## CHAPTER IV

## RESEARCH FINDING AND ANALYSIS

This chapter discusses about profile of MA NU 03 Sunan Katong Kaliwungu, data description, data analysis of treatment, and final data analysis during experimental research.

## A. Profile of MA NU 03 Sunan Katong Kaliwungu

The school named MA NU 03 Sunan Katong is one of Islamic High School in Kaliwungu, Kendal. It is located on Plantaran village, Sawahjati Street Kaliwungu.

MA NU 03 Sunan Katong Kaliwungu was built on 17th July 1980 under LP. Ma'arif institute under the notary act number: 103 15th January 1986. The vision of the school is "Creating Islamic high school as Islamic educational institution that has good morals, technology skilled and has faithful and devoted, has ideology of ahlussunah wal jama'ah, creative and educative to be idol.

## B. Data Description

In commonly teaching learning process, the teacher was used conventional way (traditional method), where the students cannot explored their critical thinking to solve materials from the teacher. They had limited
access to teacher's instruction in teaching learning process. There were only some students active to ask questions to the teacher during the teaching learning process, and some students were easy to be bored. It affected their ability in learning English.

As we know that traditional methods regarded language learning as transfer of knowledge with the help of board and rules rather than considering it as a skill, where learning of rules and vocabulary items in isolation could not yield the desired learning output.

This study involved tenth grade student of MA NU 03 Sunan Katong Kaliwungu including X B and X C with 40 students. Then, students divided into two groups: group one (X B) with 40 students who participated in EFL class through Directed Reading Thinking Activity (DRTA) strategy, whereas group two (X C) with 40 students who participated in EFL class without Directed Reading Thinking Activity (DRTA) strategy and just used traditional mehod. This research itself described about student's achievement in reading comprehension with Directed Reading Thinking Activity (DRTA) strategy focusing on news item text.

In the meeting in classroom, students of X B done a Directed Reading Thinking Activity (DRTA) paper sheet
as being instructed based on some passages given by researcher. A reading about latest news about "West Jakarta Fire Claims Four Lives, Damages 20 Homes" was used in a unit on inventions for the class with picture related to key concept and vocabulary. Students was asked to predict the content of the text based on each paragraph to examine their critical thinking through the strategy.

A class discussion was used to activate students' prior knowledge, and story pictures for student prediction. Directed Reading Thinking Activity (DRTA) strategy was used for students to explore their critical thinking in reading comprehension about the story and what they wanted to know, then leaded their idea and opinion to find out the content through this strategy.

Researcher intructed students to read their work in front of the class and gave other students to identify and ask the question to examine their understanding about the content of the text. Students worked in pairs, shared their answers to the questions, and added and evaluated information on their Directed Reading Thinking Activity (DRTA) paper sheet. Then they expressed their opinions about the reading and the strategies used.

The second meeting researcher provided news about movie entitled "London Love Story Tops Indonesia

Box Office" with Directed Reading Thinking Activity (DRTA) papersheet. Same with the first text before, researcher provided Directed Reading Thinking Activity (DRTA) papersheet with prediction for each paragraph.

Table 4.1
Sample of Directed Reading Thinking Activity paper sheet

| Prediction | Textual Evidence |
| :--- | :--- |
| Title : |  |
| First paragraph : |  |
| Second paragraph : |  |
| Third paragraph : |  |

Students read the news item text. They predicted the content of the text. Then in pairs students read the text with the interactive material, made more predictions, and answered questions. They drew the prediction on a Directed Reading Thinking Activity (DRTA) paper sheet and expressed their opinion about the reading and strategy.

There were 40 students participated in the research. Each student was labeled by a code as below:

Table 4.2
List of Grade list of XB Experiment Class

| Grade list of XB |  |  |
| :--- | :---: | :---: |
| No | Name | Student's Grade |
| 1 | B-1 | 70 |
| 2 | B-2 | 80 |
| 3 | B-3 | 80 |
| 4 | B-4 | 85 |
| 5 | B-5 | 90 |
| 6 | B-6 | 65 |
| 7 | B-7 | 85 |
| 8 | B-8 | 70 |
| 9 | B-9 | 80 |
| 10 | B-10 | 75 |
| 11 | B-11 | 85 |
| 12 | B-12 | 80 |
| 13 | B-13 | 70 |
| 14 | B-14 | 80 |
| 15 | B-15 | 85 |
| 16 | B-16 | 70 |
| 17 | B-17 | 90 |
| 18 | B-18 | 80 |
| 19 | B-19 | 80 |
| 20 | B-20 | 60 |
| 21 | B-21 | 75 |
| 22 | B-22 | 75 |
| 23 | B-23 | 85 |
| 24 | B-24 | 85 |
| 25 | B-25 | 75 |
| 26 | B-26 | 75 |
| 27 | B-27 | 75 |
| 28 | B-28 | 80 |
| 29 | B-29 | 75 |


