## APPENDIX A

The score of Pre-Test and Post-Test by the Students of Experimental Group

| No. | Initial Names | Pre-Test (T1) | Post-Test (T2) |
| :--- | :--- | :--- | :--- |
| 1 | AF | 50 | 77 |
| 2 | BTD | 68 | 67 |
| 3 | FAP | 60 | 77 |
| 4 | FR | 73 | 79 |
| 5 | FAH | 60 | 62 |
| 6 | LD | 78 | 86 |
| 7 | MF | 28 | 76 |
| 8 | MIP | 55 | 67 |
| 9 | MR | 65 | 76 |
| 10 | MTP | 67 | 81 |
| 11 | PH | 75 | 80 |
| 12 | RA | 66 | 85 |
| 13 | RAR | 65 | 80 |
| 14 | RK | 69 | 79 |
| 15 | RW | 71 | 77 |
| 16 | SWW | 62 | 78 |
| 17 | UAS | 60 | 80 |
| 18 | UN | 72 | 88 |
| 19 | VP | 85 | 90 |
| 20 | WA | 70 | 83 |
| 21 | WY | 52 | 79 |
|  | Total | $\boldsymbol{\Sigma} \mathbf{T 1}=\mathbf{1 3 5 1}$ | $\boldsymbol{\Sigma}_{\mathbf{T} 2}=\mathbf{1 6 4 7}$ |
|  | Mean | $\overline{\mathbf{X}}=\mathbf{6 4 , 3 3}$ | $\overline{\mathbf{X}}=\mathbf{7 8 , 4 3}$ |

## Pre-test:

$$
\overline{\mathrm{X}}=\frac{\sum T 1}{n}
$$

$$
\overline{\mathrm{X}}=\frac{\sum T 2}{n}
$$

$\overline{\mathrm{X}}=\frac{1351}{21}$

$$
\overline{\mathrm{X}}=\frac{1617}{21}
$$

$\overline{\mathrm{X}}=64,33$
$\overline{\mathrm{X}}=78,43$

## APPENDIX B

The score of Pre-Test and Post-Test by the Students of Control Group

| No. | Initial Names | Pre-Test (T1) | Post-Test (T2) |
| :---: | :---: | :---: | :---: |
| 1 | AHN | 76 | 78 |
| 2 | AHS | 50 | 60 |
| 3 | ASS | 39 | 45 |
| 4 | CC | 69 | 71 |
| 5 | FA | 54 | 57 |
| 6 | MAA | 57 | 57 |
| 7 | MAP | 75 | 58 |
| 8 | MFR | 53 | 55 |
| 9 | MFS | 57 | 61 |
| 10 | MHRP | 40 | 50 |
| 11 | MR | 40 | 63 |
| 12 | MRF | 70 | 63 |
| 13 | MRTN | 55 | 74 |
| 14 | NAA | 47 | 59 |
| 15 | R | 72 | 75 |
| 16 | RKA | 60 | 63 |
| 17 | RNR | 62 | 58 |
| 18 | SA | 67 | 70 |
| 19 | SH | 93 | 86 |
| 20 | SK | 60 | 68 |
| 21 | SKD | 65 | 67 |
| 22 | VS | 40 | 50 |
| 23 | WKA | 65 | 66 |
| 24 | ZZK | 85 | 89 |
|  | Total | $\Sigma_{\text {T1 }}=1451$ | $\Sigma_{\text {T2 }}=1543$ |
|  | Mean | $\overline{\mathrm{X}}=\mathbf{6 0 , 4 6}$ | $\overline{\mathrm{X}}=\mathbf{6 4 , 3 0}$ |

## Pre-test:

$\overline{\mathrm{X}}=\frac{\sum T 1}{N}$
$\overline{\mathrm{X}}=\frac{1451}{24}$
$\bar{X}=\frac{1543}{24}$
$\overline{\mathrm{X}}=60,46$
$\overline{\mathrm{X}}=64,30$

## APPENDIX C

The Reliability of the Test

| No. | Name | Rater 1 <br> $(\mathbf{X})$ | $\mathbf{X}^{\mathbf{2}}$ | Rater 2 <br> $(\mathbf{Y})$ | $\mathbf{Y}^{\mathbf{2}}$ | $(\mathbf{X} \times \mathbf{Y})$ |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| 1 | CH | 66 | 4356 | 70 | 4900 | 4620 |
| 2 | AS | 66 | 4356 | 73 | 5329 | 4818 |
| 3 | DD | 72 | 5184 | 82 | 6724 | 5904 |
| 4 | EL | 44 | 1936 | 47 | 2209 | 2068 |
| 5 | FHN | 50 | 2500 | 74 | 5476 | 3700 |
| 6 | JH | 60 | 3600 | 65 | 4225 | 3900 |
| 7 | JS | 72 | 5184 | 78 | 6084 | 5616 |
| 8 | MFR | 66 | 4356 | 70 | 4900 | 4620 |
| 9 | MRA | 63 | 3969 | 66 | 4356 | 4158 |
| 10 | RH | 72 | 5184 | 78 | 6084 | 5616 |
| 11 | SN | 60 | 3600 | 67 | 4489 | 4020 |
| 12 | SLZ | 75 | 5625 | 74 | 5476 | 5550 |
| 13 | SAE | 72 | 5184 | 76 | 5776 | 5472 |
| 14 | TV | 81 | 6561 | 86 | 6889 | 6966 |
| 15 | IA | 75 | 5625 | 78 | 6084 | 5850 |
| 16 | RP | 72 | 5184 | 77 | 5929 | 5544 |
| 17 | WA | 44 | 1936 | 51 | 2601 | 2244 |
| 18 | YK | 80 | 6400 | 79 | 6241 | 6320 |
| 19 | ZD | 86 | 7396 | 88 | 7744 | 7568 |
| 20 | ZL | 76 | 5776 | 80 | 6400 | 6080 |
| 21 | UN | 55 | 3025 | 62 | 3844 | 3410 |
|  | Total | $\mathbf{1 4 0 7}$ | $\mathbf{9 6 9 3 7}$ | $\mathbf{1 5 2 1}$ | $\mathbf{1 1 1 7 6 0}$ | $\mathbf{1 0 4 0 4 4}$ |

From the table above, the data obtained were as following:

$$
\begin{array}{lll}
\sum \mathrm{X}=1407 & \sum \mathrm{Y}=1521 \\
\sum \mathrm{X}^{2}=96937 & \sum \mathrm{Y}^{2}=111760 \\
\sum \mathrm{XY}=104044 & \mathrm{~N} & =21
\end{array}
$$

$$
\begin{aligned}
& r_{x y}=\frac{N\left(\sum X Y\right)-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left\{N\left(\sum X^{2}\right)-\left(\sum X\right)^{2}\right\}\left\{N \sum Y^{2}-\left(\sum Y\right)^{2}\right\}}} \\
& r_{x y}=\frac{21(104044)-(1407)(1521)}{\sqrt{\left\{21(96937)-(1407)^{2}\right\}\left\{21(111760)-(1521)^{2}\right\}}} \\
& r_{x y}=\frac{2184924-2140047}{\sqrt{\{2035677-1979649\}\{2346960-2313441\}}} \\
& r_{x y}=\frac{34877}{\sqrt{\{56028\}\{33519\}}}=\frac{34877}{\sqrt{1878002532}} \\
& r_{x y}=\frac{34877}{43335,92}=0,8
\end{aligned}
$$

## APPENDIX D

Test for Distribution of Frequency in Experimental Group
A. Test for Distribution of Frequency of Pre-test in Experimental Group

| $\boldsymbol{x}_{\mathbf{1}}$ | $\boldsymbol{f}$ | $\boldsymbol{f} \boldsymbol{x}_{\mathbf{1}}$ | $\boldsymbol{x}_{\mathbf{1}}-\overline{\boldsymbol{x}}$ | $\left(\boldsymbol{x}_{\mathbf{1}}-\overline{\boldsymbol{x}}\right)^{\mathbf{2}}$ | $\boldsymbol{f}\left(\boldsymbol{x}_{\mathbf{1}}-\overline{\boldsymbol{x}}\right)^{\mathbf{2}}$ |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 28 | 1 | 28 | $-36,33$ | 1319,869 | 1319,87 |
| 50 | 1 | 50 | $-14,33$ | 205,3489 | 205,349 |
| 52 | 1 | 52 | $-12,33$ | 152,0289 | 152,029 |
| 55 | 1 | 55 | $-9,33$ | 87,0489 | 87,0489 |
| 60 | 3 | 180 | $-4,33$ | 18,7489 | 56,2467 |
| 62 | 1 | 62 | $-2,33$ | 5,4289 | 5,4289 |
| 65 | 2 | 130 | 0,67 | 0,4489 | 0,8978 |
| 66 | 1 | 66 | 1,67 | 2,7889 | 2,7889 |
| 67 | 1 | 67 | 2,67 | 7,1289 | 7,1289 |
| 68 | 1 | 68 | 3,67 | 13,4689 | 13,4689 |
| 69 | 1 | 69 | 4,67 | 21,8089 | 21,8089 |
| 70 | 1 | 70 | 5,67 | 32,1489 | 32,1489 |
| 71 | 1 | 71 | 6,67 | 44,4889 | 44,4889 |
| 72 | 1 | 72 | 7,67 | 58,8289 | 58,8289 |
| 73 | 1 | 73 | 8,67 | 75,1689 | 75,1689 |
| 75 | 1 | 75 | 10,67 | 113,8489 | 113,849 |
| 78 | 1 | 78 | 13,67 | 186,8689 | 186,869 |
| 85 | 1 | 85 | 20,67 | 427,2489 | 427,249 |
| $\overline{\boldsymbol{x}}=64,33$ | $\mathrm{~N}_{1}=21$ | $\boldsymbol{\Sigma}=1351$ | $\boldsymbol{\Sigma}=8,06$ | $\boldsymbol{\Sigma}=2772,72$ | $\boldsymbol{\Sigma}=2810,67$ |

## 1. Mean of Pre-test in Experimental Group

Where: $\quad N_{1}=21$

$$
\Sigma f x_{1}=1351
$$

$M x_{1}=\frac{\Sigma f x_{1}}{N_{1}}$
$M x_{1}=\frac{1351}{21}$
$M x_{1}=64,33$

## 2. Standard Deviation

Where: $\quad \Sigma f\left(x_{1}-\bar{x}\right)^{2}=2810,669$
$N_{1}=21$
$S D_{x_{1}}=\sqrt{\frac{\sum f\left(x_{1}-\bar{x}\right)^{2}}{N_{1}}}$
$S D_{x_{1}}=\sqrt{\frac{2810,67}{21}}$
$S D_{x_{1}}=\sqrt{133,84}$
$S D_{x_{1}}=11,57$
3. Standard Error

