**Lampiran. 9 Daftar Nlilai**

Kelas Eksperimen

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Nama Siswa | Kelas | Pretest | Posttest | Rata-Rata |
| ABRAR RAMADHAN FARLY | VII.3 | 67,5 | 97,5 | 82,5 |
| ADE MARDIANSYAH | VII.3 | 70 | 77,5 | 73,75 |
| ALVIN URBANI | VII.3 | 55 | 77,5 | 66,25 |
| AN MUHAMMAD RONI SAFARIL | VII.3 | 47,5 | 77,5 | 62,5 |
| ANDINI PERMATA SUKMA | VII.3 | 52,5 | 75 | 63,75 |
| ARDIMAS EFENDY SYAHPUTRA | VII.3 | 57,5 | 70 | 63,75 |
| DARA PUTRI NABILA | VII.3 | 55 | 67,5 | 61,25 |
| ELSA AMANDA PUTRI | VII.3 | 55 | 77,5 | 66,25 |
| FAUZI HANDRA SAPUTRA | VII.3 | 35 | 57,5 | 46,25 |
| FITRI HANDRA SAPUTRA | VII.3 | 57,5 | 77,5 | 67,5 |
| IKHSAN ASNIFAR YULISMAN | VII.3 | 55 | 85 | 70 |
| KIKI AMELIA | VII.3 | 62,5 | 77,5 | 70 |
| LIZA YULIA SARI | VII.3 | 70 | 92,5 | 81,25 |
| M. FIGO SATRIA WIRA | VII.3 | 60 | 75 | 67,5 |
| MAINI ATUL PAIRA | VII.3 | 72,5 | 87,5 | 80 |
| MUFIDATUL ASYIFA | VII.3 | 57,5 | 82,5 | 70 |
| MUHAMMAD GIVARI SAPUTRA | VII.3 | 0 | 65 | 32,5 |
| MUHAMMAD FADJAR | VII.3 | 0 | 70 | 35 |
| MUHAMMAD RAFLIADI RANGGA | VII.3 | 62,5 | 85 | 73,75 |
| MUSYAH FITRINA | VII.3 | 13,5 | 60 | 36,75 |
| MUTIARA ANANDITA MULIA PUTRI NURIS | VII.3 | 60 | 87,5 | 73,75 |
| RACHEL MARSHA AULIA PUTRI | VII.3 | 60 | 85 | 72,5 |
| RAYHANDRA DIPUTRA | VII.3 | 55 | 82,5 | 68,75 |
| REFAN RAMADHAN | VII.3 | 0 | 72,5 | 36,25 |
| ROBI KURNIAWAN | VII.3 | 65 | 70 | 67,5 |
| SARI WAHYUNI | VII.3 | 15 | 37,5 | 26,25 |
| SERLI ASRUL YAHYA | VII.3 | 35 | 60 | 47,5 |
| SHAHIBUL FIKRI | VII.3 | 57,5 | 72,5 | 65 |
| SYAIPUL | VII.3 | 0 | 0 | 0 |
| TEGAR PAMUNGKAS | VII.3 | 67,5 | 87,5 | 77,5 |
| TEGAR SUHENDRA | VII.3 | 50 | 75 | 62,5 |
| TIARA NOFRI HAYATI | VII.3 | 75 | 90 | 82,5 |

**Kelas Kontrol**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Nama Siswa | Kelas | Pretest | Posttest | Rata-Rata |
| ABDUL RAFIS | VII.1 | 62,5 | 70 | 66,25 |
| ALFAREDO FERDIANATA P. | VII.1 | 65 | 72,5 | 68,75 |
| ALIF HARDIYE ZICKRI | VII.1 | 52,5 | 0 | 26,25 |
| CHELSYE PRICILA EKA PUTRI | VII.1 | 85 | 85 | 85 |
| DESY ANNISA | VII.1 | 82,5 | 87,5 | 85 |
| FACHRI RAHMAN ARDI | VII.1 | 55 | 62,5 | 58,75 |
| FAHMI MUHTADI | VII.1 | 60 | 55 | 57,5 |
| FERRI ADRIANO | VII.1 | 57,5 | 67,5 | 62,5 |
| HAFIZD JULIANDRI | VII.1 | 57,5 | 55 | 56,25 |
| IQRAR IQFA | VII.1 | 52,5 | 60 | 56,25 |
| IRHASYI ISFI RAMADAN | VII.1 | 60 | 62,5 | 61,25 |
| IRVANSYAH PUTRA ANGGARA | VII.1 | 57,5 | 62,5 | 60 |
| KARTIKA | VII.1 | 77,5 | 85 | 81,25 |
| MUHAMMAD ADITYA ALHAFIZH | VII.1 | 70 | 65 | 67,5 |
| MUHAMMAD RIDHO ALFURQAN | VII.1 | 60 | 47,5 | 53,75 |
| MARSYA KARTIKA | VII.1 | 52,5 | 65 | 58,75 |
| MIFTAH HURRAHMI | VII.1 | 80 | 90 | 85 |
| MIFTAHUL JANNAH ZALFI | VII.1 | 62,5 | 70 | 66,25 |
| MUHAMMAD RAUF | VII.1 | 60 | 60 | 60 |
| MUHASHYTA CAHAYA REFLI | VII.1 | 95 | 95 | 95 |
| MURSYAD HALIM | VII.1 | 67,5 | 67,5 | 67,5 |
| NADIA FAUNIA RIZKA | VII.1 | 77,5 | 80 | 78,75 |
| NATASYA TIFLA AFFANIN | VII.1 | 75 | 77,5 | 76,25 |
| NAURA NADIR SHABIRA | VII.1 | 77,5 | 77,5 | 77,5 |
| NELLA MURTIANA | VII.1 | 0 | 70 | 35 |
| NUR SYAHRUR TUSIYAH F. | VII.1 | 62,5 | 72,5 | 67,5 |
| REIHAN AL ZIKRIL | VII.1 | 72,5 | 77,5 | 75 |
| RENI SIRTARI PUTRI | VII.1 | 72,5 | 80 | 76,25 |
| SRI DEVI ANGGRAINI | VII.1 | 72,5 | 77,5 | 75 |
| THORIF DANASYAKSA C. | VII.1 | 62,5 | 65 | 63,75 |
| THORIQ MAYSHA DASTRI | VII.1 | 55 | 57,5 | 56,25 |
| ZAZKIA MECCA R. | VII.1 | 65 | 75 | 70 |

