the alternative hypothesis $\left(\mathrm{H}_{\mathrm{a}}\right)$ was accepted, while the null hypothesis $\left(\mathrm{H}_{0}\right)$ was rejected. As a result, it can be stated that students' vocabulary understanding of second grade students at Mts Darul Hikmah Mojokerto differed significantly before and after being taught utilizing the Scattergories game technique

Based on the abve, it can be stated that the Scattergories game was helpful in improving students' vocabulary mastery, particuly among at Mts Darul Hikmah Mojokerto second grade students. Based on Janet M Lacey "The Scattergories game generates so much enthusiasm among collage students that it could be useful educational tool for mixing the thrill of competition with the acquisition of nutrion knowledge", using this game can increase students' active learning and make the class more effective. And according to Yuliasnyah and Syafei "Using this game teachers can see the improvement of students' vocabulary mastery and teach vocabularies based on each letter categories that they have got". This finding as in line with the previous study which has been done by Wiraldi (2020). The result of this researcher is Scattergories game was effective to improve students' vocabulary. The second from Anggi Suci Setya (2017). The result of this researcher is a significant difference on students' vocabulary achievement who are taught by using

Category Game strategy. The third from Azizah Maharani. The result of this researcher is a significant differences between students taught using Vocab Categories Game.

Following the researcher's research on teaching vocabulary mastery to second grade children at Mts Darul Hikmah Mojokerto, the Scattergories game was implemented to not only engage students to learn vocabulary but also to help them enhance their vocabulary mastery. It was discovered that the Scattergories game is beneficial in vocabulary learning since it allows students to acquire new words in a fun environment.

According to the description above, the employment of Scattergories game was capable of promoting the growth of students' vocabulary mastery, as seen by the progression of the students' vocabulary scores after being treated with Scattergories game. It was envisaged that teachers would be encouraged to use the Scattergories game to teach vocabulary to their pupils in order to increase their vocabulary proficiency. When students were taught vocabulary using the Scattergories game, they were motivated and relaxed. As a result, the use of a scattergories game can maintain kids' interest in learning new words. So, it can be concluded that the Scattergories game can be an effective to learn or develop students' vocabulary.