Where: $\quad S D_{x_{1}}=11,57$
$S E_{M X_{1}}=\frac{S D_{x_{1}}}{\sqrt{N_{1}-1}}$
$S E_{M X_{1}}=\frac{11,57}{\sqrt{21-1}}$
$S E_{M X_{1}}=\frac{11,57}{\sqrt{20}}$
$S E_{M X_{1}}=\frac{11,57}{4,47}$
$S E_{M X_{1}}=2,58$
B. Test for Distribution of Frequency of Post-test in Experimental Group

| $\boldsymbol{x}_{2}$ | $\boldsymbol{f}$ | $\boldsymbol{f} \boldsymbol{x}_{\mathbf{2}}$ | $\boldsymbol{x}_{\mathbf{2}}-\overline{\boldsymbol{x}}$ | $\left(\boldsymbol{x}_{\mathbf{2}}-\overline{\boldsymbol{x}}\right)^{\mathbf{2}}$ | $\boldsymbol{f}\left(\boldsymbol{x}_{\mathbf{2}}-\overline{\boldsymbol{x}}\right)^{\mathbf{2}}$ |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 62 | 1 | 62 | 16,43 | 269,945 | 269,9449 |
| 67 | 2 | 134 | 11,43 | 130,645 | 261,2898 |
| 76 | 2 | 152 | 2,43 | 5,9049 | 11,8098 |
| 77 | 3 | 231 | 1,43 | 2,0449 | 6,1347 |
| 78 | 1 | 78 | 0,43 | 0,1849 | 0,1849 |
| 79 | 3 | 237 | $-0,57$ | 0,3249 | 0,9747 |
| 80 | 3 | 240 | $-1,57$ | 2,4649 | 7,3947 |
| 81 | 1 | 81 | $-2,57$ | 6,6049 | 6,6049 |
| 83 | 1 | 83 | $-4,57$ | 20,8849 | 20,8849 |
| 85 | 1 | 85 | $-6,57$ | 43,1649 | 43,1649 |
| 86 | 1 | 86 | $-7,57$ | 57,3049 | 57,3049 |
| 88 | 1 | 88 | $-9,57$ | 91,5849 | 91,5849 |
| 90 | 1 | 90 | $-11,57$ | 133,865 | 133,8649 |
| $\overline{\boldsymbol{x}}=78,43$ | $\mathrm{~N}_{1}=21$ | $\boldsymbol{\Sigma}=1647$ | $\Sigma=-12,41$ | $\Sigma=764,92$ | $\boldsymbol{\Sigma}=911,14$ |

## 1. Mean of Post-test in Experimental Group

$$
\begin{aligned}
& \text { Where: } \begin{array}{c}
N_{2}=21 \\
\Sigma f x_{2}=1647 \\
M x_{2}=\frac{\sum f x_{2}}{N_{2}} \\
M x_{2}=\frac{1647}{21} \\
M x_{2}=78,43
\end{array}
\end{aligned}
$$

## 2. Standard Deviation

Where: $\quad \Sigma f\left(x_{2}-\bar{x}\right)^{2}=911,14$
$S D_{x_{2}}=\sqrt{\frac{\sum f\left(x_{2}-\bar{x}\right)^{2}}{N_{2}}}$
$S D_{x_{2}}=\sqrt{\frac{911,14}{21}}$
$S D_{x_{2}}=\sqrt{43,38}$
$S D_{x_{2}}=6,58$

## 3. Standard Error

$$
\begin{aligned}
& \text { Where: } \quad S D_{x_{2}}=6,58 \\
& S E_{M X_{2}}=\frac{S D_{x_{2}}}{\sqrt{N_{1}-1}} \\
& S E_{M X_{2}}=\frac{6,58}{\sqrt{21-1}} \\
& S E_{M X_{2}}=\frac{6,58}{\sqrt{20}} \\
& S E_{M X_{2}}=\frac{6,58}{4,47}
\end{aligned}
$$

$$
S E_{M X_{2}}=1,47
$$

## APPENDIX E

Test for Distribution of Frequency in Control Group
A. Test for Distribution of Frequency of Pre-test in Control Group

| $\boldsymbol{y}_{\mathbf{1}}$ | $\boldsymbol{f}$ | $\boldsymbol{f} \boldsymbol{y}_{\mathbf{1}}$ | $\boldsymbol{y}_{\mathbf{1}}-\overline{\boldsymbol{x}}$ | $\left(\boldsymbol{y}_{\mathbf{1}}-\overline{\boldsymbol{x}}\right)^{\mathbf{2}}$ | $\boldsymbol{f}\left(\boldsymbol{y}_{\mathbf{1}}-\overline{\boldsymbol{x}}\right)^{2}$ |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 39 | 1 | 39 | $-18,46$ | 340,7716 | 340,7716 |
| 40 | 3 | 120 | $-17,46$ | 304,8516 | 914,5548 |
| 47 | 1 | 47 | $-10,46$ | 109,4116 | 109,4116 |
| 50 | 1 | 50 | $-7,46$ | 55,6516 | 55,6516 |
| 53 | 1 | 53 | $-4,46$ | 19,8916 | 19,8916 |
| 54 | 1 | 54 | $-3,46$ | 11,9716 | 11,9716 |
| 55 | 1 | 55 | $-2,46$ | 6,0516 | 6,0516 |
| 57 | 2 | 114 | $-0,46$ | 0,2116 | 0,4232 |
| 60 | 2 | 120 | 2,54 | 6,4516 | 12,9032 |
| 62 | 1 | 62 | 4,54 | 20,6116 | 20,6116 |
| 65 | 2 | 130 | 7,54 | 56,8516 | 113,7032 |
| 67 | 1 | 67 | 9,54 | 91,0116 | 91,0116 |
| 69 | 1 | 69 | 11,54 | 133,1716 | 133,1716 |
| 70 | 1 | 70 | 12,54 | 157,2516 | 157,2516 |
| 72 | 1 | 72 | 14,54 | 211,4116 | 211,4116 |
| 75 | 1 | 75 | 17,54 | 307,6516 | 307,6516 |
| 76 | 1 | 76 | 18,54 | 343,7316 | 343,7316 |
| 85 | 1 | 85 | 27,54 | 758,4516 | 758,4516 |
| 93 | 1 | 93 | 35,54 | 1263,092 | 1263,092 |
| $\overline{\boldsymbol{x}}=57,46$ | $\mathrm{~N}_{1}=24$ | $\Sigma=1451$ | $\Sigma=97,26$ | $\Sigma=758,45$ | $\Sigma=4871,72$ |

## a. Mean of Pre-test in Control Group

Where: $\quad N_{1}=24$

$$
\Sigma f y_{1}=1451
$$

$M y_{1}=\frac{\sum f y_{1}}{N_{1}}$
$\mathrm{My}_{1}=\frac{1451}{24}$
$\mathrm{My}_{1}=57,46$

## b. Standard Deviation

$$
\begin{aligned}
& \text { Where: } \quad \Sigma f\left(y_{1}-\bar{x}\right)^{2}=4871,72 \\
& N_{1}=24 \\
& S D_{y_{1}}=\sqrt{\frac{\Sigma f\left(y_{1}-\bar{x}\right)^{2}}{N_{1}}} \\
& S D_{y_{1}}=\sqrt{\frac{4871,72}{24}} \\
& S D_{y_{1}}=\sqrt{202,98} \\
& S D_{y_{1}}=14,24
\end{aligned}
$$

## c. Standard Error

$$
\begin{aligned}
& \text { Where: } \quad \begin{array}{l}
\quad D_{y_{1}}=14,24 \\
N_{1}=24
\end{array} \\
& S E_{M y_{1}}=\frac{S D_{y_{1}}}{\sqrt{N_{1}-1}} \\
& S E_{M y_{1}}=\frac{14,24}{\sqrt{24-1}} \\
& S E_{M y_{1}}=\frac{14,24}{\sqrt{23}} \\
& S E_{M y_{1}}=\frac{14,24}{4,80} \\
& S E_{M y_{1}}=2,96
\end{aligned}
$$

B. Test for Distribution of Frequency of Post-test in Control Group

| $\boldsymbol{y}_{\mathbf{2}}$ | $\boldsymbol{f}$ | $\boldsymbol{f}_{\mathbf{2}}$ | $\boldsymbol{y}_{\mathbf{2}}-\overline{\boldsymbol{x}}$ | $\left(\boldsymbol{y}_{\mathbf{2}}-\overline{\boldsymbol{x}}\right)^{\mathbf{2}}$ | $\boldsymbol{f}\left(\boldsymbol{y}_{\mathbf{2}}-\overline{\boldsymbol{x}}\right)^{\mathbf{2}}$ |
| :---: | :---: | ---: | ---: | ---: | ---: |
| 45 | 1 | 45 | $-19,3$ | 372,49 | 372,49 |
| 50 | 2 | 100 | $-14,3$ | 204,49 | 408,98 |
| 55 | 1 | 55 | $-9,3$ | 86,49 | 86,49 |
| 57 | 2 | 114 | $-7,3$ | 53,29 | 106,58 |
| 58 | 2 | 116 | $-6,3$ | 39,69 | 79,38 |
| 59 | 1 | 59 | $-5,3$ | 28,09 | 28,09 |
| 60 | 1 | 60 | $-4,3$ | 18,49 | 18,49 |
| 61 | 1 | 61 | $-3,3$ | 10,89 | 10,89 |
| 63 | 3 | 189 | $-1,3$ | 1,69 | 5,07 |
| 66 | 1 | 66 | 1,7 | 2,89 | 2,89 |
| 67 | 1 | 67 | 2,7 | 7,29 | 7,29 |
| 68 | 1 | 68 | 3,7 | 13,69 | 13,69 |
| 70 | 1 | 70 | 5,7 | 32,49 | 32,49 |
| 71 | 1 | 71 | 6,7 | 44,89 | 44,89 |
| 74 | 1 | 74 | 9,7 | 94,09 | 94,09 |
| 75 | 1 | 75 | 10,7 | 114,49 | 114,49 |
| 78 | 1 | 78 | 13,7 | 187,69 | 187,69 |
| 86 | 1 | 86 | 21,7 | 470,89 | 470,89 |
| 89 | 1 | 89 | 24,7 | 610,09 | 610,09 |
| $\overline{\boldsymbol{x}}=64,30$ | $\mathrm{~N}_{1}=24$ | $\boldsymbol{\Sigma}=1543$ | $\boldsymbol{\Sigma}=30,3$ | $\boldsymbol{\Sigma}=2394,11$ | $\boldsymbol{\Sigma}=2694,96$ |

## a. Mean of Post-test in Control Group

Where: $\quad \Sigma f y_{2}=1543$

$$
N_{2}=24
$$

$M y_{2}=\frac{\sum f y_{2}}{N_{2}}$
$\mathrm{My}_{2}=\frac{1543}{24}$
$\mathrm{My}_{2}=64,30$

## b. Standard Deviation

Where: $\quad \Sigma f\left(y_{2}-\bar{x}\right)^{2}=2694,96$

$$
\begin{aligned}
& \quad N_{2}=24 \\
& S D_{y_{2}}=\sqrt{\frac{\Sigma f y_{2}^{2}}{N_{2}}} \\
& S D_{y_{2}}=\sqrt{\frac{2694,96}{24}} \\
& S D_{y_{2}}=\sqrt{112,29} \\
& S D_{y_{2}}=10,59
\end{aligned}
$$

## c. Standard Error

$$
\begin{aligned}
& \text { Where: } \quad \begin{array}{l}
\quad D_{y_{2}}=10,59 \\
S E_{M y_{2}}= \\
= \\
\frac{S D_{2}}{\sqrt{N_{2}-1}} \\
S E_{M y_{2}}= \\
\frac{10,59}{\sqrt{24-1}} \\
S E_{M y_{2}}=\frac{10,59}{\sqrt{23}} \\
S E_{M y_{1}}=\frac{10,59}{4,80} \\
S E_{M y_{1}}=2,20
\end{array}
\end{aligned}
$$

## APPENDIX F

Testing Normality
A. Testing Normality of Post-test in Experimental Group

| $\boldsymbol{x}_{\mathrm{i}}$ | $f$ | $\Sigma f$ | Zi | $f(Z i)$ | S(Zi) | $\|f(Z i)-S(Z i)\|$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 | 1 | 1 | -2,49696 | 0,00539 | 0,047619 | 0,04223 |
| 67 | 2 | 3 | -1,73708 | 0,04006 | 0,142857 | 0,1028 |
| 76 | 2 | 5 | -0,3693 | 0,36317 | 0,238095 | 0,125075 |
| 77 | 3 | 8 | -0,21733 | 0,40129 | 0,380952 | 0,020338 |
| 78 | 1 | 9 | -0,06535 | 0,44038 | 0,428571 | 0,011809 |
| 79 | 3 | 12 | 0,086626 | 0,51994 | 0,571429 | 0,05149 |
| 80 | 3 | 15 | 0,238602 | 0,55962 | 0,714286 | 0,15467 |
| 81 | 1 | 16 | 0,390578 | 0,63683 | 0,761905 | 0,12508 |
| 83 | 1 | 17 | 0,694529 | 0,74215 | 0,809524 | 0,06737 |
| 85 | 1 | 18 | 0,99848 | 0,82894 | 0,857143 | 0,0282 |
| 86 | 1 | 19 | 1,150456 | 0,85314 | 0,904762 | 0,05162 |
| 88 | 1 | 20 | 1,454407 | 0,91149 | 0,952381 | 0,04089 |
| 90 | 1 | 21 | 1,758359 | 0,95053 | 1 | 0,04947 |
| $\mathrm{L}_{0}=0,15$ |  |  |  |  |  |  |
| $\mathrm{L}_{\mathrm{t}}=0,19(\alpha=0,05 \& \mathrm{~N}=21)$ |  |  |  |  |  |  |
| Normal Distribution ( $L_{\text {observed }}<L_{\text {table }}$ ) |  |  |  |  |  |  |