**Lampiran. 10 Hasil Pengujian Statistik**

Aspek Memberikan Penjelasan Sederhana

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Eksperimen | Cases | | | | | |
| Valid | | Missing | | Total |  |
| N | Percent | N | Percent | N | Percent |
| Pretest & Posttest | pretest eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| posttest eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | |  |
|  | Eksperimen | | | Statistic | Std. Error |
| Pretest & Posttest | prestest eksperimen | Mean | | 60,69 | 5,274 |
| 95% Confidence Interval for Mean | Lower Bound | 54,87 |  |
| Upper Bound | 66,43 |  |
| 5% Trimmed Mean | | 63,72 |  |
| Median | | 50,00 |  |
| Variance | | 459,4592 |  |
| Std. Deviation | | 21,435 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 25 |  |
| Interquartile Range | | 46 |  |
| Skewness | | 1,030 | ,309 |
| Kurtosis | | 2,607 | ,608 |
| posttest eksperimen | Mean | | 65,42 | 6,867 |
| 95% Confidence Interval for Mean | Lower Bound | 57,92 |  |
| Upper Bound | 72,92 |  |
| 5% Trimmed Mean | | 68,69 |  |
| Median | | 75,00 |  |
| Variance | | 288,728 |  |
| Std. Deviation | | 16,992 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 0 |  |
| Skewness | | -1,681 | ,414 |
| Kurtosis | | ,877 | ,809 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Pretest & Posttest | pretest kontrol | ,434 | 32 | ,000 | ,585 | 32 | ,000 |
| posttest kontrol | ,494 | 32 | ,000 | ,478 | 32 | ,000 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | eksperimen | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Pretest & Posttest | pretest eksperimen | ,288 | 30 | ,000 | ,747 | 30 | ,000 |
| posttest eksperimen | ,429 | 30 | ,000 | ,623 | 30 | ,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Pre-test | ,056 | 1 | 60 | ,641 |
| Post-test | ,078 | 1 | 60 | ,569 |

|  |  |  |
| --- | --- | --- |
| **Test Statisticsa** | | |
|  | Pre-test | Post-test |
| Mann-Whitney U | 388,450 | 273,000 |
| Wilcoxon W | 733,450 | 523,000 |
| Z | -,4145 | -2,071 |
| Asymp. Sig. (2-tailed) | ,433 | ,141 |

N-gain

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Kelas | Cases | | | | | |
| Valid | | Missing | | Total |  |
| N | Percent | N | Percent | N | Percent |
| Ngain | eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | |  |
|  | Kelas | | | Statistic | Std. Error |
| Ngain\_persen | eksperimen | Mean | | 56,40 | 2,980 |
| 95% Confidence Interval for Mean | Lower Bound | 38.22 |  |
| Upper Bound | 74,58 |  |
| 5% Trimmed Mean | | 59,22 |  |
| Median | | 75,00 |  |
| Variance | | 2182,664 |  |
| Std. Deviation | | 46,719 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -1,085 | ,536 |
| Kurtosis | | -,942 | 1,038 |
| kontrol | Mean | | 52,16 | 2,495 |
| 95% Confidence Interval for Mean | Lower Bound | 46,71 |  |
| Upper Bound | 56,61 |  |
| 5% Trimmed Mean | | 54,76 |  |
| Median | | 75,00 |  |
| Variance | | 2081,914 |  |
| Std. Deviation | | 45,628 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 25 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -3,162 | ,687 |
| Kurtosis | | 10,000 | 1,334 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Kelas | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Ngain\_persen | eksperimen | ,228 | 30 | ,000 | ,288 | 30 | ,000 |
| kontrol | ,257 | 32 | ,000 | ,429 | 30 | ,002 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Ngain\_persen | ,045 | 1 | 60 | ,740 |