| 30 | B-30 | 85 |
| :--- | :---: | :---: |
| 31 | B-31 | 80 |
| 32 | B-32 | 75 |
| 33 | B-33 | 70 |
| 34 | B-34 | 75 |
| 35 | B-35 | 90 |
| 36 | B-36 | 80 |
| 37 | B-37 | 80 |
| 38 | B-38 | 85 |
| 39 | B-39 | 85 |
| 40 | B-40 | 80 |
| Average |  | $3147 / 40=78.67$ |

Table 4.3
Grade list of XC Control Class
Grade list of XC

| No | Name | Student's Grade |
| :--- | :---: | :---: |
| 1 | $\mathrm{C}-1$ | 75 |
| 2 | $\mathrm{C}-2$ | 80 |
| 3 | $\mathrm{C}-3$ | 80 |
| 4 | $\mathrm{C}-4$ | 75 |
| 5 | $\mathrm{C}-5$ | 70 |
| 6 | $\mathrm{C}-6$ | 75 |
| 7 | $\mathrm{C}-7$ | 65 |
| 8 | $\mathrm{C}-8$ | 75 |
| 9 | $\mathrm{C}-9$ | 75 |
| 10 | $\mathrm{C}-10$ | 60 |
| 11 | $\mathrm{C}-11$ | 75 |
| 12 | $\mathrm{C}-12$ | 75 |
| 13 | $\mathrm{C}-13$ | 80 |
| 14 | $\mathrm{C}-14$ | 75 |
| 15 | $\mathrm{C}-15$ | 70 |
| 16 | $\mathrm{C}-16$ | 75 |


| 17 | $\mathrm{C}-17$ | 85 |
| :--- | :--- | :--- |
| 18 | $\mathrm{C}-18$ | 70 |
| 19 | $\mathrm{C}-19$ | 80 |
| 20 | $\mathrm{C}-20$ | 65 |
| 21 | $\mathrm{C}-21$ | 75 |
| 22 | $\mathrm{C}-22$ | 70 |
| 23 | $\mathrm{C}-23$ | 75 |
| 24 | $\mathrm{C}-24$ | 75 |
| 25 | $\mathrm{C}-25$ | 75 |
| 26 | $\mathrm{C}-26$ | 75 |
| 27 | $\mathrm{C}-27$ | 80 |
| 28 | $\mathrm{C}-28$ | 75 |
| 29 | $\mathrm{C}-29$ | 75 |
| 30 | $\mathrm{C}-30$ | 75 |
| 31 | $\mathrm{C}-31$ | 80 |
| 32 | $\mathrm{C}-32$ | 85 |
| 33 | $\mathrm{C}-33$ | 80 |
| 34 | $\mathrm{C}-34$ | 70 |
| 35 | $\mathrm{C}-35$ | 75 |
| 36 | $\mathrm{C}-36$ | 70 |
| 37 | $\mathrm{C}-37$ | 70 |
| 38 | $\mathrm{C}-38$ | 85 |
| 39 | $\mathrm{C}-39$ | 75 |
| 40 | $\mathrm{C}-40$ | 80 |
| Average |  | $3000 / 40=75$ |

Based on the research, student's difficulties completing Directed Reading Thinking Activity (DRTA) paper sheet related to a lack of understanding as to how to complete them, the individual nature of the activity
without the help of a classmate, and a lack of vocabulary in English.

Based on student's paper sheet, most students from experimental group demonstrated their understanding of the text by answering accurately in reading lessons. Although they had difficulties in putting some vocabulary in English, they understaood what they read in the text and then could completed the paper sheet. It was different with some students of control group. They had a few problems demonstrating their understanding related 'comprehension' questions because they wrote simple answers that were not accurate enough and some a little ambiguous.