Where: $\quad \sum f x=1647$

$$
N=21
$$

$\overline{\mathrm{X}}=\frac{\sum f x}{N}$
$\overline{\mathrm{X}}=\frac{1647}{21}$
$\overline{\mathrm{X}}=78,43$

## 1. Standard Deviation

From previous table the Standard Deviation can be formulated as follows:
Where: $\quad \Sigma f\left(x_{2}-\bar{x}\right)^{2}=911,14$
$S D_{x_{2}}=\sqrt{\frac{\sum f\left(x_{2}-\bar{x}\right)^{2}}{N_{2}}}$
$S D_{x_{2}}=\sqrt{\frac{911,14}{21}}$
$S D_{x_{2}}=\sqrt{43,38}$
$S D_{x_{2}}=6,58$
2. Transformation of numbers to notation of the normal distribution

Where: $\quad x_{i}=62$

$$
\bar{x}=78,43
$$

$$
S D_{x_{2}}=6,58
$$

$$
Z i=\frac{x_{i}-\bar{x}}{S D_{x_{2}}}
$$

$$
Z i=\frac{62-78,43}{6,58}
$$

$$
Z i=\frac{-16,43}{6,58}
$$

$$
Z i=-2,49
$$

3. Empirical cumulative probability

Where:

$$
\Sigma f=1
$$

$$
N_{1}=21
$$

$\mathrm{S}(\mathrm{Zi})=\frac{\Sigma f}{N}$
$S(Z i)=\frac{1}{21}$
$S(Z i)=0,05$
4. Cumulative proportion of area of a normal curve based notation of Zi
$F(Z i)=-2,49696 \rightarrow 0,00539$
5. $\quad \mathrm{L}$ observed Maximum Value from $|f(\mathrm{Zi})-\mathrm{S}(\mathrm{Zi})|$
$\mathrm{L}_{\mathrm{o}}=0,15$
6. $\mathrm{L}_{\text {table }}$ was gained from Liliefors table

$$
\mathrm{L}_{\mathrm{t}}=0,19(\alpha=0,05 \& \mathrm{~N}=21)
$$

| Sample Size <br> $\mathbf{( N )}$ | Significance Level ( $\boldsymbol{\alpha}$ ) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{0 , 0 1}$ | $\mathbf{0 , 0 5}$ | $\mathbf{0 , 1 0}$ | $\mathbf{0 , 1 5}$ | $\mathbf{0 , 2 0}$ |  |
| $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ |  |
| 20 | 0,231 | 0,194 | 0,180 | 0,172 | 0,736 |  |
| 21 | 0,225 | 0,189 | 0,176 | 0,168 | 0,736 |  |
| 22 | 0,220 | 0,185 | 0,172 | 0,164 | 0,736 |  |

B. Testing Normality of Post-test in Control Group

| $y_{\text {i }}$ | $f$ | $\Sigma f$ | Zi | $f(\mathrm{Zi})$ | S(Zi) | $\|f(Z i)-S(Z i)\|$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 45 | 1 | 1 | -1,8224 | 0,03216 | 0,041667 | 0,00951 |
| 50 | 2 | 3 | -1,3503 | 0,08851 | 0,125 | 0,03649 |
| 55 | 1 | 4 | -0,8781 | 0,19766 | 0,166667 | 0,030993 |
| 57 | 2 | 6 | -0,6893 | 0,22663 | 0,25 | 0,02337 |
| 58 | 2 | 8 | -0,5949 | 0,25785 | 0,333333 | 0,07548 |
| 59 | 1 | 9 | -0,5004 | 0,29116 | 0,375 | 0,08384 |
| 60 | 1 | 10 | -0,4060 | 0,32636 | 0,416667 | 0,09031 |
| 61 | 1 | 11 | -0,3116 | 0,36317 | 0,458333 | 0,09516 |
| 63 | 3 | 14 | -0,1227 | 0,44038 | 0,583333 | 0,14295 |
| 66 | 1 | 15 | 0,1605 | 0,51994 | 0,625 | 0,10506 |
| 67 | 1 | 16 | 0,2549 | 0,55962 | 0,666667 | 0,10705 |
| 68 | 1 | 17 | 0,3493 | 0,59871 | 0,708333 | 0,10962 |
| 70 | 1 | 18 | 0,5382 | 0,67364 | 0,75 | 0,07636 |
| 71 | 1 | 19 | 0,6326 | 0,70884 | 0,791667 | 0,08283 |
| 74 | 1 | 20 | 0,9159 | 0,80234 | 0,833333 | 0,03099 |
| 75 | 1 | 21 | 1,0103 | 0,82894 | 0,875 | 0,04606 |
| 78 | 1 | 22 | 1,2936 | 0,89435 | 0,916667 | 0,02232 |
| 86 | 1 | 23 | 2,0491 | 0,97441 | 0,958333 | 0,016077 |
| 89 | 1 | 24 | 2,3323 | 0,98778 | 1 | 0,01222 |
| $\mathrm{L}_{0}=0,142$ |  |  |  |  |  |  |
| $\mathrm{L}_{\mathrm{t}}=0,177(\alpha=0,05 \& \mathrm{~N}=24)$ |  |  |  |  |  |  |
| Normal Distribution ( $L_{\text {observed }}<\mathrm{L}_{\text {table }}$ ) |  |  |  |  |  |  |

Where: $\quad \sum f x=1543$
$\overline{\mathrm{X}}=\frac{\sum f x}{N}$
$\overline{\mathrm{X}}=\frac{1543}{24}$
$\overline{\mathrm{X}}=64,30$

## 1. Standard Deviation

From previous table the Standard Deviation can be formulated as follows:
Where: $\quad \Sigma f\left(y_{2}-\bar{x}\right)^{2}=2694,96$

$$
N_{2}=24
$$

$S D_{y_{2}}=\sqrt{\frac{\Sigma f y_{2}{ }^{2}}{N_{2}}}$
$S D_{y_{2}}=\sqrt{\frac{2694,96}{24}}$
$S D_{y_{2}}=\sqrt{112,29}$
$S D_{y_{2}}=10,59$
2. Transformation of numbers to notation of the normal distribution

$$
\begin{aligned}
& \text { Where: } \begin{array}{l}
y_{i}=45 \\
\bar{x}=64,30 \\
S D_{y_{2}}=10,59
\end{array} \\
& Z i=\frac{y_{i}-\bar{x}}{S D_{x_{2}}} \\
& Z i=\frac{45-64,30}{10,59} \\
& Z i=\frac{-19,30}{10,59} \\
& Z i=-1,82
\end{aligned}
$$

3. Empirical cumulative probability

Where:

$$
\Sigma f=1
$$

$$
N_{1}=24
$$

$\mathrm{S}(\mathrm{Zi})=\frac{\Sigma f}{N}$
$S(Z i)=\frac{1}{24}$
$S(Z i)=0,04$
4. Cumulative proportion of area of a normal curve based notation of $Z i$ $F(Z i)=-1,8224 \rightarrow 0,03216$
5. $\quad \mathrm{L}$ observed Maximum Value from $|f(\mathrm{Zi})-\mathrm{S}(\mathrm{Zi})|$
$L_{0}=0,142$
6. $\mathrm{L}_{\text {table }}$ was gained from Liliefors table
$L_{t}=0,177(\alpha=0,05 \& N=24)$

| Sample Size <br> $\mathbf{( N )}$ | Significance Level ( $\boldsymbol{\alpha}$ ) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{0 , 0 1}$ | $\mathbf{0 , 0 5}$ | $\mathbf{0 , 1 0}$ | $\mathbf{0 , 1 5}$ | $\mathbf{0 , 2 0}$ |  |
| $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ |  |
| 23 | 0,215 | 0,181 | 0,168 | 0,160 | 0,736 |  |
| 24 | 0,210 | 0,177 | 0,164 | 0,157 | 0,736 |  |
| 25 | 0,206 | 0,173 | 0,161 | 0,154 | 0,736 |  |