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | Ngain\_persen |
| Mann-Whitney U | 582,000 |
| Wilcoxon W | 824,000 |
| Z | -1,201 |
| Asymp. Sig. (2-tailed) | ,115 |

2. Aspek Membangun Keterampilan Dasar

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Eksperimen | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| pre-test & post-test | pre-test eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| post=test eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | |  |
|  | Eksperimen | | | Statistic | Std. Error |
| pre-test & post-test | pre-test eksperimen | Mean | | 75,42 | 3,550 |
| 95% Confidence Interval for Mean | Lower Bound | 66,62 |  |
| Upper Bound | 81,72 |  |
| 5% Trimmed Mean | | 79,19 |  |
| Median | | 50,00 |  |
| Variance | | 454,755 |  |
| Std. Deviation | | 21,325 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 50 |  |
| Skewness | | ,100 | ,414 |
| Kurtosis | | -,692 | ,809 |
| post=test eksperimen | Mean | | 62,92 | 3,591 |
| 95% Confidence Interval for Mean | Lower Bound | 33,72 |  |
| Upper Bound | 80,56 |  |
| 5% Trimmed Mean | | 66,006 |  |
| Median | | 50,00 |  |
| Variance | | 584,868 |  |
| Std. Deviation | | 24,184 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 50 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -,473 | ,414 |
| Kurtosis | | -,212 | ,809 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | |  |
|  | kontrol | | | Statistic | Std. Error |
| pre-test & post-test | pre-test kontrol | Mean | | 73,04 | 3,240 |
| 95% Confidence Interval for Mean | Lower Bound | 53,24 |  |
| Upper Bound | 92,84 |  |
| 5% Trimmed Mean | | 76,69 |  |
| Median | | 50,00 |  |
| Variance | | 441,420 |  |
| Std. Deviation | | 21,01 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 50 |  |
| Skewness | | ,232 | ,535 |
| Kurtosis | | -,689 | ,718 |
| post=test kontrol | Mean | | 80,32 | 3,591 |
| 95% Confidence Interval for Mean | Lower Bound | 60,20 |  |
| Upper Bound | 95,44 |  |
| 5% Trimmed Mean | | 84,33 |  |
| Median | | 50,00 |  |
| Variance | | 485,629 |  |
| Std. Deviation | | 22,037 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -,394 | ,306 |
| Kurtosis | | -,522 | ,609 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | Sig. | |
| pre-test & post-test | pre-test kontrol | ,347 | 30 | ,000 | ,623 | ,000 | |
| post=test kontrol | ,167 | 30 | ,000 | ,854 | ,000 | |
| a. Lilliefors Significance Correction | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | eksperimen | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | Sig. | |
| pre-test & post-test | pre-test eksperimen | ,237 | 30 | ,000 | ,705 | ,000 | |
| post=test eksperimen | ,129 | 30 | ,000 | ,894 | ,000 | |
| a. Lilliefors Significance Correction | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Pre-test | ,049 | 1 | 60 | ,834 |
| Post-test | ,186 | 1 | 60 | ,668 |
| ngain\_persen\_lagi | 344,676 | 1 | 60 | ,1565 |

|  |  |  |
| --- | --- | --- |
| **Test Statisticsa** | | |
|  | Pre-test | Post-test | |
| Mann-Whitney U | 475,000 | 459,000 | |
| Wilcoxon W | 940,000 | 924,000 | |
| Z | -2,4245 | -,8505 | |
| Asymp. Sig. (2-tailed) | ,4695 | ,438 | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Kelas | Cases | | | | | |
| Valid | | Missing | | Total |  |
| N | Percent | N | Percent | N | Percent |
| Ngain | eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | |  |
|  | Kelas | | | Statistic | Std. Error |
| Ngain\_persen | eksperimen | Mean | | 43,7 | 2,980 |
| 95% Confidence Interval for Mean | Lower Bound | 38.22 |  |
| Upper Bound | 60,89 |  |
| 5% Trimmed Mean | | 45,88 |  |
| Median | | 75,00 |  |
| Variance | | 1618,291 |  |
| Std. Deviation | | 40,228 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -1,85 | ,536 |
| Kurtosis | | -,742 | 1,038 |
| kontrol | Mean | | 27 | 2,495 |
| 95% Confidence Interval for Mean | Lower Bound | 15,89 |  |
| Upper Bound | 35,89 |  |
| 5% Trimmed Mean | | 28,35 |  |
| Median | | 50 |  |
| Variance | | 3247,176 |  |
| Std. Deviation | | 56,984 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 25 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -3,162 | ,687 |
| Kurtosis | | 10,000 | 1,334 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Kelas | Kolmogorov-Smirnova | | | Shapiro-Wilk | | | |
| Statistic | df | Sig. | Statistic | df | Sig. | |
| Ngain\_persen | eksperimen | ,228 | 30 | ,000 | ,288 | 30 | ,016 | |
| kontrol | ,257 | 32 | ,000 | ,429 | 30 | ,003 | |

