**CHAPTER IV**

**DATA ANALYSIS AND RESEARCH FINDING**

**4.1 The Data**

A test was administrated to collect the data. The experiment was to VII grade students of MTs. PP. Raudlatul Hasanah Medan 2019/2020 academic year, the test was essay tests.

There was similiraty between experimental group and control group. The students of experimental group taught by using word square media. While the students of control group taught by using conventional strategy. The score of both groups are shown in table II:

**TABLE II**

**THE SCORE PRE-TEST OF THE EXPERIMENTAL GROUP**

|  |  |  |
| --- | --- | --- |
| **No.** | **Initial of Students** | **Score** |
| 1. | FAF | 55 |
| 2. | NZS | 70 |
| 3. | AAH | 55 |
| 4. | NNS | 70 |
| 5. | DPR | 70 |
| 6. | SWH | 40 |
| 7. | NSE | 75 |
| 8. | FKA | 75 |
| 9. | AMA | 50 |
| 10. | ARP | 65 |
| 11. | AAI | 55 |
| 12. | SAJ | 50 |
| 13. | SAA | 45 |
| 14. | SKS | 20 |
| 15. | ZYR | 70 |
| 16. | KDA | 60 |
| 17. | NHH | 55 |
| 18. | WNK | 30 |
| 19. | NMN | 45 |
| 20. | SAK | 55 |
| 21. | SPI | 50 |
| 22. | DRI | 30 |
| 23. | MNA | 40 |
| 24. | ASA | 45 |
| 25. | MZM | 35 |
| 26. | RAH | 30 |
| 27. | ASP | 55 |
| 28. | BML | 50 |
| 29. | AFA | 30 |
| 30. | VAF | 60 |
| **Total** | | **1535** |

Based on the result of the experimental group above, it can be concluded that the sum of the students’ score of pre-test is **1535**. The mean score of them computed as below:

Mean = 1535

30

= 51, 16

From the pre-test, it was found that experimental group had mean score: **51, 16**

**TABLE III**

**THE SCORE PRE-TEST OF CONTROL GROUP**

|  |  |  |
| --- | --- | --- |
| **No.** | **Initial of Students** | **Score** |
| 1. | ADI | 60 |
| 2. | FAA | 65 |
| 3. | APK | 65 |
| 4. | AAS | 60 |
| 5. | RAN | 60 |
| 6. | SAM | 50 |
| 7. | AAP | 55 |
| 8. | AAM | 55 |
| 9. | ZNZ | 55 |
| 10. | JSA | 50 |
| 11. | DAB | 50 |
| 12. | PMH | 55 |
| 13. | KML | 40 |
| 14. | AKI | 50 |
| 15. | CAA | 60 |
| 16. | SSS | 30 |
| 17. | AMN | 50 |
| 18. | YAC | 60 |
| 19. | ZDI | 60 |
| 20. | AAS | 35 |
| 21. | KWA | 45 |
| 22. | KNH | 40 |
| 23. | ARN | 60 |
| 24. | MHA | 50 |
| 25. | ANA | 55 |
| 26. | IRT | 40 |
| 27. | NAP | 30 |
| 28. | RJA | 25 |
| 29. | FTA | 40 |
| 30. | LRA | 60 |
| **Total** | | **1510** |

Based on the result of the control group above, it can be concluded that the sum of the students’ score of pre-test is **1510**.

The mean score of them computed as below:

Mean = 1510

30

= 50, 33

From the pre-test, it was found that control group had mean score: **50, 33**

**TABLE IV**

**THE COMPARISON OF MEANS FROM PRE-TEST OF BOTH GROUP IN ESSAY TEST**

|  |  |  |
| --- | --- | --- |
| Pre-test  Experimental Group | Pre-test  Control Group | Difference |
| 51, 16 | 50, 33 | 0.83 |

Based on the table above, it was found that the comparison of pre-test in both group is 0, 83.

**TABLE V**

**THE SCORE POST-TEST OF THE EXPERIMENTAL GROUP**

|  |  |  |
| --- | --- | --- |
| **No.** | **Initial of Students** | **Score** |
| 1. | FAF | 75 |
| 2. | NZS | 95 |
| 3. | AAH | 90 |
| 4. | NNS | 90 |
| 5. | DPR | 85 |
| 6. | SWH | 70 |
| 7. | NSE | 100 |
| 8. | FKA | 100 |
| 9. | AMA | 75 |
| 10. | ARP | 90 |
| 11. | AAI | 75 |
| 12. | SAJ | 80 |
| 13. | SAA | 90 |
| 14. | SKS | 70 |
| 15. | ZYR | 80 |
| 16. | KDA | 80 |
| 17. | NHH | 75 |
| 18. | WNK | 65 |
| 19. | NMN | 60 |
| 20. | SAK | 70 |
| 21. | SPI | 85 |
| 22. | DRI | 80 |
| 23. | MNA | 75 |
| 24. | ASA | 85 |
| 25. | MZM | 80 |
| 26. | RAH | 75 |
| 27. | ASP | 90 |
| 28. | BML | 85 |
| 29. | AFA | 75 |
| 30. | VAF | 95 |
| **Total** | | **2440** |