## APPENDIX G

## Z Table

Probability content 0,00 to Z

| Z | 0,00 | 0,01 | 0,02 | 0,03 | 0,04 | 0,05 | 0,06 | 0,07 | 0,08 | 0,09 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -3,10 | 0,00097 | 0,00094 | 0,00090 | 0,00087 | 0,00084 | 0,00082 | 0,00079 | 0,00076 | 0,00074 | 0,00071 |
| -3,00 | 0,00135 | 0,00131 | 0,00126 | 0,00122 | 0,00118 | 0,00114 | 0,00111 | 0,00107 | 0,00104 | 0,00100 |
| -2,40 | 0,00820 | 0,00798 | 0,0077 | 0,00755 | 0,00734 | 0,0071 | 0,00695 | 0,00676 | 0,00657 | 0,00639 |
| -2,30 | 0,01072 | 0,01044 | 0,01017 | 0,00990 | 0,00964 | 0,00939 | 0,00914 | 0,00889 | 0,00866 | 0,00842 |
| -2,20 | 0,01390 | 0,01355 | 0,013 | 0,012 | 0,012 | 0,012 | 0,01 | 01160 | 0,01130 | 0,01101 |
| -2,10 | 0,01786 | 0,01743 | 0,01700 | 0,01659 | 0,01618 | 0,0157 | 0,01539 | 0,01500 | 0,01463 | 0,01426 |
| -2,00 | 0,0227 | 0,02222 | 0,0216 | 0,02118 | 0,02068 | 0,0201 | 0,01970 | 0,01923 | 0,01876 | 0,01831 |
| -1,90 | 0,0287 | 0,02807 | 0,0274 | 0,02680 | 0,02619 | 0,0255 | 0,02500 | 0,02442 | 0,02385 | 0,02330 |
| -1,80 | 0,03593 | 0,03515 | 0,0343 | 0,03362 | 0,03288 | 0,0321 | 0,03144 | 0,03074 | 0,03005 | 0,02938 |
| -1,70 | 0,04457 | 0,04363 | 0,04272 | 0,04182 | 0,04093 | 0,04006 | 0,03920 | 0,03836 | 0,03754 | 0,03673 |
| -1,60 | 0,05480 | 0,05370 | 0,052 | 0,05155 | 0,05050 | 0,0494 | 0,04846 | 0,04746 | 0,04648 | 0,04551 |
| -1,50 | 0,06681 | 0,06552 | 0,06426 | 0,06301 | 0,06178 | 0,06057 | 0,05938 | 0,05821 | 0,05705 | 0,05592 |
| -1,40 | 0,0807 | 0,07927 | 0,07 | 0,07636 | 0,07493 | 0,07353 | 0,07215 | 0,07078 | 0,06944 | 0,06811 |
| -1,30 | 0,0968 | 0,09510 | 0,093 | 0,09176 | 0,0901 | 0,08851 | 0,08691 | 0,08534 | 0,08379 | 0,08226 |
| -1,20 | 0,1150 | 0,11314 | 0,1112 | 0,10935 | 0,10 | 0,1056 | 0,10383 | 0,10204 | 0,10027 | 0,09853 |
| -1,10 | 0,13567 | 0,13350 | 0,1313 | 0,12924 | 0,12714 | 0,1250 | 0,12302 | 0,12100 | 0,11900 | 0,11702 |
| -1,00 | 0,15866 | 0,15625 | 0,1538 | 0,15151 | 0,14917 | 0,1468 | 0,14457 | 0,14231 | 0,14007 | 0,13786 |
| -0,90 | 0,18406 | 0,18141 | 0,178 | 0,17619 | 0,17361 | 0,17106 | 0,16853 | 0,16602 | 0,16354 | 0,16109 |
| -0,80 | 0,21186 | 0,20897 | 0,2061 | 0,20327 | 0,20045 | 0,19766 | 0,19489 | 0,19215 | 0,18943 | 0,18673 |
| -0,70 | 0,24196 | 0,23885 | 0,235 | 0,23270 | 0,22965 | 0,22663 | 0,22363 | 0,22065 | 0,21770 | 0,21476 |
| -0,60 | 0,2742 | 0,27093 | 0,26 | 0,26435 | 0,26109 | 0,2578 | 0,2546 | 0,25143 | 0,24825 | 0,24510 |
| -0,50 | 0,3085 | 0,30503 | 0,3015 | 0,29806 | 0,29460 | 0,29116 | 0,28774 | 0,28434 | 0,28096 | 0,27760 |
| -0,40 | 0,34458 | 0,34090 | 0,3372 | 0,33360 | 0,32997 | 0,3263 | 0,32276 | 0,31918 | 0,31561 | 0,31207 |
| -0,30 | 0,38209 | 0,37828 | 0,37448 | 0,37070 | 0,36693 | 0,36317 | 0,35942 | 0,35569 | 0,35197 | 0,34827 |
| -0,20 | 0,4207 | 0,41683 | 0,4129 | 0,40905 | 0,40517 | 0,40129 | 0,39743 | 0,39358 | 0,38974 | 0,38591 |
| -0,10 | 0,46017 | 0,45620 | 0,4522 | 0,44828 | 0,44433 | 0,44038 | 0,43644 | 0,43251 | 0,42858 | 0,42465 |
| 0,00 | 0,5000 | 0,49601 | 0,492 | 0,48803 | 0,48405 | 0,48006 | 0,47608 | 0,47210 | 0,46812 | 0,46414 |
| 0,10 | 0,5398 | 0,53586 | 0,5318 | 0,52790 | 0,52392 | 0,5199 | 0,51595 | 0,51197 | 0,50798 | 0,50399 |
| 0,20 | 0,57926 | 0,57535 | 0,5714 | 0,56749 | 0,56356 | 0,55962 | 0,55567 | 0,55172 | 0,54776 | 0,54380 |
| 0,30 | 0,61791 | 0,61409 | 0,6102 | 0,60642 | 0,60257 | 0,59871 | 0,59483 | 0,59095 | 0,58706 | 0,58317 |
| 0,40 | 0,65542 | 0,65173 | 0,64803 | 0,64431 | 0,64058 | 0,63683 | 0,63307 | 0,62930 | 0,62552 | 0,62172 |
| 0,50 | 0,69146 | 0,68793 | 0,68439 | 0,68082 | 0,67724 | 0,67364 | 0,67003 | 0,66640 | 0,66276 | 0,65910 |
| 0,60 | 0,72575 | 0,72240 | 0,71904 | 0,71566 | 0,71226 | 0,70884 | 0,70540 | 0,70194 | 0,69847 | 0,69497 |
| 0,70 | 0,75804 | 0,75490 | 0,75175 | 0,74857 | 0,74537 | 0,74215 | 0,73891 | 0,73565 | 0,73237 | 0,72907 |
| 0,80 | 0,78814 | 0,78524 | 0,78230 | 0,77935 | 0,77637 | 0,77337 | 0,77035 | 0,76730 | 0,76424 | 0,76115 |
| 0,90 | 0,81594 | 0,81327 | 0,81057 | 0,80785 | 0,80511 | 0,80234 | 0,79955 | 0,79673 | 0,79389 | 0,79103 |


| 1,00 | 0,84134 | 0,83891 | 0,83646 | 0,83398 | 0,83147 | 0,82894 | 0,82639 | 0,82381 | 0,82121 | 0,81859 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1,10 | 0,86433 | 0,86214 | 0,85993 | 0,85769 | 0,85543 | 0,85314 | 0,85083 | 0,84849 | 0,84614 | 0,84375 |
| 1,20 | 0,88493 | 0,88298 | 0,88100 | 0,87900 | 0,87698 | 0,87493 | 0,87286 | 0,87076 | 0,86864 | 0,86650 |
| 1,30 | 0,90320 | 0,90147 | 0,89973 | 0,89796 | 0,89617 | 0,89435 | 0,89251 | 0,89065 | 0,88877 | 0,88686 |
| 1,40 | 0,91924 | 0,91774 | 0,91621 | 0,91466 | 0,91309 | 0,91149 | 0,90988 | 0,90824 | 0,90658 | 0,90490 |
| 1,50 | 0,93319 | 0,93189 | 0,93056 | 0,92922 | 0,92785 | 0,92647 | 0,92507 | 0,92364 | 0,92220 | 0,92073 |
| 1,60 | 0,94520 | 0,94408 | 0,94295 | 0,94179 | 0,94062 | 0,93943 | 0,93822 | 0,93699 | 0,93574 | 0,93448 |
| 1,70 | 0,95543 | 0,95449 | 0,95352 | 0,95254 | 0,95154 | 0,95053 | 0,94950 | 0,94845 | 0,94738 | 0,94630 |
| 1,80 | 0,96407 | 0,96327 | 0,96246 | 0,96164 | 0,96080 | 0,95994 | 0,95907 | 0,95818 | 0,95728 | 0,95637 |
| 1,90 | 0,97128 | 0,97062 | 0,96995 | 0,96926 | 0,96856 | 0,96784 | 0,96712 | 0,96638 | 0,96562 | 0,96485 |
| 2,00 | 0,97725 | 0,97670 | 0,97615 | 0,97558 | 0,97500 | 0,97441 | 0,97381 | 0,97320 | 0,97257 | 0,97193 |
| 2,10 | 0,98214 | 0,98169 | 0,98124 | 0,98077 | 0,98030 | 0,97982 | 0,97932 | 0,97882 | 0,97831 | 0,97778 |
| 2,20 | 0,98610 | 0,98574 | 0,98537 | 0,98500 | 0,98461 | 0,98422 | 0,98382 | 0,98341 | 0,98300 | 0,98257 |
| 2,30 | 0,98928 | 0,98899 | 0,98870 | 0,98840 | 0,98809 | 0,98778 | 0,98745 | 0,98713 | 0,98679 | 0,98645 |
| 2,40 | 0,99180 | 0,99158 | 0,99134 | 0,99111 | 0,99086 | 0,99061 | 0,99036 | 0,99010 | 0,98983 | 0,98956 |
| 2,50 | 0,99379 | 0,99361 | 0,99343 | 0,99324 | 0,99305 | 0,99286 | 0,99266 | 0,99245 | 0,99224 | 0,99202 |
| 2,60 | 0,99534 | 0,99520 | 0,99506 | 0,99492 | 0,99477 | 0,99461 | 0,99446 | 0,99430 | 0,99413 | 0,99396 |
| 2,70 | 0,99653 | 0,99643 | 0,99632 | 0,99621 | 0,99609 | 0,99598 | 0,99585 | 0,99573 | 0,99560 | 0,99547 |
| 2,80 | 0,99744 | 0,99736 | 0,99728 | 0,99720 | 0,99711 | 0,99702 | 0,99693 | 0,99683 | 0,99674 | 0,99664 |
| 2,90 | 0,99813 | 0,99807 | 0,99801 | 0,99795 | 0,99788 | 0,99781 | 0,99774 | 0,99767 | 0,99760 | 0,99752 |
| 3,00 | 0,99865 | 0,99861 | 0,99856 | 0,99851 | 0,99846 | 0,99841 | 0,99836 | 0,99831 | 0,99825 | 0,99819 |
| 3,10 | 0,99903 | 0,99900 | 0,99896 | 0,99893 | 0,99889 | 0,99886 | 0,99882 | 0,99878 | 0,99874 | 0,99869 |

## APPENDIX H

Table of critical values for the Liliefors test for normality

| Sample Size <br> ( N ) | Significance Level ( $\alpha$ ) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0,01 | 0,05 | 0,10 | 0,15 | 0,20 |
| 1 | 1,031 | 0,866 | 0,805 | 0,768 | 0,736 |
| 2 | 0,729 | 0,612 | 0,569 | 0,543 | 0,736 |
| 3 | 0,595 | 0,500 | 0,465 | 0,443 | 0,736 |
| 4 | 0,516 | 0,433 | 0,403 | 0,384 | 0,736 |
| 5 | 0,461 | 0,387 | 0,360 | 0,343 | 0,736 |
| 6 | 0,421 | 0,354 | 0,329 | 0,314 | 0,736 |
| 7 | 0,390 | 0,327 | 0,304 | 0,290 | 0,736 |
| 8 | 0,365 | 0,306 | 0,285 | 0,272 | 0,736 |
| 9 | 0,344 | 0,289 | 0,268 | 0,256 | 0,736 |
| 10 | 0,326 | 0,274 | 0,255 | 0,243 | 0,736 |
| 11 | 0,311 | 0,261 | 0,243 | 0,232 | 0,736 |
| 12 | 0,298 | 0,250 | 0,232 | 0,222 | 0,736 |
| 13 | 0,286 | 0,240 | 0,223 | 0,213 | 0,736 |
| 14 | 0,276 | 0,231 | 0,215 | 0,205 | 0,736 |
| 15 | 0,266 | 0,224 | 0,208 | 0,198 | 0,736 |
| 16 | 0,258 | 0,217 | 0,201 | 0,192 | 0,736 |
| 17 | 0,250 | 0,210 | 0,195 | 0,186 | 0,736 |
| 18 | 0,243 | 0,204 | 0,190 | 0,181 | 0,736 |
| 19 | 0,237 | 0,199 | 0,185 | 0,176 | 0,736 |
| 20 | 0,231 | 0,194 | 0,180 | 0,172 | 0,736 |
| 21 | 0,225 | 0,189 | 0,176 | 0,168 | 0,736 |
| 22 | 0,220 | 0,185 | 0,172 | 0,164 | 0,736 |
| 23 | 0,215 | 0,181 | 0,168 | 0,160 | 0,736 |
| 24 | 0,210 | 0,177 | 0,164 | 0,157 | 0,736 |
| 25 | 0,206 | 0,173 | 0,161 | 0,154 | 0,736 |
| 26 | 0,202 | 0,170 | 0,158 | 0,151 | 0,736 |
| 27 | 0,198 | 0,167 | 0,155 | 0,148 | 0,736 |
| 28 | 0,195 | 0,164 | 0,152 | 0,145 | 0,736 |
| 29 | 0,191 | 0,161 | 0,149 | 0,143 | 0,736 |
| 30 | 0,188 | 0,158 | 0,147 | 0,140 | 0,736 |
| > 30 | $\frac{1,031}{\sqrt{n}}$ | $\frac{0,866}{\sqrt{n}}$ | $\frac{0,805}{\sqrt{n}}$ | $\frac{0,768}{\sqrt{n}}$ | $\frac{0,736}{\sqrt{n}}$ |