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | ngain |
| Mann-Whitney U | 173,500 |
| Wilcoxon W | 524,500 |
| Z | -3,515 |
| Asymp. Sig. (2-tailed) | ,000 |

3. Aspek Menyimpiulkan

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | |
|  | eksperimen dan kontrol | Cases | | | | |
| Valid | | Missing | | Total |
| N | Percent | N | Percent | N |
| Pre-test | ekperimen | 30 | 100,0% | 0 | 0,0% | 30 |
| kontrol | 32 | 100,0% | 0 | 0,0% | 32 |
| Post-test | ekperimen | 30 | 100,0% | 0 | 0,0% | 30 |
| kontrol | 32 | 100,0% | 0 | 0,0% | 32 |

|  |  |  |
| --- | --- | --- |
| **Case Processing Summary** | | |
|  | eksperimen dan kontrol | Cases |
| Total |
| Percent |
| Pre-test | ekperimen | 100,0% |
| kontrol | 100,0% |
| Post-test | ekperimen | 100,0% |
| kontrol | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | eksperimen dan kontrol | | | Statistic | Std. Error |
| Pre-test | ekperimen | Mean | | 48,66 | 4,666 |
| 95% Confidence Interval for Mean | Lower Bound | 32,96 |  |
| Upper Bound | 52,04 |  |
| 5% Trimmed Mean | | 51,09 |  |
| Median | | 25,00 |  |
| Variance | | 611,572 |  |
| Std. Deviation | | 24,730 |  |
| Minimum | | 0 |  |
| Maximum | | 75 |  |
| Range | | 50 |  |
| Interquartile Range | | 25 |  |
| Skewness | | 1,075 | ,427 |
| Kurtosis | | ,614 | ,833 |
| kontrol | Mean | | 53,48 | 3,699 |
| 95% Confidence Interval for Mean | Lower Bound | 46,58 |  |
| Upper Bound | 65,21 |  |
| 5% Trimmed Mean | | 56,15 |  |
| Median | | 50,00 |  |
| Variance | | 655,718 |  |
| Std. Deviation | | 25,607 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 50 |  |
| Interquartile Range | | 25 |  |
| Skewness | | 1,548 | ,414 |
| Kurtosis | | 2,250 | ,809 |
| Post-test | ekperimen | Mean | | 71,25 | 5,216 |
| 95% Confidence Interval for Mean | Lower Bound | 63,06 |  |
| Upper Bound | 79,97 |  |
| 5% Trimmed Mean | | 74,81 |  |
| Median | | 50,00 |  |
| Variance | | 816,092 |  |
| Std. Deviation | | 28,567 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 56 |  |
| Skewness | | ,474 | ,427 |
| Kurtosis | | -1,166 | ,833 |
| kontrol | Mean | | 56,64 | 4,115 |
| 95% Confidence Interval for Mean | Lower Bound | 42,19 |  |
| Upper Bound | 65,68 |  |
| 5% Trimmed Mean | | 59,47 |  |
| Median | | 25,00 |  |
| Variance | | 450,330 |  |
| Std. Deviation | | 21,221 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | 1,201 | ,414 |
| Kurtosis | | ,498 | ,809 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | | | | | | |
|  | | eksperimen | | Kolmogorov-Smirnova | | | | | | Shapiro-Wilk | | |
| Statistic | | df | | Sig. | | Statistic | df | Sig. |
| Pre-test | | ekperimen | | ,287 | | 30 | | ,000 | | ,804 | 30 | ,000 |
| kontrol | | ,405 | | 32 | | ,000 | | ,699 | 32 | ,000 |
| Post-test | | ekperimen | | ,259 | | 30 | | ,0015 | | ,823 | 30 | ,001 |
|  | | kontrol | | ,332 | | 32 | | ,001 | | ,741 | 32 | ,000 |
| **Test of Homogeneity of Variances** | | | | | | | | |
|  | Levene Statistic | | df1 | | df2 | | Sig. | |
| pre-tes | 1,202 | | 1 | | 60 | | ,277 | |
| post-tes | ,096 | | 1 | | 60 | | ,758 | |
| Ngain\_persen | 9,760 | | 1 | | 48 | | ,003 | |

|  |  |  |
| --- | --- | --- |
| **Test Statisticsa** | | |
|  | Pre-test | Post-test |
| Mann-Whitney U | 396,500 | 336,000 |
| Wilcoxon W | 924,500 | 864,000 |
| Z | -2,1035 | -2,564 |
| Asymp. Sig. (2-tailed) | ,182 | ,031 |