## C. Data Analysis and Hypothesis Test <br> 1. Analysis of Try-out Test Instrument

This discussion included of validity, reliability, difficulty level and also discriminating power.
a. Validity of instrument

There are thirty items numbers of try out test. Based on try out test that was conducted before, it showed that eighteen reading item numbers were valid. For example, the item
analysis of relevance was obtained $r$ (xy) 0,4471 for $\alpha=5 \%$ with $\mathrm{N}=40$. It would be obtained 0,304 . Since the result of the instruments validity was higher than the critical score, it was considered that the instruments were valid. The complete computation and the sample of computation are as below.

Table 4.4
Validity of each item

| Criteria | $\mathrm{t}_{\text {table }}$ | Number of <br> questions | Total |
| :---: | :---: | :---: | :---: |
| Valid | 0,304 | $1,2,3,4,7,8,10$, <br> $12,16,17,19,21$, <br> $23,24,26,27$ | 16 |
|  |  | $5,6,9,11,13,15$, <br> $18,20,22,25,28$, <br> 29,30 | 14 |
| Invalid |  |  |  |

The following was item of validity computation for item number 1 and for the other items would use the same formula.

## Formula :

$r_{x y}=\frac{N \sum X Y-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left\{N \sum X^{2}-\left(\sum X\right)^{2}\right\}\left\{N \sum Y^{2}-\left(\sum Y\right)^{2}\right\}}}$
Keterangan :
$r_{x y}=$ the correlation coefficient between variable $X$ and variable $Y$

$$
\begin{aligned}
& \mathrm{N}=\text { the number of students } \\
& \Sigma \mathrm{X}=\text { the sum of score of } \mathrm{X} \text { item } \\
& \Sigma \mathrm{Y}=\text { the sum of total score } \\
& \Sigma \mathrm{XY}=\text { the sum of multiplication between } \mathrm{X} \text { and } \\
& \quad \mathrm{Y}
\end{aligned}
$$

The following is the calculation for item number 1, for the other items would use the same formula.

Table 4.5
The Calculation of Validity number 1

| No | Code | $\mathbf{X}$ | $\mathbf{Y}$ | $\mathbf{x}^{\mathbf{2}}$ | $\mathbf{y}^{\mathbf{2}}$ | $\mathbf{x y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | TO-05 | 1 | 27 | 1 | 729 | 27 |
| 2 | TO-02 | 1 | 26 | 1 | 676 | 26 |
| 3 | TO-03 | 1 | 25 | 1 | 625 | 25 |
| 4 | TO-06 | 1 | 25 | 1 | 625 | 25 |
| 5 | TO-07 | 1 | 25 | 1 | 625 | 25 |
| 6 | TO-04 | 1 | 24 | 1 | 576 | 24 |
| 7 | TO-14 | 1 | 23 | 1 | 529 | 23 |
| 8 | TO-38 | 1 | 22 | 1 | 484 | 22 |
| 9 | TO-10 | 0 | 22 | 0 | 484 | 0 |
| 10 | TO-01 | 1 | 21 | 1 | 441 | 21 |
| 11 | TO-08 | 1 | 21 | 1 | 441 | 21 |
| 12 | TO-12 | 1 | 21 | 1 | 441 | 21 |
| 13 | TO-19 | 1 | 20 | 1 | 400 | 20 |
| 14 | TO-13 | 1 | 19 | 1 | 361 | 19 |
| 15 | TO-15 | 0 | 19 | 0 | 361 | 0 |
| 16 | TO-16 | 1 | 19 | 1 | 361 | 19 |
| 17 | TO-37 | 1 | 19 | 1 | 361 | 19 |
| 18 | TO-25 | 0 | 18 | 0 | 324 | 0 |