## APPENDIX I

> Test for Homogeneity of Variance

Test for Homogeneity of Variance of Pre-test in Experimental and Control Group

| No. | Pre-test in Experimental (X) | Pre-test Control (Y) | $\mathrm{X}^{2}$ | $Y^{2}$ | XY |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 50 | 76 | 2500 | 5776 | 3800 |
| 2 | 68 | 50 | 4624 | 2500 | 3400 |
| 3 | 60 | 39 | 3600 | 1521 | 2340 |
| 4 | 73 | 69 | 5329 | 4761 | 5037 |
| 5 | 60 | 54 | 3600 | 2916 | 3240 |
| 6 | 78 | 57 | 6084 | 3249 | 4446 |
| 7 | 28 | 75 | 784 | 5625 | 2100 |
| 8 | 55 | 53 | 3025 | 2809 | 2915 |
| 9 | 65 | 57 | 4225 | 3249 | 3705 |
| 10 | 67 | 40 | 4489 | 1600 | 2680 |
| 11 | 75 | 40 | 5625 | 1600 | 3000 |
| 12 | 66 | 70 | 4356 | 4900 | 4620 |
| 13 | 65 | 55 | 4225 | 3025 | 3575 |
| 14 | 69 | 47 | 4761 | 2209 | 3243 |
| 15 | 71 | 72 | 5041 | 5184 | 5112 |
| 16 | 62 | 60 | 3844 | 3600 | 3720 |
| 17 | 60 | 62 | 3600 | 3844 | 3720 |
| 18 | 72 | 67 | 5184 | 4489 | 4824 |
| 19 | 85 | 93 | 7225 | 8649 | 7905 |
| 20 | 70 | 60 | 4900 | 3600 | 4200 |
| 21 | 52 | 65 | 2704 | 4225 | 3380 |
| 22 | 0 | 40 | 0 | 1600 | 0 |
| 23 | 0 | 65 | 0 | 4225 | 0 |
| 24 | 0 | 85 | 0 | 7225 | 0 |
|  | $\mathrm{X}=1351$ | $\sum \mathrm{Y}=1451$ | $\sum \mathrm{X}^{2}=89725$ | $\sum \mathrm{Y}^{2}=92381$ | $\sum X Y=80962$ |
| $\mathrm{F}_{\mathrm{o}}=2,93$ <br> $\mathrm{F}_{\mathrm{t}}=4,30(\mathrm{df} 1=1 ; \mathrm{df} 2=22 ; \alpha=0,05)$ <br> Homogenous Variance of Sample ( $\mathrm{F}_{\text {observed }}<\mathrm{F}_{\text {table }}$ ) |  |  |  |  |  |

Test for homogeneity of pre-test in experimental group and control group used following formula:

$$
\begin{aligned}
& \text { Where: } \begin{array}{c}
\sum x^{2}=89725 \\
\sum x=1351 \\
n=24
\end{array} \\
& \begin{aligned}
& S_{\mathrm{x}}^{2}= \frac{n \sum x^{2}-\left(\sum x\right)^{2}}{n(n-1)} \\
&= \frac{24 \times 89725-(1351)^{2}}{24(24-1)} \\
&= \frac{2153400-1825201}{552} \\
&= 552 \\
&=594,56(\text { The Highest variance })
\end{aligned}
\end{aligned}
$$

## Where:

$$
\begin{aligned}
& \Sigma y^{2}=92381 \\
& \Sigma y=1451 \\
& n=24
\end{aligned}
$$

$$
\mathrm{S}_{\mathrm{y}}{ }^{2}=\frac{n \sum y^{2}-\left(\sum y\right)^{2}}{n(n-1)}
$$

$$
=\frac{24 \times 92381-(1451)^{2}}{24(24-1)}
$$

$$
=\frac{2217144-2105401}{552}
$$

$$
=\frac{111743}{552}
$$

$$
=202,43 \text { (The lowest variance) }
$$

$\mathrm{F}_{\text {observed }}=\frac{\text { The highest variance }}{\text { The lowest variance }} \quad=\frac{594,56}{202,43}=2,93$

$$
F_{\text {table }}=4,30
$$

$\mathrm{df} 1=\mathrm{k}-1$
$\mathrm{df} 2=\mathrm{n}-\mathrm{k}$
Where:
df1 $=$ Numerator of first degree of freedom
df2 $=$ Denominator of second degree of freedom
$\mathrm{k}=$ Number of variable
$\mathrm{n}=$ Number of sample
$\mathrm{df} 1=2-1=1$
$\mathrm{df} 2=24-2=22$
$\mathrm{F}_{\mathrm{t}}=4,30(\mathrm{df} 1=1 ; \mathrm{df} 2=22 ; \alpha=0,05)$
F. Distribution ( $\alpha=0.05$ in the Right Tail)

|  | Numerator Degrees of Freedom |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 20 | 4. 512 | 3.4928 | 3.0984 | 2.8661 | 2.7109 | 2.5990 | 2.5140 | 2.4471 | 2.3928 |
| 21 | 4. 248 | 3.4668 | 3.0725 | 2.8401 | 2.6848 | 2.5727 | 2.4876 | 2.4205 | 2.3660 |
| 22 | 4.3009 | 3.4434 | 3.0491 | 2.8167 | 2.6613 | 2.5491 | 2.4638 | 2.3965 | 2.3419 |
| 23 | 4.2793 | 3.4221 | 3.0280 | 2.7955 | 2.6400 | 2.5277 | 2.4422 | 2.3748 | 2.3201 |
| 24 | 4.2597 | 3.4028 | 3.0088 | 2.7763 | 2.6207 | 2.5082 | 2.4226 | 2.3551 | 2.3002 |

## APPENDIX J

F Distribution Table

F- Distribution ( $\alpha=0.05$ in the Right Tail)


## APPENDIX K

1. The calculation of t-test for Control Group

| No. | Initial Names | Pre-Test ( $\mathbf{T}_{1}$ ) | Post-Test ( $\mathrm{T}_{2}$ ) | $\begin{gathered} d \\ \left(\mathbf{T}_{2}-\mathbf{T}_{1}\right) \end{gathered}$ | $\underset{(\mathrm{d}-\overline{\mathrm{X}} 2)}{\mathrm{d} 2}$ | $\begin{gathered} d 2^{2} \\ (\mathrm{~d}-\overline{\mathrm{X}} 2)^{2} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | AHN | 76 | 78 | 2 | -1,83 | 3,3489 |
| 2 | AHS | 50 | 60 | 10 | 6,17 | 38,0689 |
| 3 | ASS | 39 | 45 | 6 | 2,17 | 4,7089 |
| 4 | CC | 69 | 71 | 2 | -1,83 | 3,3489 |
| 5 | FA | 54 | 57 | 3 | -0,83 | 0,6889 |
| 6 | MAA | 57 | 57 | 0 | -3,83 | 14,6689 |
| 7 | MAP | 75 | 58 | -17 | -20,83 | 433,8889 |
| 8 | MFR | 53 | 55 | 2 | -1,83 | 3,3489 |
| 9 | MFS | 57 | 61 | 4 | 0,17 | 0,0289 |
| 10 | MHRP | 40 | 50 | 10 | 6,17 | 38,0689 |
| 11 | MR | 40 | 63 | 23 | 19,17 | 367,4889 |
| 12 | MRF | 70 | 63 | -7 | -10,83 | 117,2889 |
| 13 | MRTN | 55 | 74 | 19 | 15,17 | 230,1289 |
| 14 | NAA | 47 | 59 | 12 | 8,17 | 66,7489 |
| 15 | R | 72 | 75 | 3 | -0,83 | 0,6889 |
| 16 | RKA | 60 | 63 | 3 | -0,83 | 0,6889 |
| 17 | RNR | 62 | 58 | -4 | -7,83 | 61,3089 |
| 18 | SA | 67 | 70 | 3 | -0,83 | 0,6889 |
| 19 | SH | 93 | 86 | -7 | -10,83 | 117,2889 |
| 20 | SK | 60 | 68 | 8 | 4,17 | 17,3889 |
| 21 | SKD | 65 | 67 | 2 | -1,83 | 3,3489 |
| 22 | VS | 40 | 50 | 10 | 6,17 | 38,0689 |
| 23 | WKA | 65 | 66 | 1 | -2,83 | 8,0089 |
| 24 | ZZK | 85 | 89 | 4 | 0,17 | 0,0289 |
|  | Total | $\Sigma_{T 1}=1451$ | $\Sigma_{\text {T2 }}=1543$ | $\Sigma_{\text {d }}=92$ | $\Sigma_{\text {d2 }}=0,08$ | $\Sigma_{\mathrm{d} 2}{ }^{2}=1569,33$ |

$$
\overline{\mathrm{X}} 2=\frac{\Sigma d}{n 2}=\frac{92}{24}=3,83
$$

2. The calculation of t -test for Experimental Group

| No. | Initial <br> Names | Pre-Test <br> ( $\mathrm{T}_{1}$ ) | Post-Test ( $\mathrm{T}_{2}$ ) | $\begin{gathered} \text { D } \\ \left(\mathbf{T}_{2}-\mathrm{T}_{1}\right) \end{gathered}$ | $\underset{(\mathrm{d}-\overline{\mathrm{X}} 1)}{\mathrm{d} 1}$ | $\begin{gathered} \mathrm{d} \mathbf{1}^{2} \\ (\mathrm{~d}-\overline{\mathbf{X}} \mathbf{1})^{2} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | AF | 50 | 77 | 27 | 12,29 | 151,0441 |
| 2 | BTD | 68 | 67 | -1 | -15,71 | 246,8041 |
| 3 | FAP | 60 | 77 | 17 | 2,29 | 5,2441 |
| 4 | FR | 73 | 79 | 6 | -8,71 | 75,8641 |
| 5 | FAH | 60 | 62 | 2 | -12,71 | 161,5441 |
| 6 | LD | 78 | 86 | 8 | -6,71 | 45,0241 |
| 7 | MF | 28 | 76 | 48 | 33,29 | 1108,224 |
| 8 | MIP | 55 | 67 | 12 | -2,71 | 7,3441 |
| 9 | MR | 65 | 76 | 11 | -3,71 | 13,7641 |
| 10 | MTP | 67 | 81 | 14 | -0,71 | 0,5041 |
| 11 | PH | 75 | 80 | 5 | -9,71 | 94,2841 |
| 12 | RA | 66 | 85 | 19 | 4,29 | 18,4041 |
| 13 | RAR | 65 | 80 | 15 | 0,29 | 0,0841 |
| 14 | RK | 69 | 79 | 10 | -4,71 | 22,1841 |
| 15 | RW | 71 | 77 | 6 | -8,71 | 75,8641 |
| 16 | SWW | 62 | 78 | 16 | 1,29 | 1,6641 |
| 17 | UAS | 60 | 80 | 20 | 5,29 | 27,9841 |
| 18 | UN | 72 | 88 | 16 | 1,29 | 1,6641 |
| 19 | VP | 85 | 90 | 5 | -9,71 | 94,2841 |
| 20 | WA | 70 | 83 | 13 | -1,71 | 2,9241 |
| 21 | WY | 52 | 79 | 27 | 12,29 | 151,0441 |
|  | Total | $\Sigma_{\text {T1 }}=1351$ | $\Sigma_{\text {T2 }}=1647$ | $\Sigma_{\text {d }}=309$ | $\Sigma_{\text {d1 }}=-12,91$ | $\Sigma_{\text {d1 }}{ }^{2}=2305,75$ |

$\overline{\mathrm{X}} 1=\frac{\Sigma d}{n 1}=\frac{309}{21}=14,71$
Thus, from the data it can be known that:

$$
\begin{array}{ll}
\overline{\mathrm{X}} 1 & =14,71 \\
\overline{\mathrm{X}} 2 & =3,83 \\
\Sigma_{\mathrm{d} 1}{ }^{2} & =2305,75 \\
\Sigma_{\mathrm{d} 2}{ }^{2} & =1569,33 \\
n 1 & =21 \\
n 2 & =24
\end{array}
$$