N-gain

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Kelas | Cases | | | | | |
| Valid | | Missing | | Total |  |
| N | Percent | N | Percent | N | Percent |
| Ngain | eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | eksperimen dan kontrol | | | Statistic | Std. Error |
| Ngain\_Persen | ekperimen | Mean | | 42,84 | 9,673 |
| 95% Confidence Interval for Mean | Lower Bound | 35,98 |  |
| Upper Bound | 50,43 |  |
| 5% Trimmed Mean | | 44,98 |  |
| Median | | 12,50 |  |
| Variance | | 2666,792 |  |
| Std. Deviation | | 51,641 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 54 |  |
| Skewness | | -,382 | ,427 |
| Kurtosis | | ,479 | ,833 |
| kontrol | Mean | | 14,58 | 7,584 |
| 95% Confidence Interval for Mean | Lower Bound | -10,52 |  |
| Upper Bound | 20,42 |  |
| 5% Trimmed Mean | | 5,50 |  |
| Median | | ,00 |  |
| Variance | | 1840,768 |  |
| Std. Deviation | | 42,904 |  |
| Minimum | | -100 |  |
| Maximum | | 100 |  |
| Range | | 200 |  |
| Interquartile Range | | 19 |  |
| Skewness | | -,166 | ,414 |
| Kurtosis | | 1,947 | ,809 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | eksperimen dan kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Ngain\_Persen | ekperimen | ,228 | 30 | ,0015 | ,883 | 30 | ,003 |
| kontrol | ,329 | 32 | ,000 | ,811 | 32 | ,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Ngain\_Persen | 1,376 | 1 | 60 | ,258 |

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | Ngain\_Persen |
| Mann-Whitney U | 396,500 |
| Wilcoxon W | 924,500 |
| Z | -2,015 |
| Asymp. Sig. (2-tailed) | ,047 |

4. Aspek Memberikan Penjelasan Sederhana

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | kontrol | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| pre-test & post-test | pretest | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |
| posttest | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | kontrol | | | Statistic | Std. Error |
| pre-test & post-test | pretest | Mean | | 62,515 | 3,246 |
| 95% Confidence Interval for Mean | Lower Bound | 54,34 |  |
| Upper Bound | 73,54 |  |
| 5% Trimmed Mean | | 65,64 |  |
| Median | | 75,00 |  |
| Variance | | 618,790 |  |
| Std. Deviation | | 24,8755 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 50 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -,150 | ,414 |
| Kurtosis | | -1,057 | ,809 |
| posttest | Mean | | 67,58 | 3,448 |
| 95% Confidence Interval for Mean | Lower Bound | 60,15 |  |
| Upper Bound | 74,22 |  |
| 5% Trimmed Mean | | 70,95 |  |
| Median | | 75,00 |  |
| Variance | | 676,832 |  |
| Std. Deviation | | 26,016 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -,241 | ,414 |
| Kurtosis | | -,095 | ,809 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| pre-test & post-test | pretest | ,238 | 32 | ,000 | ,809 | 32 | ,000 |
| posttest | ,281 | 32 | ,005 | ,857 | 32 | ,001 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | | | | | | |
|  | eksperimen | | Cases | | | | | | | | | |
| Valid | | Missing | | | | Total | | | |
| N | Percent | N | | Percent | | N | | Percent | |
| Pre-test & post-test | pretest | | 30 | 100,0% | 0 | | 0,0% | | 30 | | 100,0% | |
| posttest | | 30 | 100,0% | 0 | | 0,0% | | 30 | | 100,0% | |
| **Descriptives** | | | | | | | | | | | |
|  | Eksperimen | | | | | | | Statistic | | Std. Error | |
| Pre-test & post-test | pretest | Mean | | | | | | 55,42 | | 3,323 | |
| 95% Confidence Interval for Mean | | | | Lower Bound | | 49,08 | |  | |
| Upper Bound | | 63,96 | |  | |
| 5% Trimmed Mean | | | | | | 58,92 | |  | |
| Median | | | | | | 75,00 | |  | |
| Variance | | | | | | 518,290 | |  | |
| Std. Deviation | | | | | | 22,766 | |  | |
| Minimum | | | | | | 25 | |  | |
| Maximum | | | | | | 100 | |  | |
| Range | | | | | | 50 | |  | |
| Interquartile Range | | | | | | 25 | |  | |
| Skewness | | | | | | ,396 | | ,427 | |
| Kurtosis | | | | | | -,957 | | ,833 | |
| posttest | Mean | | | | | | 62,915 | | 3,408 | |
| 95% Confidence Interval for Mean | | | | Lower Bound | | 63,86 | |  | |
| Upper Bound | | 77,80 | |  | |
| 5% Trimmed Mean | | | | | | 70,37 | |  | |
| Median | | | | | | 75,00 | |  | |
| Variance | | | | | | 601,156 | |  | |
| Std. Deviation | | | | | | 24,518 | |  | |
| Minimum | | | | | | 0 | |  | |
| Maximum | | | | | | 100 | |  | |
| Range | | | | | | 50 | |  | |
| Interquartile Range | | | | | | 25 | |  | |
| Skewness | | | | | | ,286 | | ,427 | |
| Kurtosis | | | | | | -1,095 | | ,833 | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Eksperimen | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Pre-test & post-test | Pretest | ,254 | 30 | ,000 | ,793 | 30 | ,000 |
| Posttest | ,234 | 30 | ,000 | ,802 | 30 | ,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Pretes | 1,202 | 1 | 60 | ,4195 |
| posttes | ,096 | 1 | 60 | ,4045 |