| 19 | TO-11 | 1 | 17 | 1 | 289 | 17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | TO-17 | 0 | 17 | 0 | 289 | 0 |
| 21 | TO-23 | 1 | 17 | 1 | 289 | 17 |
| 22 | TO-32 | 0 | 17 | 0 | 289 | 0 |
| 23 | TO-36 | 1 | 17 | 1 | 289 | 17 |
| 24 | TO-21 | 1 | 16 | 1 | 256 | 16 |
| 25 | TO-22 | 1 | 16 | 1 | 256 | 16 |
| 26 | TO-18 | 0 | 15 | 0 | 225 | 0 |
| 27 | TO-20 | 0 | 15 | 0 | 225 | 0 |
| 28 | TO-27 | 1 | 15 | 1 | 225 | 15 |
| 29 | TO-39 | 1 | 15 | 1 | 225 | 15 |
| 30 | TO-09 | 0 | 14 | 0 | 196 | 0 |
| 31 | TO-34 | 1 | 14 | 1 | 196 | 14 |
| 32 | TO-24 | 1 | 13 | 1 | 169 | 13 |
| 33 | TO-26 | 0 | 13 | 0 | 169 | 0 |
| 34 | TO-31 | 1 | 13 | 1 | 169 | 13 |
| 35 | TO-28 | 0 | 12 | 0 | 144 | 0 |
| 36 | TO-29 | 0 | 12 | 0 | 144 | 0 |
| 37 | TO-30 | 0 | 11 | 0 | 121 | 0 |
| 38 | TO-33 | 1 | 11 | 1 | 121 | 11 |
| 39 | TO-40 | 0 | 11 | 0 | 121 | 0 |
| 40 | TO-35 | 0 | 9 | 0 | 81 | 0 |
| Sum |  | 25 | 664 | 625 | 12888 | 490 |
|  | $\mathrm{N}=40$ | $\Sigma \mathrm{Y}=664$ |  |  |  |  |
|  | $\Sigma \mathrm{X}=25$ | $\Sigma \mathrm{Y}^{2}=12888$ |  |  |  |  |
|  | $\Sigma \mathrm{X}^{2}=625$ | $\Sigma \mathrm{XY}=490$ |  |  |  |  |

$$
\begin{aligned}
& r_{x y}=\frac{N \sum X Y-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left\{N \sum X^{2}-\left(\sum X\right)^{2}\right\}\left\{N \sum Y^{2}-\left(\sum Y\right)^{2}\right\}}} \\
& r_{x y}=\frac{(40)(490)-(25)(664)}{\sqrt{\left\{(40)(25)-(25)^{2}\right\}\left\{(40)(12888)-(664)^{2}\right\}}} \\
& r_{x y}=1.557
\end{aligned}
$$

For $\alpha=5 \%$ and the number of the subjects of post-test were 40 . The rxy > r table= 0,304 , so the item number 1 was valid.
b. Reability of instrument

After computing validity items, the next analysis was to test the reliability of instrument to find out whether a test had higher critical score and gave the stability or consistency of the test scores or not. The analysis and the computation as follow:

Formula:

$$
\mathrm{r}_{11}=\left(\frac{\mathrm{k}}{\mathrm{k}-1}\right)\left(\frac{\mathrm{S}^{2}-\sum \mathrm{pq}}{\mathrm{~S}^{2}}\right)
$$

Keterangan:
$\mathrm{r}_{11}=$ the hole of test reliability
$\Sigma \mathrm{pq}=$ the sum of multiplication between p and q
$\mathrm{n}=$ the number of items
$\mathrm{s}^{2}=$ total of variant
The following is the calculation of reliability of the item, if $r_{11}>r_{\text {table }}$ so the instrument is reliable.

Based on the data of the analysis of try-out test obtained

$$
\Sigma \mathrm{pq}=\mathrm{pq}_{1}+\mathrm{pq}_{2}+\mathrm{pq}_{3}+\ldots+\mathrm{pq}_{30}
$$

$$
\begin{aligned}
& =0,1196+0,2377+0,2122+\ldots+0,1875 \\
& =6,2824 \\
S^{2} & =\frac{\sum Y^{2}-\frac{\left(\sum Y\right)^{2}}{N}}{N} \\
& =\frac{12888-\frac{(664)^{2}}{40}}{40} \\
& =21,778 \\
r_{11} & =\left(\frac{n}{n-1}\right)\left(\frac{s^{2}-\sum p q}{s^{2}}\right) \\
& =\left(\frac{40}{40-1}\right)\left(\frac{15,4956}{21,778}\right) \\
& =0,729
\end{aligned}
$$

From the analysis $r$ product moment with $\alpha=$ $5 \%$ and $\mathrm{n}=40$ obtained $\mathrm{r}_{\text {table }}=0,304$. Because $\mathrm{r}_{11}>$ $\mathrm{r}_{\text {table, }}$ it means that the instrument is reliable.
c. Difficulty level

The computation of difficulty level of the thirty items analysis of reading, it was found that the difficulty level of number one is easy. The sample of computation is as follow.