Further, the researcher applied t -test formula as follows:
$t=\frac{\overline{\mathrm{x}} 1-\overline{\mathrm{X}} 2}{\sqrt{\left(\frac{\sum d 1^{2}+\sum d 2^{2}}{(n 1+n 2)-2}\right)\left(\frac{1}{n 1}+\frac{1}{n 2}\right)}}$
$t=\frac{14,71-3,83}{\sqrt{\left(\frac{2305,75+1569,33}{(21+24)-2}\right)\left(\frac{1}{21}+\frac{1}{24}\right)}}$
$t=\frac{11,38}{\sqrt{\left(\frac{3875,08}{43}\right)\left(\frac{5}{56}\right)}}=\frac{11,38}{\sqrt{(90,12)(0,09)}}$
$t=\frac{11,38}{\sqrt{2,84}}=\frac{11,38}{1,68}$
$t=6,77$

The calculation of t -table:
$\mathrm{df} \quad=(n 1+n 2)-k$
Where:
$\mathrm{df}=$ degree of freedom
$\mathrm{k}=$ Independent variable + dependent variable
$\mathrm{df}=(21+24)-2$
$\mathrm{df}=43$
df43; $\alpha=0,05, t_{\text {table }}=2,017$

| Degree of Freedom | Two-tails | 0,20 | 0,10 | 0,05 | 0,02 | 0,01 | 0,002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | One-tail | 0,10 | 0,05 | 0,025 | 0,01 | 0,005 | 0,001 |
|  | $\gamma$ - | $\sim$ | 1 |  |  |  |  |
| 42 |  | 1,302 | 1,682 | 2,018 | 2,418 | 2,698 | 3,296 |
| 43 |  | 1,302 | 1,681 | 2,017 | 2,416 | 2,695 | 3,291 |
| 44 |  | 1,301 | 1,680 | 2,015 | 2,414 | 2,692 | 3,286 |

$t$-observed $>t$-table $=\mathbf{6 , 7 7}>\mathbf{2 , 0 1 7}$

## APPENDIX L

Table of t -Distribution

| SIGNIFICANCE LEVEL |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Degree of freedom | Two-tails | 0,20 | 0,10 | 0,05 | 0,02 | 0,01 | 0,002 |
|  | One-tail | 0,10 | 0,05 | 0,025 | 0,01 | 0,005 | 0,001 |
| 1 |  | 3,078 | 6,314 | 12,706 | 31,821 | 63,657 | 318,309 |
| 2 |  | 1,886 | 2,920 | 4,303 | 6,965 | 9,925 | 22,327 |
| 3 |  | 1,638 | 2,353 | 3,182 | 4,541 | 5,841 | 10,215 |
| 4 |  | 1,533 | 2,132 | 2,776 | 3,747 | 4,604 | 7,173 |
| 5 |  | 1,476 | 2,015 | 2,571 | 3,365 | 4,032 | 5,893 |
| 6 |  | 1,440 | 1,943 | 2,447 | 3,143 | 3,707 | 5,208 |
| 7 |  | 1,415 | 1,895 | 2,365 | 2,998 | 3,499 | 4,785 |
| 8 |  | 1,397 | 1,860 | 2,306 | 2,896 | 3,355 | 4,501 |
| 9 |  | 1,383 | 1,833 | 2,262 | 2,821 | 3,250 | 4,297 |
| 10 |  | 1,372 | 1,812 | 2,228 | 2,764 | 3,169 | 4,144 |
| 11 |  | 1,363 | 1,796 | 2,201 | 2,718 | 3,106 | 4,025 |
| 12 |  | 1,356 | 1,782 | 2,179 | 2,681 | 3,055 | 3,930 |
| 13 |  | 1,350 | 1,771 | 2,160 | 2,650 | 3,012 | 3,852 |
| 14 |  | 1,345 | 1,761 | 2,145 | 2,624 | 2,977 | 3,787 |
| 15 |  | 1,341 | 1,753 | 2,131 | 2,602 | 2,947 | 3,733 |
| 16 |  | 1,337 | 1,746 | 2,120 | 2,583 | 2,921 | 3,686 |
| 17 |  | 1,333 | 1,740 | 2,110 | 2,567 | 2,898 | 3,646 |
| 18 |  | 1,330 | 1,734 | 2,101 | 2,552 | 2,878 | 3,610 |
| 19 |  | 1,328 | 1,729 | 2,093 | 2,539 | 2,861 | 3,579 |
| 20 |  | 1,325 | 1,725 | 2,086 | 2,528 | 2,845 | 3,552 |
| 21 |  | 1,323 | 1,721 | 2,080 | 2,518 | 2,831 | 3,527 |
| 22 | - | 1,321 | 1,717 | 2,074 | 2,508 | 2,819 | 3,505 |
| 23 |  | 1,319 | 1,714 | 2,069 | 2,500 | 2,807 | 3,485 |
| 24 |  | 1,318 | 1,711 | 2,064 | 2,492 | 2,797 | 3,467 |
| 25 |  | 1,316 | 1,708 | 2,060 | 2,485 | 2,787 | 3,450 |
| 26 |  | 1,315 | 1,706 | 2,056 | 2,479 | 2,779 | 3,435 |
| 27 |  | 1,314 | 1,703 | 2,052 | 2,473 | 2,771 | 3,421 |
| 28 |  | 1,313 | 1,701 | 2,048 | 2,467 | 2,763 | 3,408 |
| 29 |  | 1,311 | 1,699 | 2,045 | 2,462 | 2,756 | 3,396 |
| 30 |  | 1,310 | 1,697 | 2,042 | 2,457 | 2,750 | 3,385 |
| 31 |  | 1,309 | 1,696 | 2,040 | 2,453 | 2,744 | 3,375 |
| 32 |  | 1,309 | 1,694 | 2,037 | 2,449 | 2,738 | 3,365 |
| 33 |  | 1,308 | 1,692 | 2,035 | 2,445 | 2,733 | 3,356 |


| 34 |  | 1,307 | 1,691 | 2,032 | 2,441 | 2,728 | 3,348 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 35 |  | 1,306 | 1,690 | 2,030 | 2,438 | 2,724 | 3,340 |
| 36 |  | 1,306 | 1,688 | 2,028 | 2,434 | 2,719 | 3,333 |
| 37 |  | 1,305 | 1,687 | 2,026 | 2,431 | 2,715 | 3,326 |
| 38 |  | 1,304 | 1,686 | 2,024 | 2,429 | 2,712 | 3,319 |
| 39 |  | 1,304 | 1,685 | 2,023 | 2,426 | 2,708 | 3,313 |
| 40 |  | 1,303 | 1,684 | 2,021 | 2,423 | 2,704 | 3,307 |
| 41 |  | 1,303 | 1,683 | 2,020 | 2,421 | 2,701 | 3,301 |
| 42 |  | 1,302 | 1,682 | 2,018 | 2,418 | 2,698 | 3,296 |
| 43 |  | 1,302 | 1,681 | 2,017 | 2,416 | 2,695 | 3,291 |
| 44 |  | 1,301 | 1,680 | 2,015 | 2,414 | 2,692 | 3,286 |
| 45 |  | 1,301 | 1,679 | 2,014 | 2,412 | 2,690 | 3,281 |
| 46 |  | 1,300 | 1,679 | 2,013 | 2,410 | 2,687 | 3,277 |
| 47 |  | 1,300 | 1,678 | 2,012 | 2,408 | 2,685 | 3,273 |
| 48 |  | 1,299 | 1,677 | 2,011 | 2,407 | 2,682 | 3,269 |
| 49 |  | 1,299 | 1,677 | 2,010 | 2,405 | 2,680 | 3,265 |
| 50 |  | 1,299 | 1,676 | 2,009 | 2,403 | 2,678 | 3,261 |

## APPENDIX M

## Lesson Plan

## LESSON PLAN FOR EXPERIMENTAL GROUP

School Name<br>: SMA PANCA BUDI Medan<br>Subject<br>: English<br>Class/Semester<br>: X/1<br>Learning Topic<br>: Recount Text<br>Time Allocation<br>: $\mathbf{2} \mathbf{x} \mathbf{4 5}$ Minutes ( $\mathbf{1}$ Meeting)<br>Meeting<br>: $\mathbf{1}^{\text {st }}$ Meeting

## A. Core Competence (KI)

KI 1 Appreciating and practicing the teachings of their religion.
KI 2 Appreciating and practicing honest behavior, discipline, responsibility, caring (mutual assistance, cooperation, tolerance, peace), polite, responsive and pro-active, and showing attitude as part of the solution to various problems in interacting effectively with the social environment, nature and in positioning ourselves as a reflection of the nation in in world relationships.

KI 3 Understanding applying analyzing the factual knowledge conceptual, procedural, based on his curiosity about science technology arts culture, and humanities with insight into humanity national state and civilization related to causes of phenomena and events as well as applying procedural knowledge in the specific field of study according to their talents and interests to solve the problem.

KI 4 Processing, reasoning and serving in the realm of a concrete and abstract domains associated with the development of the school learning independently and able to use the method according to the rules of science.

## B. Basic Competence (KD)

3.9 Analyzing social functions, text structure, and linguistic elements in the simple recount text about experience / occurrence / event, according to the context of its use.
4.14 Composing oral and written simple recount text about experiences / activities / occurrence / event, by noticing the social function, the structure of the text, and linguistic elements, correctly and in accordance with the context.

## C. Indicator

1. Identify the social function, text/generic structure of recount text, linguistic elements of simple recount text about experiences / events / occurrence / activities according to context of its use.
2. Responding the meaning of simple recount text about experiences / events / occurrence / activities according to context of its use.
3. Composing oral and written simple recount text based on its context.

## D. Teaching Objectives

At the end of the learning process, it is hoped that:

1. Students have capability to show responsibility behavior, caring, cooperation, and peace-loving in performing functional communication.
2. Students have capability to show seriousness in learning English related to simple recount text about experience / occurrence / event, according to the context of its use.
3. Students have capability to identify the social function, the generic structures, and linguistics elements of a recount text.
4. Students have capability to read and comprehend the meaning of oral and written recount text.
5. Students have capability to answer questions related to the recount text.
6. Students have capability to compose oral and written simple recount text about their experience / occurrence / event, according to the context of its use.

## E. Teaching Materials

## Recount Text

## 1. Definition

Recount text is defined as one of text types which is made with purpose to inform about activity in past. In simple word, Recount is a text genre which is made in order to inform about activities in past time.
2. Generic structures of a descriptive text are :
a. Orientation: it is an element of text consist of topic or some information will be delivered to the reader, meanwhile the function of orientation is to be an eye catching for readers and focusing their attention
b. Record of events: it contains of events or activities in the past were told chronologically
c. Re-orientation: it is contain of conclusion from what have been told in record of events
3. Grammatical features
a. Using verb in form of past tense, past perfect tense, past continuous tense.
b. Using verbs of doing on predicate, such as: went, took, saw, got, etc. that describe activity.
c. Using adjective to show personal attitude, for instance:

- It was wonderful
- We enjoy it very much
- It was fun, etc.