|  |  |  |
| --- | --- | --- |
| **Test Statisticsa** | | |
|  | Pretest | posttest |
| Mann-Whitney U | 212,500 | 443,000 |
| Wilcoxon W | 465,500 | 971,000 |
| Z | -1,694 | -1,485 |
| Asymp. Sig. (2-tailed) | ,464 | ,328 |

N-gain

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | eksperimen & kontrol | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| Ngain\_persen | eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | eksperimen & kontrol | | | Statistic | Std. Error |
| Ngain\_persen | eksperimen | Mean | | 22,885 | 14,059 |
| 95% Confidence Interval for Mean | Lower Bound | -3,02 |  |
| Upper Bound | 45,02 |  |
| 5% Trimmed Mean | | 27,45 |  |
| Median | | 50,00 |  |
| Variance | | 3160,407 |  |
| Std. Deviation | | 56,2175 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 50 |  |
| Interquartile Range | | 75 |  |
| Skewness | | -,527 | ,464 |
| Kurtosis | | -,757 | ,902 |
| kontrol | Mean | | 11,28 | 12,866 |
| 95% Confidence Interval for Mean | Lower Bound | 9,23 |  |
| Upper Bound | 19,94 |  |
| 5% Trimmed Mean | | 17,54 |  |
| Median | | 50 |  |
| Variance | | 4482,771 |  |
| Std. Deviation | | 66,9535 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 50 |  |
| Skewness | | -,251 | ,491 |
| Kurtosis | | -,285 | ,953 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Kelas | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Ngain | Eksperimen | ,228 | 30 | ,0175 | ,883 | 30 | ,003 |
| Kontrol | ,329 | 32 | ,000 | ,811 | 32 | ,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Ngain | 1,376 | 1 | 60 | ,324 |

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | Ngain |
| Mann-Whitney U | 359,000 |
| Wilcoxon W | 887,000 |
| Z | -1,193 |
| Asymp. Sig. (2-tailed) | ,243 |

5. Aspek Strategi dan Taktik

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | eks dan kontrol | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| pre eks dan pre kontrol | pre eks | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| pre kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | eks dan kontrol | | | Statistic | Std. Error |
| pre eks dan pre kontrol | pre eks | Mean | | 65,835 | 3,918 |
| 95% Confidence Interval for Mean | Lower Bound | 58,98 |  |
| Upper Bound | 77,82 |  |
| 5% Trimmed Mean | | 70.91 |  |
| Median | | 50,00 |  |
| Variance | | 726,787 |  |
| Std. Deviation | | 26,959 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -1,356 | ,427 |
| Kurtosis | | ,891 | ,833 |
| pre kontrol | Mean | | 78,255 | 3,122 |
| 95% Confidence Interval for Mean | Lower Bound | 75,90 |  |
| Upper Bound | 87,12 |  |
| 5% Trimmed Mean | | 83,32 |  |
| Median | | 75,00 |  |
| Variance | | 570,278 |  |
| Std. Deviation | | 23,88805 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -,245 | ,414 |
| Kurtosis | | ,191 | ,809 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | |  |
|  | eks dan kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| pre eks dan pre kontrol | pre eks | ,379 | 30 | ,000 | ,695 | 30 | ,000 |
| pre kontrol | ,309 | 32 | ,000 | ,830 | 32 | ,000 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | eks dan kontrol | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| posttest eks dan posttes kontrol | Posttest eks | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| Posttest kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | eks dan kontrol | | | Statistic | Std. Error |
| Posttest eks dan pre kontrol | eks | Mean | | 81,98 | 3,662 |
| 95% Confidence Interval for Mean | Lower Bound | 74,16 |  |
| Upper Bound | 89,98 |  |
| 5% Trimmed Mean | | 86,78 |  |
| Median | | 75,00 |  |
| Variance | | 425,308 |  |
| Std. Deviation | | 20,623 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -,159 | ,427 |
| Kurtosis | | -,243 | ,833 |
| kontrol | Mean | | 34,765 | 3,246 |
| 95% Confidence Interval for Mean | Lower Bound | 27,90 |  |
| Upper Bound | 40,12 |  |
| 5% Trimmed Mean | | 38,80 |  |
| Median | | 75,00 |  |
| Variance | | 553,684 |  |
| Std. Deviation | | 23,5305 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 50 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -,150 | ,414 |
| Kurtosis | | -1,057 | ,809 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | eks dan kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| posttest eks dan pre kontrol | posttest eks | ,261 | 30 | ,000 | ,866 | 30 | ,000 |
| posttest kontrol | ,238 | 32 | ,000 | ,809 | 32 | ,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Pretes | 1,020 | 1 | 60 | ,209 |
| posttes | ,096 | 1 | 60 | ,08 |