Formula:

$$
\mathrm{P}=\frac{\mathrm{B}}{\mathrm{~J}}
$$

Criteria:
$0.00-0.30=$ very difficult
$0.31-0.70=$ medium
$0.71-1.00=$ easy

## Calculation:

Below is the example of the computation of difficulty level on item number 1.

$$
\begin{aligned}
P & =\frac{25}{40} \\
& =0.625
\end{aligned}
$$

Based on the criteria above, the result is between $0.70 \leq \mathrm{P}<1.00$, so item number 1 is medium.

Table 4.6
Degree of Difficulty of each item

| Criteria | Number of Questions | Total |
| :---: | :---: | :---: |
| Easy | $1,5,8,12,13,16,22,23,24$, | 11 |
| Medium | 26,30 |  |
|  | $17,18,19,20,21,25,27,28$, <br> 29 | 19 |

d. Discriminating power

The discriminating power of the thirty items analysis of reading was satisfied. It showed that all reading items had strong discrimination. The complete analysis and the sample of computation as follow.

Formula:

$$
D=\frac{B A}{J A}-\frac{B B}{J B}
$$

Criteria:

## Table 4.7

Criteria of discriminating power analysis

| Interval (D) | Criteria |
| :---: | :---: |
| $0.00<\mathrm{D} \leq 0.19$ | poor |
| $0.20<\mathrm{D} \leq 0.39$ | Satisfactory |
| $0.40<\mathrm{D} \leq 0.69$ | Good |
| $0.70<\mathrm{D} \leq 1.00$ | Very difficult |

Calculation:
Below is the example of the computation of discriminating power on item number 1 .

## Table 4.8

Computation item number 1 reliability analysis

| Top Group |  |  | Bottom Group |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Code | Score | No | Code | Score |
| 1 | TO-05 | 1 | 1 | TO-23 | 1 |
| 2 | TO-02 | 1 | 2 | TO-32 | 1 |
| 3 | TO-03 | 1 | 3 | TO-36 | 1 |
| 4 | TO-06 | 1 | 4 | TO-21 | 1 |
| 5 | TO-07 | 1 | 5 | TO-22 | 0 |
| 6 | TO-04 | 1 | 6 | TO-18 | 1 |
| 7 | TO-14 | 1 | 7 | TO-20 | 1 |
| 8 | TO-38 | 1 | 8 | TO-27 | 1 |


| 9 | TO-10 | 0 | 9 | TO-39 | 1 |
| :---: | :--- | :---: | :---: | :--- | :---: |
| 10 | TO-01 | 1 | 10 | TO-09 | 0 |
| 11 | TO-08 | 1 | 11 | TO-34 | 1 |
| 12 | TO-12 | 1 | 12 | TO-24 | 1 |
| 13 | TO-19 | 1 | 13 | TO-26 | 1 |
| 14 | TO-13 | 1 | 14 | TO-31 | 0 |
| 15 | TO-15 | 0 | 15 | TO-28 | 1 |
| 16 | TO-16 | 1 | 16 | TO-29 | 1 |
| 17 | TO-37 | 1 | 17 | TO-30 | 1 |
| 18 | TO-25 | 0 | 18 | TO-33 | 1 |
| 19 | TO-11 | 1 | 19 | TO-40 | 0 |
| 20 | TO-17 | 0 | 20 | TO-35 | 0 |
| Total |  |  |  |  |  |
| 16 |  | Total | 10 |  |  |

The following was the computation of the discriminating power for the item number 1 and for other items would use the same formula.

$$
\begin{aligned}
& B A=16 \\
& J A=20 \\
& B B=10 \\
& J B=20 \\
& D=\frac{B A}{J A}-\frac{B B}{J B}
\end{aligned}
$$

$$
=0,3
$$

According to the criteria, the item number 1 was enough. After computing 30 items of tryout test, there were 2 item were considered to be good, 16 items were satisfactory, 11 items were poor, and 1 item was very poor. The result of the discriminating power of each item could be seen appendix.