Example of recount text:

| Generic Structure | Text |
| :--- | :--- |
| Visiting Yogyakarta |  |
| Orientation | Some friends and I went to Yogyakarta for a vacation <br> last month. It was fun and we had a wonderful time <br> there. |

$\begin{array}{|c|l|}\hline & \begin{array}{l}\text { We had our vacation soon after the school exam was } \\ \text { over. We chose to go to Yogyakarta because we } \\ \text { thought that the place was nice and the people were } \\ \text { friendly in addition, some friends have told me that it } \\ \text { has a lot of places of interests. }\end{array} \\$\cline { 2 - 4 } <br> Pramex train that departed from Solo at 08.00. We <br> got off in Yogyakarta Railway Station, and headed to <br> one of the Food Stalls in Malioboro for some food <br> and drinks. We were surprised to see that everything <br> in Malioboro has been arranged well now.\end{array}$\left.\} \begin{array}{l}\text { Record of events } \\ \text { After we had a walk around the place for a few } \\ \text { minutes, we took a taxi and headed to one the most } \\ \text { famous beaches, Parangteritis beach. On the beach, } \\ \text { we really enjoyed the beauty of the waves reaching } \\ \text { the seashore. We stayed there for several hours, } \\ \text { before finally we decided to be back to Solo. }\end{array}\right\}$

## F. Teaching Strategy / Method / Approach

1. Question-answer relationship strategy
2. Lecture Method, small group discussion
3. Scientific approach

## G. Source and Media of Teaching

1. Source : Textbook
2. Media : Laptop, LCD TV, and Undubbed Video

## H. Teaching and Learning Process

$1^{\text {st }}$ Meeting

1. Opening activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| - Greeting the student and check the attendance list. | - Responding the greeting | 10' |
| - Apperception ( students are asked their understanding about recount text) | - Answering the question |  |
| - Motivating the students in learning writing recount. | - Listening to the teacher motivation |  |
| - The teacher explains the topic will be discussed. It will be started by talking about their past experience before explaining the recount text will be given | - telling their past experiences |  |

2. Main activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| a. Observing <br> - Asking students to read their book about recount text | - Reading text book about recount text | 5 |
| - Showing some example of recount text about holiday | - Noticing the example |  |
| b. Questioning <br> - Giving chance to students to ask about information they don't get clearly | - asking some information | 10' |
| - Asking students to write down some questions from their book | - writing down their questions in their own book |  |
| c. Experimenting <br> - Examining students' comprehension by exchange their question to their seatmate and answer the question they got. | - Trying to answer the question |  |
| - Giving material addition from other sources about communicative purpose, rhetorical structure, grammatical patterns or language features and giving other example | - Listening carefully to the teacher and receiving about how to make a personal recount text based on communicative purpose, rhetorical structure, grammar | 15, |


|  | patterns or language features and giving other example |  |
| :---: | :---: | :---: |
| d. Associating <br> - Asking students to make a small group. Then, imagining and collecting their past experience become a good recount text | - Collecting past experiences on each group together. Then, writing a recount text | 10' |
| - Asking students to write a recount text about their real experiences / events in the past based on the example is given | - Writing down the experiences in the past in a good recount text |  |
| e. Communicating <br> - Asking for each group to read or presenting the recount text about experiences/events | - One representative of each group presenting the text they made | 25 |
| - Giving chance to students to ask about how to recount the past experiences | - Giving questions related to recount the past experiences |  |

## 3. Closing Activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| - Giving guidance to conclude the learning result | - By teacher's guidance conclude the result of learning |  |
| - Asking students to give opinion about the learning have been done | - Giving opinion about learning have been done |  |
| - Giving self-activity to write a recount text about self-activity or experiences in the past | - Doing assignment to write recount text about activities in the past | 15, |
| - Delivering next activity plan about using undubbed video to teach students in composing oral or written recount text | - Listening to teacher explanation about using undubbed to teach how to compose oral or written recount text for next meeting |  |

## I. Assessment

1. Recount Writing Assessment Rubric

|  | Score |  |  |
| :--- | :--- | :---: | :---: |
|  | Generic Structure |  |  |
| A. Orientation | 10 | 70 |  |
|  | 2. Events |  |  |
|  | 3. Reorientation | 10 |  |
|  | Language Features | 20 |  |
|  | 1. Tense |  |  |
|  | 2. Punctuation | 10 |  |
| B. | Formatting | 1. Length | 5 |

## English Teacher



MEIUNA KHAIRANI, S.PC.
NIP.


## Lesson Plan

## LESSON PLAN FOR EXPERIMENTAL GROUP

School Name
Subject
Class/Semester
Learning Topic
Time Allocation
Meeting
: SMA PANCA BUDI Medan
: English
: X/1
: Recount text
: $2 \times 45$ Minutes (1 Meeting)
$: 2^{\text {nd }}$ Meeting

## J. Core Competence (KI)

KI 1 Appreciating and practicing the teachings of their religion.
KI 2 Appreciating and practicing honest behavior, discipline, responsibility, caring (mutual assistance, cooperation, tolerance, peace), polite, responsive and pro-active, and showing attitude as part of the solution to various problems in interacting effectively with the social environment, nature and in positioning ourselves as a reflection of the nation in in world relationships.

KI 3 Understanding applying analyzing the factual knowledge conceptual, procedural, based on his curiosity about science technology arts culture, and humanities with insight into humanity national state and civilization related to causes of phenomena and events as well as applying procedural knowledge in the specific field of study according to their talents and interests to solve the problem.
KI 4 Processing, reasoning and serving in the realm of a concrete and abstract domains associated with the development of the school learning independently and able to use the method according to the rules of science.

## B. Basic Competence (KD)

3.9 Analyzing social functions, text structure, and linguistic elements in the simple recount text about experience / occurrence / event, according to the context of its use.
4.14 Composing oral and written simple recount text about experiences / activities / occurrence / event, by noticing the social function, the structure of the text, and linguistic elements, correctly and in accordance with the context.

## C. Indicator

4. Identify the social function, text/generic structure of recount text, linguistic elements of simple recount text about experiences / events / occurrence / activities according to context of its use.
5. Responding the meaning of simple recount text about experiences / events / occurrence / activities according to context of its use.
6. Composing oral and written simple recount text based on its context.

## D. Teaching Objectives

At the end of the learning process, it is hoped that:
7. Students have capability to show responsibility behavior, caring, cooperation, and peace-loving in performing functional communication.
8. Students have capability to show seriousness in learning English related to simple recount text about experience / occurrence / event, according to the context of its use.
9. Students have capability to identify the social function, the generic structures, and linguistics elements of a recount text.
10. Students have capability to read and comprehend the meaning of oral and written recount text.
11. Students have capability to answer questions related to the recount text.
12. Students have capability to compose oral and written simple recount text about their experience / occurrence / event, according to the context of its use.

## E. Teaching Material

## Recount Text

4. Definition

Recount text is defined as one of text types which is made with purpose to inform about activity in past. In simple word, Recount is a text genre which is made in order to inform about activities in past time.
5. Generic structures of a descriptive text are :
d. Orientation: it is an element of text consist of topic or some information will be delivered to the reader, meanwhile the function of orientation is to be an eye catching for readers and focusing their attention
e. Record of events: it contains of events or activities in the past were told chronologically
f. Re-orientation: it is contain of conclusion from what have been told in record of events
6. Language features
d. Using verb in form of past tense, past perfect tense, past continuous tense.
e. Using verbs of doing on predicate, such as: went, took, saw, got, etc. that describe activity.
f. Using adjective to show personal attitude, for instance:

- It was wonderful
- We enjoy it very much
- It was fun, etc.

7. Using undubbed video

Undubbed is used in delivering the material to help the students get better illustration in understanding the recount text. Below is the screenshot of the example of undubbed video.

The example of undubbed video
The screenshot of the undubbed video


| No. | Screenshot of recount undubbed video |
| :---: | :--- |
| 1. | There were a boy, he had a school holiday |
| 2. | He woke up early morning to go to Erakor island with his <br> friends |
| 3. | On there, he had many activities. He was taught to make <br> a beautiful handicraft |
| 4. | Then, at the noon he and his friends prepared a <br> swimming kit after that we go to swim |
| 5. | At the night we saw a fire attraction, It was wonderful |
| 6. | Finally, at the next morning we went home. It was a great <br> holiday ever |

F. Teaching Strategy / Method / Approach
4. Question-answer relationship strategy
5. Lecture Method, small group discussion
6. Scientific approach
G. Source and Media of Teaching
3. Source: Textbook
4. Media : Laptop, LCD TV, and Undubbed Video

## H. Teaching and Learning Process

$1^{\text {st }}$ Meeting

1. Opening activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| - Greeting the student and check the attendance list. | - Responding the greeting | 10' |
| - Apperception ( students are asked their understanding about recount text) | - Answering the question |  |
| - Motivating the students in learning writing recount. | - Listening to the teacher motivation |  |
| - The teacher explains the topic will be discussed about how to compose a recount text related to their past experience before explaining of the recount text will be given | - Noticing the teacher explanation |  |

2. Main activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| a. Observing - Asking students to read their book about recount text | - Reading text book about recount text |  |
| - The teacher models a recount text by showing some undubbed videos about recount to stimulate students' creativity. Then, teacher narrate the story. | - Watching the undubbed video carefully and listening to teacher narration | 10' |
| b. Questioning <br> - Giving chance to students to ask about information they don't get clearly | - asking some information | 10' |
| - Asking students to write down some questions from their book | - writing down their questions in their own book |  |
| f. Experimenting <br> - Examining students' comprehension by exchange their question to their seatmate and answer the question they got. | - Trying to answer the question |  |
| - Giving material addition from other sources about communicative purpose, rhetorical structure, grammatical patterns or language features related to the undubbed video | - Listening carefully to the teacher and receiving about how to make a personal recount text based on communicative purpose, rhetorical structure, grammatical patterns or language features related to the undubbed video | 15' |
| g. Associating <br> - Asking students to make a small group. Then teacher plays an undubbed video | - Each group watch the video carefully |  |
| - Asking students to write a recount text about experiences or events contained in the undubbed video is given | - Writing down the experiences or events based on the undubbed video is given | 10' |
| h. Communicating - Asking for each group to read or presenting the recount text has been | - One $\left.\begin{array}{l}\text { representative } \\ \text { students of the each }\end{array}\right)$ | $20^{\prime}$ |


| written | group presents the text <br> they made |
| :--- | :--- | :--- |
| - Giving chance to students to ask <br> question about how to recount the <br> past experiences well | - Giving questions related <br> to recount the past <br> experiences |

4. Closing Activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| - Giving guidance to conclude the learning result | - By teacher's guidance, concluding the result of learning | 15' |
| - Asking students to give opinion about the learning have been done | - Giving opinion about learning have been done |  |
| - Giving self-activity to write a recount text about self-activity or experiences in the past | - Doing assignment to write recount text about activities in the past |  |
| - Delivering next activity plan about using undubbed video to teach students to have good writing recount text whether oral or written | - Listening to teacher explanation about using undubbed to enhance writing recount skill |  |

I. Assessment
2. Recount Writing Assessment Rubric

Assessment Rubric

| A. | Score |  |  |
| :---: | :---: | :---: | :---: |
|  | Generic Structure |  |  |
|  | 1. Orientation | 10 | 70 |
|  | 2. Events | 50 |  |
|  | 3. Reorientation | 10 |  |
|  | Language Features |  |  |
|  | 1. Tense | 10 | 20 |
|  | 2. Punctuation | 10 |  |
| B. | Formatting |  |  |
|  | 1. Length | 5 | 10 |
|  | 2. Neat | 5 |  |
|  |  | Total | 100 |

English Teacher


MEIUNA KHAIEANI, S.PC. NIP.

Medan, November 2014
Researcher
Puput Saputra
NIM. 2101121032

## Lesson Plan

## LESSON PLAN FOR EXPERIMENTAL GROUP

School Name
Subject
Class/Semester
Learning Topic
Time Allocation
Meeting
: SMA PANCA BUDI Medan
: English
: X/1
: Recount Text
: $\mathbf{2 \times 4 5}$ Minutes ( 1 Meeting)
$: 3^{\text {rd }}$ Meeting

## K. Core Competence (KI)

KI 1 Appreciating and practicing the teachings of their religion.
KI 2 Appreciating and practicing honest behavior, discipline, responsibility, caring (mutual assistance, cooperation, tolerance, peace), polite, responsive and pro-active, and showing attitude as part of the solution to various problems in interacting effectively with the social environment, nature and in positioning ourselves as a reflection of the nation in in world relationships.

KI 3 Understanding applying analyzing the factual knowledge conceptual, procedural, based on his curiosity about science technology arts culture, and humanities with insight into humanity national state and civilization related to causes of phenomena and events as well as applying procedural knowledge in the specific field of study according to their talents and interests to solve the problem.
KI 4 Processing, reasoning and serving in the realm of a concrete and abstract domains associated with the development of the school learning independently and able to use the method according to the rules of science.