Based on the result of the experimental group above, it can be concluded that the sum of the students’ score of post-test is **2440**. The mean score of them computed as below:

Mean = 2440

30

= 81, 33

From the post-test, it was found that experimental group had mean score: **81, 33**

**TABLE VI**

**THE SCORE POST-TEST OF CONTROL GROUP**

|  |  |  |
| --- | --- | --- |
| **No.** | **Initial of Students** | **Score** |
| 1. | ADI | 90 |
| 2. | FAA | 85 |
| 3. | APK | 75 |
| 4. | AAS | 85 |
| 5. | RAN | 70 |
| 6. | SAM | 80 |
| 7. | AAP | 80 |
| 8. | AAM | 75 |
| 9. | ZNZ | 80 |
| 10. | JSA | 70 |
| 11. | DAB | 65 |
| 12. | PMH | 85 |
| 13. | KML | 60 |
| 14. | AKI | 75 |
| 15. | CAA | 85 |
| 16. | SSS | 85 |
| 17. | AMN | 70 |
| 18. | YAC | 80 |
| 19. | ZDI | 75 |
| 20. | AAS | 85 |
| 21. | KWA | 80 |
| 22. | KNH | 85 |
| 23. | ARN | 80 |
| 24. | MHA | 90 |
| 25. | ANA | 85 |
| 26. | IRT | 70 |
| 27. | NAP | 60 |
| 28. | RJA | 60 |
| 29. | FTA | 80 |
| 30. | LRA | 90 |
| **Total** | | **2335** |

Based on the result of the control group above, it can be concluded that the sum of the students’ score of post-test is **2335**. The mean score of them computed as below:

Mean = 2335

30

= 77, 83

From the post-test, it was found that control group had mean score: **77, 83**

**TABLE VII**

**THE COMPARISON OF MEANS FROM POST-TEST OF BOTH GROUP IN ESSAY TEST**

|  |  |  |
| --- | --- | --- |
| Post-test  Experimental Group | Post-test  Control Group | Difference |
| 81, 33 | 77, 83 | 3,5 |

Based on the table above, it was found that the comparison of post-test in both group is 3, 5.

**TABLE VIII**

**RESULT OF POST-TEST SCORE BOTH EXPERIMENTAL AND**

**CONTROL GROUP**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group | N | Max  Sore | Min Score | Mean | Standard Deviation | Sum Score |
| Experimental | 30 | 100 | 60 | 81, 33 | 9,99 | 2440 |
| Control | 30 | 90 | 60 | 77, 83 | 8, 87 | 2335 |

**4.2 Data Analysis**

Based on the data in the table above, it can be described that the score of experimental group after getting treatment were 100 as the highest score, the lowest score was 60, mean score was 81, 33, standard deviation was 9, 99 and sum score was 2440. While the result of post-test of control group were 90 as the highest score, the lowest score was 60, mean score was 77, 83, standard deviation was 8, 87 and sum score was 2335.

The calculation of t-test between mean score of experimental and control group in term of post-test is as follow:

**Varian sample is:**

*S*12 = 9, 99  = 8, 87

N1  = 30 N2 = 30

**S**



Next, the calculation of t-test between mean score of experimental and control group in term of post-test is as follow:



 = 81, 33  = 77, 83

N1  = 30 N2 = 30

S = 3, 07





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Based on the calculation above, it was obtained tcalculateis 4.66 meanwhile ttablefor N = 60 and α = 0.05 is 1.67.

* 1. **Testing Hypothesis**

From the calculation of tcalculateand ttableabove, it is concluded that tcalculateis higher thanttable (4.66 >1.67). From the data analysis above showed that there is a significant difference. The pre-test mean score of experimental was 51.16 and post-test was 81.33, the difference was 30.17.The value of tcalculateis higher than ttable (4.66 > 1.67) degree of freedom was 58. It can be seen as follows:

tcalculate>ttable(p = 0.05 with df = 58)

4.66 > 1.67 (p = 0.05 with df = 58)

From the result, it was found that Ho was rejected and Ha was accepted. It means that using word square media significantly affected the students’ vocabulary achievement.

**4.4** **Research Finding**

Based on the analysis, it was found that applying word square media gave significant effect towards students’ vocabulary achievement. The students’ score taught by applying word square media was higher than score taught without applying word square media. It means that word square media is effective to improve students’ vocabulary acvhievement.

Based on the calculation of the result of the research by using t-test, tcalculate is 4.66 and ttable is 1.67. It is obtained that the hypothesis formulated “ Word Square Media improves the students’ vocabulary achievement” is accepted in this study.