Table 4.9
Discriminating power of each item

| Criteria | Number of questions | Total |
| :---: | :---: | :---: |
| Very poor | 25 | 1 |
| Poor | $1,5,14,15,18,20,22,23$, | 11 |
|  | $27,29,30$ |  |

Based on the analysis on validity, reability, difficulty level and discriminating power, finally 18 items were accepted. They were number 2, 3, 4, 6, 7, $8,9,10,11,12,13,16,17,19,21,24,26,28$.

## 2. Hyphotesis Analysis

a. Analysis of pre-Test

1) Normality Test of Pre-Test

Test of normality was used to find out whether data of control and experimental group, which had been collected after getting treatments, though normal distribution were normal or not. The formula that was used, was Chi-quadrate. The result computation of Chiquadrate ( 2 score $\chi$ ) then was compared with table of Chi-quadrate ( 2 table $\chi$ ) by using $5 \%$ alpha of significance. If 2 score $\chi<2$ table $\chi$ meant that the data spread of research result distributed normally.

Ho : the data of normal distribution
$H a$ : the data of un normal distribution
With criteria Ho accepted if $\chi_{\text {count }}^{2}<\chi_{\text {table }}^{2}$.

## Normality test of Class $X$ C

| Max. score | $=85$ |
| :--- | :--- |
| Min. score | $=55$ |
| Range | $=30$ |
| Class Interval | $=6$ |
| Class width | $=5$ |
| Mean (x) | $=73$ |
| s | $=6,78$ |
| n | $=40$ |

Table 4.10
Normality of Pre test

| Kelas Interval | Batas kelas | Z <br> untuk <br> batas <br> kelas | Class width | Class width for Z | Ei | Oi | $\frac{(O i-E i)^{2}}{E i}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 55-61 | 54,50 | -2,76 | 0,4971 | 0,0389 | 1,5565 | 1 | 0,126 |
| 62-68 | 61,50 | -1,73 | 0,4582 | 0,2010 | 8,0398 | 1 | 2,030 |
| 69-75 | 68,50 | -0,70 | 0,2572 | 0,3887 | 15,5463 | 14 | 0,019 |
| 76-82 | 75,50 | 0,34 | 0,1314 | 0,2830 | 11,3211 | 12 | 1,195 |
| 83-89 | 82,50 | 1,37 | 0,4145 | 0,0774 | 3,0956 | 3 | 1,172 |
| 90-96 | 89,50 | 2,40 | 0,4918 | 0,0079 | 0,3145 | 0 | 0,314 |
| $\Sigma$ | 96,50 | 3,43 | 0,4997 |  |  |  | 4,8570 |
|  |  |  |  |  | $\chi^{2}=4,8570$ |  |  |

For $\mathrm{a}=5 \%, \mathrm{dk}=6-1=5, \chi^{2}=11,07$


Table 4.11
The normality result pre test in experimental class and
control classes

| Class | test | $\chi_{\text {count }}^{2}$ | $\chi_{\text {table }}^{2}$ | Criteria |
| :---: | :---: | :---: | :---: | :---: |
| Experimental | Pre <br> test | 2,8918 | 11,07 | Normal |
| Control | Pre <br> test | 4,8570 |  | Normal |
|  |  |  |  |  |

Based on the analysis above it can be seen that $\chi_{\text {count }}^{2}$ both of class were lower that
$\chi_{\text {table }}^{2}\left(\chi_{\text {count }}^{2}<\chi_{\text {table }}^{2}\right)$, so Ho is accepted. It can be concluded that the distribution data of experimental and control class are normal.
2) Homogeneity Test of Pre Test

The homogeneity test is used to know whether the group sample that was taken from population is homogeneity or not.

Ho : $\sigma_{1}^{2}=\sigma_{2}^{2}$
На : $\sigma_{1}^{2} \neq \sigma_{2}^{2}$
Table 4.12
The homogeneity result of pre test in experimental and control classes

| Class | Variance <br> $\left(\mathrm{s}^{2}\right)$ | N | $\mathrm{F}_{\text {count }}$ | $\mathrm{F}_{\text {table }}$ | Criteria |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Experimental | 52,82 | 39 | 1,279 | 3,84 | Homogenous |
| Control | 41,28 | 39 |  |  |  |

According to the formula above, it is obtained that:

$$
\begin{aligned}
& F=\frac{\text { Biggest Variance }}{\text { Smallest Variance }} \\
& F=\frac{52,82}{41,28} \\
& \\
& =1,279
\end{aligned}
$$

$$
\mathrm{F}_{(0,025)(29: 29)} \quad=3,84
$$



Because $\mathrm{F}_{\text {count }}$ was lower than $\mathrm{F}_{\text {table, }}$, Ho was accepted then it can be concluded that both of classes were homogenous.
3) Testing of similarity of Average of the Initial Data between Experimental and Control Classes.