## L. Basic Competence (KD)

3.9 Analyzing social functions, text structure, and linguistic elements in the simple recount text about experience / occurrence / event, according to the context of its use.
4.14 Composing oral and written simple recount text about experiences / activities / occurrence / event, by noticing the social function, the structure of the text, and linguistic elements, correctly and in accordance with the context.

## M. Indicator

7. Identify the social function, text/generic structure of recount text, linguistic elements of simple recount text about experiences / events / occurrence / activities according to context of its use.
8. Responding the meaning of simple recount text about experiences / events / occurrence / activities according to context of its use.
9. Compile oral and written simple recount text based on its context.

## N. Teaching Objectives

At the end of the learning process, it is hoped that:
13. Students have capability to show responsibility behavior, caring, co operat-ion, and peace-loving in performing functional communication.
14. Students have capability to show seriousness in learning English related to simple recount text about experience / occurrence / event, according to the context of its use.
15. Students have capability to identify the social function, the generic structures, and linguistics elements of a recount text.
16. Students have capability to read and comprehend the meaning of oral and written recount text.
17. Students have capability to answer questions related to the recount text.
18. Students have capability to compose oral and written simple recount text about their experience / occurrence / event, according to the context of its use.

## O. Teaching Material

## Recount Text

8. Definition

Recount text is defined as one of text types which is made with purpose to inform about activity in past. In simple word, Recount is a text genre which is made in order to inform about activities in past time.
9. Generic structures of a descriptive text are :
g. Orientation: it is an element of text consist of topic or some information will be delivered to the reader, meanwhile the function of orientation is to be an eye catching for readers and focusing their attention
h. Record of events: it contains of events or activities in the past were told chronologically
i. Re-orientation: it is contain of conclusion from what have been told in record of events
10. Language features
g. Using verb in form of past tense, past perfect tense, past continuous tense.
h. Using verbs of doing on predicate, such as: went, took, saw, got, etc. that describe activity.
i. Using adjective to show personal attitude, for instance:

- It was wonderful
- We enjoy it very much
- It was fun, etc.

11. Using undubbed video

Undubbed is used in delivering the material to help the students get better illustration in understanding the recount text. Below is the screenshot of the example of undubbed video.

The example of undubbed video
The screenshot of the undubbed video


日成（6）

－権（3）



| No. | Screenshot of recount undubbed video |
| :---: | :--- |
| 1. | This was my story about spending holiday in Jakarta |
| 2. | On the first day, I and my family went to air port |
| 3. | Next, 2 hours later we arrived at Soekarno-Hatta air port |
| 4. | Then, we went to water park until afternoon |
| 5. | After that, we went to the one of our family house and <br> did crazy action by making a funny video |
| 6. | Finally, at the next morning we prepared to go home. It <br> was a great holiday ever |

P. Teaching Strategy / Method / Approach
7. Question-answer relationship strategy
8. Lecture Method, small group discussion
9. Scientific approach
Q. Source and Media of Teaching
5. Source: Textbook
6. Media : Laptop, LCD TV, and Undubbed Video
R. Teaching and Learning Process
$1^{\text {st }}$ Meeting

1. Opening activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| - Greeting the student and check the attendance list. | - Responding the greeting | 10' |
| - Apperception ( students are asked their understanding about recount text) | - Answering the question |  |
| - Motivate the students in learning writing recount. | - Listening to the teacher motivation |  |
| - The teacher explains the topic will be discussed. It will be started by reviewing the previous topic before continuing the learning process | - Students review the previous topic |  |

2. Main activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| a. Observing <br> - Asking students to read their note about recount text | - Reading note book about recount text | 5 |
| - Showing some example of oral recount story about holiday | - Listening to teacher story |  |
| b. Questioning <br> - Giving chance to students to ask about story they don't get clearly | - Students ask some | $10{ }^{\prime}$ |
| - Asking students to write down some questions from their note book | - writing down questions in note book |  |
| i. Experimenting <br> - Examining students' comprehension by exchange their question to their seatmate and answer the question they got. | - Trying to answer the question | 15 ${ }^{\text {², }}$ |
| - Giving material addition from other sources about kinds of recount text | - Listening carefully to the teacher explanation |  |
| j. Associating <br> - Asking students to make a small group to discuss about types of recount text | - Discussing types of recount text | $10{ }^{\prime}$ |
| - Asking each group to presents in front of class about their discussion result | - Presenting the discussion result |  |
| k. Communicating <br> - Asking for each group to present in the front of class the recount text about experiences/events they made | - One representative student of each group presenting the text they made | 25 |
| - Giving chance to students to ask teacher about how to recount the past experiences correctly | - Giving questions related to recount the past experiences |  |

5. Closing Activity

| Teacher's Activity | Students' Activity | Time |
| :---: | :---: | :---: |
| - Giving guidance to conclude the learning result | - By teacher's guidance conclude the result of learning | 15 |
| - Asking students to give opinion about the learning have been done | - Giving opinion about learning have been done |  |
| Giving self-activity to write a recount text based on undubbed video is played | - Doing assignment to write recount text based on undubbed video is played |  |
| The teacher closes the topic is taught and concluding all the material have been taught | - Paying attention and listening carefully |  |

## S. Assessment

3. Recount Writing Assessment Rubric

Assessment Rubric


## APPENDIX N

## Three Representative of Student's Answer Sheets of Each Group

## 1. Pre-Test Answer Sheet of Experimental Group

Name : Ummu Nabilah
Class: X MS A
Date: Monday, 17 Nov ' 14
I would like to tell you about my activity yesterday.
Yesterday was sunday. So, I spent my time to took a rest First, I woke us at six o'clock and then I did subuhte pray. After that I fell asleep again. And then I woke up at eight o'clock. Second, I took breakfast mom made a cupcakes.
Third, I took a shower and then moved to the living room and watched television.

Fourth, I went to the outside of my house to looked around and played with my cats. Fifth, I went into my house
and ate my lunch.
Sixth. in the night we went to my grandma's house to celebrated my grandma's birthday. Seventh, on nine past thirty we went to our house. Cause tomorrow is monday I did is ya and then slept in my bedroom.

$$
0=14
$$

$$
E=50
$$

$$
R=8
$$




First, I woke up at 7.00 am . Then. I cleaned up my bedroom. And than. my mother called me to took a breakfast. Second, after I took my breakfast, I went to my bathroom to took a bath. Then. I opened my laptop to watch my favorite film. I watched of fill that called "Jessabelle". 1 watched it with my sister. That film (is mostly scary. I was shocked. And you know what? Actually l was screamed. Third. At 3.00 pm the film was end. I changed another film to watch. The named was "Ouija". Ouija is one of horror story too. It was told about a game about ancient believes to called a death man. It's very scary you know. But, l love that film. So that was my activities on sunday I just spent my time for watching my favorite film

$$
\begin{aligned}
& O=13 \\
& E=45 \\
& R=13
\end{aligned}
$$

## 2. Post-Test Answer Sheet of Experimental Group



RIEKY $\triangle N A N D A$ REV

Date: 24-Nou - 2014

Yesterday, "My friend" and 2 went to Mall. we went by motorcycle. Yesierday was a hot day. My skir burnt, as soonas we got there. After we finishes there, we went to cinema ano Reserveet ficket. We bought some drink and food. We warched the cinema, the title is "Tokarev". I was little sleept. Apter the Film finished, we went out. We went back rome

Before 1 got home, 1 latited my Frieni. We bog bought lunch and ate togather after that I went home and Rest.
$\square$


No,

|  | Nama = Resa Wijayanti |
| :---: | :---: |
|  | Kelas = X MS A |
|  |  |
|  | Myi Yesterday |
|  |  |
|  | Yesterday, I woke up early at 06.00 am . And than |
|  | 1 made some breakfast to my little sister because my mom |
|  | go to the market. Than me and my sister cleaned up all the |
|  | rooms. Suddenly, my little sister was cried, so I made a milk |
|  | to her. |
|  | At 12.00 pm I touk a bath. After that I choosed my best |
|  | clothes because my mom asked me to go to the mall. While on |
|  | the car. I listened my favorite song and I brushed my hair. |
|  | Then me and my family arrived at the mall. Before it, 1 |
|  | wanted to bagta new hair clip. Unfortunatelly, the hair clip that |
|  | I wanted bought is sold out. So I came back to home and |
|  | took a rest. So, that is all my activities yesterday |
|  |  |
|  | $0=15$ |
|  | 1 |
|  | $E=47$ |
|  |  |
|  | $R=15$ |
|  |  |
|  |  |

## 3. Pre-Test Answer Sheet of Control Group

| No. |  |
| :---: | :---: |
|  | Nama: Wan Kevin zulla |
|  | Kolas: $x$-ms-1 |
|  | Enguish ??? |
|  | Write down three paragraphs of recount text |
|  | about your activities yesterday! |
| 1 | Orientation |
| 2 | events |
| 3 | Re-orientation |
|  | Answer |
|  | - orientation - |
|  | one day. before the Fasting, month Came, Andi and Ibra |
|  | Played marbles with their Friends in the yard. Because |
|  | of the maghrit time had come. They come badc then had |
|  | dinner with opa, their grandmother, and Lovely, their sister, |
|  | - Event- |
|  |  |
|  | When they were having diner, Wovely tald them that fasting |
|  | month would come tamorrow, so they should have "Sohur" |
|  | eark in the morning At $3.00 \mathrm{a}, \mathrm{m}$, opa and lovely were |
|  | making food For "Sahur". at the same time lovely |
|  | had asked Andi and lbra to wake up. |
|  | $0=15 \quad 05$ |
|  |  |
|  | $E=50$ |

$$
\begin{array}{l|}
\square \\
\square \\
\square \\
\square \\
\square \\
\square \\
\square \\
\square \\
\text { Punished : Yesterday : was my m parents. } x \\
\text { So, my mother hdd }
\end{array}
$$

So, my mother hold me to by a cake but I was busy of texting an my BB. (Wy mother was angry, then punished me. plus my feet got hut. So that was my bad experience.

$$
0=17
$$

$$
E=45 \quad 72
$$

$$
R=10
$$

Raditya Khairu Angara.
XIS
*. Yesterday I had a terrible day. First, I woke up an hour late because nobodit: (wakes mess up

Then iwas making breakfast. After breakfast: I got diesel so quirclu.

Next, i drive motorcycle really fast: Finally i was punished wort by the teacher.

$$
\begin{aligned}
& \theta=10 \\
& E=30 \\
& R=12
\end{aligned}
$$

4. Post-Test Answer Sheet of Control Group

No.

$$
0=0
$$

$$
\begin{array}{ll}
\text { Nama }=- \text { Wan Kevin Hull }- & E=40 \\
\text { Class }=-X-m s-1- & R=10 \\
\text { Subject }=-B \text {. Engush }- &
\end{array}
$$

- Orientasi-8 Last morning mt roamate wake up and she had to go to campus when she wanted to wake take her motor cede tract che couldn' move it because there were same.

Fient:g when 1 wanted to 60 to the Play Fursal 1 Fell Prom The brcudle right in front of garda futsal that time 1 was a little Confused why could happen and + along with mit brother because the incident is fum.
= R-onentasi $8=$ Ont worry about that the incident is funny. 1 wanted to 60 to the Play futsal + Fell From The bicycle.



Orientation: yesterday was a good day. JIm go to brastagi with my family and my bay friend.
is very happy can gather with family.
event:

- I got home J also bum com meal its pf.
- I also saw a very beautiful sight after arriving there.
- in the middle of the Street a lot of monkeys hanging around and Jalong with my brother to feed his mong: monkey monkey.

Reorientation: and the holiday that Jill never forget.

Raditia Khairu A.
X ms
Yesterday, I woke up late.
1 was. sleeping at 12.00 am . I was cuatching horror movie before. Then i wok up late at $07: 00 \mathrm{Am}$ in the morning. So that $I$ didn't do Suburb Praters.
That was my bad expert encl -

$$
\begin{aligned}
& 0=6 \\
& E=47 \\
& R=10
\end{aligned}
$$