|  |  |  |
| --- | --- | --- |
| **Test Statisticsa** | | |
|  | post eks&kontrol | pre eks&kontrol |
| Mann-Whitney U | 346,000 | 235,000 |
| Wilcoxon W | 811,000 | 623,000 |
| Z | -2,1475 | -1,8385 |
| Asymp. Sig. (2-tailed) | ,185 | ,07 |

N-gain

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | eksperimen & kontrol | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| NGain\_persen | eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | eksperimen & kontrol | | | Statistic | Std. Error |
| NGain\_persen | eksperimen | Mean | | 45,78 | 13,015 |
| 95% Confidence Interval for Mean | Lower Bound | 37,81 |  |
| Upper Bound | 56,90 |  |
| 5% Trimmed Mean | | 53,12 |  |
| Median | | 75,00 |  |
| Variance | | 4455,963 |  |
| Std. Deviation | | 66,753 |  |
| Minimum | | 25 |  |
| Maximum | | 100 |  |
| Range | | 50 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -1,383 | ,456 |
| Kurtosis | | ,678 | ,887 |
| kontrol | Mean | | 7,46 | 14,887 |
| 95% Confidence Interval for Mean | Lower Bound | 2,89 |  |
| Upper Bound | 11,32 |  |
| 5% Trimmed Mean | | 11,99 |  |
| Median | | 50 |  |
| Variance | | 3502,686 |  |
| Std. Deviation | | 59,1835 |  |
| Minimum | | 0 |  |
| Maximum | | 100 |  |
| Range | | 75 |  |
| Interquartile Range | | 50 |  |
| Skewness | | -1,181 | ,491 |
| Kurtosis | | 2,009 | ,953 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | | | | | | |
|  | | eks dan kontrol | | Kolmogorov-Smirnova | | | | | | Shapiro-Wilk | | |
| Statistic | | df | | Sig. | | Statistic | df | Sig. |
| Ngain\_persen eks dan pre kontrol | | eks | | ,356 | | 32 | | ,0005 | | ,728 | 32 | ,000 |
| kontrol | | ,250 | | 30 | | ,001 | | ,818 | 30 | ,000 |
| **Test of Homogeneity of Variances** | | | | | | | | |
|  | Levene Statistic | | df1 | | df2 | | Sig. | |
| NGain\_persen | ,151 | | 1 | | 60 | | ,354 | |

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | ngain\_persen |
| Mann-Whitney U | 374,500 |
| Wilcoxon W | 902,500 |
| Z | -2,4675 |
| Asymp. Sig. (2-tailed) | ,046 |