To test the difference of average the writer used $t$-test.
Но: $\mu_{1}=\mu_{2}$
На: $\mu_{1} \neq \mu_{2}$
$\mu_{1} \quad=$ average data of experimental group
$\mu_{2}=$ average data of control group
Table 4.13
The average similarity test of pre test in experimental and control test

| Source of <br> Variance | Experimental | Control | Criteria |
| :--- | :---: | :---: | :---: |
| Sum | 2960,0 | 2940,0 |  |
| N | 39 | 39 |  |
| Average | 75,90 | 75,38 | Ho |
| Variance | 46,1378 | 28,2051 |  |
| Standard | 6,79 | 10,38 |  |

## Deviation ( $S$ )

According to the formula above, it is obtained that


$$
t=\frac{74,00-73,50}{6,859394 \sqrt{\frac{1}{40}+\frac{1}{40}}}=0,65
$$

$$
\begin{aligned}
& \text { with } \mathrm{a}=5 \% \text { and } \mathrm{dk}=39+39-2=76 \text { obtained } \\
& \mathrm{t}_{(0,95)(76)}=1,67
\end{aligned}
$$



Because $t$ count was in area acceptance Ho, then it can be concluded that there is no difference an average from both two groups.

With $\alpha=5 \%$ and $\mathrm{df}=39+39-2=76$, obtained $\mathrm{t}_{\text {table }}=$
2. From the result of calculation $t$-test, $t_{\text {count }}$ was lower than
$\mathrm{t}_{\text {table }}$, So Ho is accepted. It means that both of classes was homogeneous.

## b. Post test

It was conducted to answer hypothesis of the research. The data used were the result of post test of both classes. The final analysis contains of normality test, homogeneity test and the hypothesis test.

## 1) Normality Test

Ho : the data of normal distribution
Ha : the data of abnormal distribution
With criteria:
Ho accepted if $\chi_{\text {count }}^{2}<\chi_{\text {table }}^{2}$
Ho rejected if $\chi_{\text {count }}^{2}>\chi_{\text {table }}^{2}$
With $\alpha=5 \%$ and $\mathrm{df}=\mathrm{k}-1$

Table 4.14
The normality result post test in experimental class and control classes

| class | $\chi_{\text {count }}^{2}$ | $\chi_{\text {table }}^{2}$. | Criteria |
| :---: | :---: | :---: | :---: |
| Experimental | 2,403 | 11,07 | Normal |
| Control | 8,842 |  | Normal |

Analysis

above showed | that |
| :--- |
| $\chi_{\text {count }}^{2}$ both of class were lower that |

$\chi_{\text {table }}^{2}\left(\chi_{\text {count }}^{2}<\chi_{\text {table }}^{2}\right)$, so Ho is accepted. The conclusion is the distribution data of experimental and control class are normal.
2) Homogeneity test

The homogeneity test is used to know whether the group sample that was taken from population is homogeneity or not.

Но : $\sigma^{2}=\sigma^{2}{ }_{2}$
На : $\sigma^{2} \neq \sigma^{2}{ }_{2}$

## Table 4.15

The homogeneity result of post test in experimental and control classes

| Class | Variance <br> $\left(\mathrm{s}^{2}\right)$ | N | $\mathrm{F}_{\text {count }}$ | $\mathrm{F}_{\text {table }}$ | Criteria |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Experimental | 46,137821 | 40 | 2,3379 | 3,84 | Homogenous |
| Control | 28,20513 | 40 |  |  |  |

According to the formula above, it is obtained that:
$\mathrm{F}=\frac{\text { biggest variance }}{\text { smallest variance }}$
$\mathrm{F}=\frac{46,137821}{28,20513}$
$\mathrm{F}=1,63$

$$
\mathrm{F}_{(0,025)(29: 29)} \quad=3,84
$$



Because F were in area acceptance Ho, then it can be concluded that the second classes homogeneity.