6. aspek secara keseluruhan

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Eksperimen | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| Pretest\_Posttest | Pretest Eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| Posttest Eksperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | Eksperimen | | | Statistic | Std. Error |
| Pretest\_Posttest | Pretest Eksperimen | Mean | | 55,70 | 3,730 |
| 95% Confidence Interval for Mean | Lower Bound | 45,76 |  |
| Upper Bound | 73,20 |  |
| 5% Trimmed Mean | | 61,86 |  |
| Median | | 75,00 |  |
| Variance | | 220,730 |  |
| Std. Deviation | | 14,857 |  |
| Minimum | | 13,5 |  |
| Maximum | | 75 |  |
| Range | | 57 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -1,282 | ,427 |
| Kurtosis | | 2,014 | ,833 |
| Posttest Eksperimen | Mean | | 76,00 | 2,495 |
| 95% Confidence Interval for Mean | Lower Bound | 62,89 |  |
| Upper Bound | 83,00 |  |
| 5% Trimmed Mean | | 81,98 |  |
| Median | | 65 |  |
| Variance | | 149,377 |  |
| Std. Deviation | | 12,222 |  |
| Minimum | | 37,5 |  |
| Maximum | | 97,5 |  |
| Range | | 52,5 |  |
| Interquartile Range | | 25 |  |
| Skewness | | -1,407 | ,427 |
| Kurtosis | | 1,201 | ,833 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Eksperimen | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | Df | Sig. |
| Pretest\_Posttest | Pretest Eksperimen | ,288 | 30 | ,001 | ,747 | 30 | ,000 |
| Posttest Eksperimen | ,429 | 30 | ,101 | ,623 | 30 | ,000 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | | | | | |
|  | Kontrol | Cases | | | | | | | | | |
| Valid | | Missing | | | | Total | | | |
| N | Percent | N | | Percent | | N | | Percent | |
| Pre-Test dan Post-Tes | Pre-test kontrol | 32 | 100,0% | 0 | | 0,0% | | 32 | | 100,0% | |
| Post-test Kontrol | 32 | 100,0% | 0 | | 0,0% | | 32 | | 100,0% | |
| **Descriptives** | | | | | | | | | | |
|  | Kontrol | | | | | | Statistic | | Std. Error | |
| Pre-Test dan Post-Tes | Pre-test kontrol | Mean | | | | | 66,25 | | 1,9247 | |
| 95% Confidence Interval for Mean | | | Lower Bound | | 62,246 | |  | |
| Upper Bound | | 70,097 | |  | |
| 5% Trimmed Mean | | | | | 71,09 | |  | |
| Median | | | | | 62,50 | |  | |
| Variance | | | | | 120,450 | |  | |
| Std. Deviation | | | | | 10,975 | |  | |
| Minimum | | | | | 52,5 | |  | |
| Maximum | | | | | 95,0 | |  | |
| Range | | | | | 42,5 | |  | |
| Interquartile Range | | | | | 16,9 | |  | |
| Skewness | | | | | ,730 | | ,414 | |
| Kurtosis | | | | | -,029 | | ,809 | |
| Post-test Kontrol | Mean | | | | | 70,938 | | 2,0167 | |
| 95% Confidence Interval for Mean | | | Lower Bound | | 66,199 | |  | |
| Upper Bound | | 74,426 | |  | |
| 5% Trimmed Mean | | | | | 73,897 | |  | |
| Median | | | | | 70,000 | |  | |
| Variance | | | | | 122,8838 | |  | |
| Std. Deviation | | | | | 11,0853 | |  | |
| Minimum | | | | | 47,5 | |  | |
| Maximum | | | | | 95,0 | |  | |
| Range | | | | | 47,5 | |  | |
| Interquartile Range | | | | | 15,0 | |  | |
| Skewness | | | | | ,201 | | ,414 | |
| Kurtosis | | | | | -,471 | | ,809 | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Pre-Test dan Post-Tes | Pre-test kontrol | ,163 | 32 | ,101 | ,932 | 32 | ,030 |
| Post-test Kontrol | ,086 | 32 | ,985\* | ,984 | 32 | ,200\* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| Pre-test | ,235 | 1 | 60 | ,630 |
| Post-test | ,001 | 1 | 60 | ,970 |

|  |  |  |
| --- | --- | --- |
| **Test Statisticsa** | | |
|  | Pre-test | Post-test | |
| Mann-Whitney U | 286,500 | 342,500 | |
| Wilcoxon W | 751,500 | 870,500 | |
| Z | -2,735 | -1,944 | |
| Asymp. Sig. (2-tailed) | ,006 | ,049 | |

N-gain

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | eksperimen dan kontrol | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| Ngain\_persen | Ekperimen | 30 | 100,0% | 0 | 0,0% | 30 | 100,0% |
| Kontrol | 32 | 100,0% | 0 | 0,0% | 32 | 100,0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | eksperimen dan kontrol | | | Statistic | Std. Error |
| Ngain\_persen | ekperimen | Mean | | 45,19 | 7,857 |
| 95% Confidence Interval for Mean | Lower Bound | 28,79 |  |
| Upper Bound | 56,63 |  |
| 5% Trimmed Mean | | 53,87 |  |
| Median | | 58,33 |  |
| Variance | | 1143,454 |  |
| Std. Deviation | | 33,815 |  |
| Minimum | | 37,5 |  |
| Maximum | | 92 |  |
| Range | | 57,5 |  |
| Interquartile Range | | 67,5 |  |
| Skewness | | -1,173 | ,427 |
| Kurtosis | | 2,322 | ,833 |
| kontrol | Mean | | 13,87 | 8,411 |
| 95% Confidence Interval for Mean | Lower Bound | 10,23 |  |
| Upper Bound | 25,78 |  |
| 5% Trimmed Mean | | 15,91 |  |
| Median | | 25 |  |
| Variance | | 11513,07 |  |
| Std. Deviation | | 107,299 |  |
| Minimum | | 17,5 |  |
| Maximum | | 88 |  |
| Range | | 67 |  |
| Interquartile Range | | 33 |  |
| Skewness | | -,382 | ,414 |
| Kurtosis | | ,977 | ,809 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | eksperimen dan kontrol | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Ngain\_persen | ekperimen | ,228 | 30 | ,000 | ,838 | 30 | ,030 |
| kontrol | ,257 | 32 | ,000 | ,893 | 32 | ,200\* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variances** | | | | |
|  | Levene Statistic | df1 | df2 | Sig. |
| ngain\_persen | 2,716 | 1 | 60 | ,105 |

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | ngain\_persen |
| Mann-Whitney U | 199,000 |
| Wilcoxon W | 727,000 |
| Z | -3,959 |
| Asymp. Sig. (2-tailed) | ,000 |