Based on the computation above it is obtained that Fcount is lower than F table so Ho accepted. It can be conclude that data of pre test from experimental and control class have the same variance or homogeneous.
3) Hypothesis testing

Hypothesis test is used to know whether there is a difference on post-test of experimental class and control class. The data which is used to test the hypothesis is post-test score from both of classes. The difference of test average used t-test.

Ho: $\mu_{1} \leq \mu_{2} \rightarrow \quad$ it means there is no significant difference between the reading comprehension improvements of students who were taught by using Directed Reading Thinking Activity (DRTA) strategy and who were
taught without Directed Reading Thinking Activity (DRTA) strategy.

Ha: $\mu_{1}>\mu_{2} \rightarrow \quad$ it means there is significant difference between the reading comprehension improvements of students who were taught by using Directed Reading Thinking Activity (DRTA) strategy and who were taught without Directed Reading Thinking Activity (DRTA) strategy.

Hyphotesis
Ho: $\mu_{1} \leq \mu_{2}$
На: $\mu_{1}>\mu_{2}$
Hypothesis test

$$
t=\frac{\bar{x}_{1}-\bar{x}_{2}}{s \sqrt{\frac{1}{n_{1}}+\frac{1}{n_{2}}}}
$$

Ha is accepted if $\mathrm{t} \geq \mathrm{t}(1-\alpha)\left(\mathrm{n}_{1}+\mathrm{n}_{2}-2\right)$


Table 4.16
Difference between two means

| Variance | $\mathbf{X B}$ | $\mathbf{X C}$ |
| :---: | :---: | :---: |
| $\Sigma$ | 3147,0 | 3000,0 |
| N | 39 | 39 |
| X | 78,68 | 75,00 |
| Variance (S ${ }^{2}$ ) | 52,8205 | 41,2821 |
| Deviation <br> standard (S) | 7,27 | 6,43 |

with the formula:

$$
S=\sqrt{\frac{[40-1] 46,1378+[40-1] 28,2051}{40+40-2}}=6,86
$$

$$
t=\frac{78,63-755,00}{6,09684 \sqrt{\frac{1}{40}+\frac{1}{40}}}=2,659
$$

$$
\alpha=5 \% \text { with } \mathrm{dk}=40+40-2=78, \mathrm{t}(0.95)(78)=1,67
$$




#### Abstract

Based on the computation above, it is obtained that the average of post test of the experimental class who are taught by using Directed Reading Thinking Activity (DRTA) strategy is 78,68 and standard deviation (s) is 7,27. While the average of post test of control class who are taught without using Directed Reading Thinking Activity (DRTA) strategy is 75,00 and standard deviation (s) 6,43. With $\mathrm{df}=40+40-2=78$ by $\alpha=5 \%$ so obtained table and tcount, tcount>table. It means that Ho is rejected and Ha is accepted.


Because t was on Ha accepted area, it could be conclude that experiment group was better than control group.

## C. Discussion of the Research Findings

1. The comparison of average score between pretest of experimental class and control class was not significant/homogeneous. The homogeneity of pretest is very important for the researcher to continue the research. The average score of experimental class was 76,313 and the average score of control class was 73,875.
2. The progress between pretest and posttest of experimental class and control class. The difference between experimental class and control class was on the treatment was given. The student of experimental class was taught by using Directed Reading Thinking Activity (DRTA), while the students of control class was taught without using Directed Reading Thinking Activity (DRTA). The achievement of learning process in experimental class was increased and influenced, it can be seen on students' activity in treatment process by using Directed Reading Thinking Activity (DRTA).

It means that Directed Reading Thinking Activity (DRTA) can facilitate student gain more comprehension on news item.

It was affected to the students average score of post test in experiment class was 78.67 while the average score of pretest in reading comprehension was 74 after being taught using Directed Reading Thinking Activity (DRTA). Meanwhile, the average score of control class was 75 for post test and 73,5 for pretest.

## D. Limitation of the Research

The researcher knows that the research had not been perfect. Some limitations of this research were:

1. The research was limited at MA NU 03 Sunan Katong Kaliwungu and just took class X B and X C as sample.
2. The lack of knowledge and experience in the research from the researcher, so the application process of this research was not optimal. But the researcher tried to present the research as good as possible.
According to those limitations above, there was a need to analyze more about teaching news item text reading using the same or different strategy in order to gain satisfied result in reading comprehension. So, the more optimal result will be gained.
