

# THE EFFECT OF DIRECT READING THINKING ACTIVITY (DRTA) ON STUDENTS' READING COMPREHENSION (AN EXPERIMENTAL STUDY AT SMA NEGERI 4 BOGOR)

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## Abstract

The aim of this study was to investigate the effect of directed reading thinking activity (DRTA) on students' reading comprehension at second grade students of SMA Negeri 4 Bogor. The population of this study consisted of 60 secondary grade students at SMA Negeri 4 Bogor. The two groups' including pre-post test true experimental design was used in this study. The instrument tools are students' reading score such as pre-test and post-test such as summarizing and responding test; and reading assessment rubric. The result showed that  $t_{calculated}$  is 14.136 with the value of df is 58 while the result of  $t_{table}$  in the level significant  $t_{0.05} = 1.684$  and  $t_{0.01} = 2.423$ . Since the  $t_{calculated}$  is higher than  $t_{table}$  ( $14.136 > 1.624 < 2.423$ ), it can be concluded that the alternative hypothesis ( $H_a$ ) is accepted and null hypothesis ( $H_o$ ) is rejected. It is concluded that Directed Reading Thinking Activity (DRTA) effects on student's reading comprehension.

**Keywords:** *DRTA, reading comprehension, true experimental design, secondary grade students*

## INTRODUCTION

In Indonesia, English is one of compulsory subject at school. It is taught in Elementary School, Junior High School and University Level as the first foreign language. There are four skills that students should mastered they are speaking, writing, listening and reading. As stated by (Brown, 2003:185) says that 'Reading, arguably the most essential skills for success in all education context'. It means that, it is true that reading is the essential skill because it needs in educational system, besides that, all the knowledge starts from reading. By the development of internet, students in 21<sup>st</sup> century have access to more information than any other students before them. Unfortunately some of the students do not able to manage and comprehend what behind the text or passage. It is because the students' ignorance or less of intentions. In 1994, Weaver in 1999, Eilar noted that "reading is now viewed as transactive

process in which meaning is created by the reader". It means that, by the students read the text or passage it let the students to create the meaning by themselves. Therefore, students need to merge their own thinking with the information they read to comprehend what is between and beyond the lines.

However the major problem which is faced by the students is poor in reading comprehension, as it exists nowadays in SMA Negeri 4 Bogor of second grade students. The students' difficulties are come from: the students' ignorance in teacher instruction while having discussions and teacher ask the students to read then to comprehend the meaning of the passage. After that, it is because of the students lack to read the book, especially in English book and limited on vocabulary. So it makes them did not have idea while having discussion and express their idea in front of the class. Moreover, the students prefer to

find difficult translation (words and meaning) through “Google Translate” than use English dictionary. That is why students’ cognitive process cannot be used as well as the process of brain. Then, students are lack of reading strategies. Perhaps the teacher did not teach how to read effectively or tell the students by using skimming and scanning process. Furthermore, in this study the researcher stated alternative hypothesis (*ha*) that Directed Reading Thinking Activity (DRTA) has an effect on students’ reading comprehension. As Thompson (1993) stated that, problem in comprehension could be a result of the lack of instruction in reading comprehension strategy. In solving this problem of the students’ poor comprehension skills, many researchers (e.g., Bongratz, et al., 2002; Craner, fare and Weders, 2001; Song, 1998) in El-Koumy Khaleek (2006) found that “reading strategy are beneficial in helping poor readers improve their comprehension strategies through the implementation of the Directed Reading Thinking Activity (DR-TA) to teach reading comprehension”.

As mentioned by (Brown, 2008, p.185), “Reading arguably the most essential skills for success in all education context”. It means that, true that reading is essential skills because it needs in all education contexts, not only for English subject but for all subject area. In reference Weaver (1999) in Eilar (1994) that “reading is now viewed as transactive process in which meaning is created by the reader”. It means that, the reader can create its meaning which is known as transactive process. Based on the statements above, it can be concluded that reading is important skills that should be mastered and even it is as essential skill education context.

Moreover by reading process the reader can make its meaning.

Snow, 2002, p.11 noted that “reading comprehension as the process of simultaneously extracting and constructing meaning through interaction and involvement with written language”. It means that, reading comprehension cannot be stand alone; therefore it passed the process of interaction and involvement with written language. (Perencevich et al, 2004, p.227) says that “reading comprehension consist of the process of constructing conceptual knowledge from a text through cognitive interaction and motivational involvement with text”. It means that, conceptual knowledge is needed in reading comprehension. Moreover, (Perencevich et al, 2004,p.228) explains that reading comprehension (building conceptual knowledge) is virtually identical to learning from text (building new conceptual knowledge)”. (Perencevich et al, 2006, p.229) indicate that “reading comprehension is centrally defined by the conceptual knowledge that the reader construct and extracts from the text. This definition places an emphasis on the term conceptual knowledge”. In addition, (Perencevich et al, 2006:231) mentioned that “growth of reading comprehension consist of an increase in the ability to build conceptual knowledge during text interaction”.

From those explanations above by the experts it is concluded that reading is essential and important skill which is needed by education context. Moreover, in reading comprehension it needs conceptual knowledge as it basis.

Steves and Karen, (2007, p.8) mentioned that “Reading comprehension involves much more than readers’ responses to text. Reading comprehension

is a multi-component, highly complex process that involves many interactions between readers and what they bring to the text (previous knowledge, strategy use) as well as variables related to the text itself (interest in text, understanding of text types)". It means that, in reading comprehension needed the previous knowledge and strategy used because it is a basis to comprehend the text conceptually. (Graham Steves and Harris R Karen, 2007:8) also added 6 processes in reading comprehension they are: cognitive process, micro process, integrative process, macro process, elaborative process and metacognitive process.

Furthermore, it can be concluded that" We know that reading comprehension is a complex process of constructing meaning by coordinating a number of skills related to decoding, word reading, and fluency (Jenkins, Larson, & Fleischer, 1983; O'Shea, Sindelar, & O'Shea, 1987) and the integration of background knowledge, vocabulary, and previous experiences (Anderson et al., 1985). Irwin, 1991, p. 7 mention that most notably stated that, "Comprehension is an active process to which the reader brings his or her individual attitudes, interests, and expectations" (Graham Steves, 2007:12). So, it is suggested by treatment the students through Direct Reading Thinking Activity (DRTA).

As stated by (El-Koumy, 2006:3) "the Direct Reading Thinking Activity is defined operationally as a reading strategy which consists of 6 steps. (Ren Eilar, 1999:i) stated that "the DRTA strategy is one of such approach, built around the core of components of direct, explicit reading comprehension instructions.

By the same token, (El-Koumy, 2004: 1) states that "the DR-TA engages

students in thinking about what they read in three phases. In the first phase, students generate predictions about what they are going to read based on the title of the text. In the second phase, they read to confirm or reject their predictions. In the third phase, they evaluate their predictions using information from the text to support their opinions. He maintains that this strategic process can develop students' reading comprehension skills as well as their higher-order thinking skills". (Abi Samra, 2006: 6) states that the DR-TA is an effective strategy for teaching reading comprehension because it helps students set reading purposes by making predictions, read more actively and enthusiastically, and remember more information from what they have read. It means that, Direct Reading Thinking Activity (DRTA) can help students in reading comprehension and let the students to have critical thinking based on what the students have read.

This is the steps of Direct Reading Thinking Activity (DRTA) according to (El-Koumy, 2006, p: 3) as follows:

1. The teacher writes the title of the reading passage on the board and asks students to read it,
2. The teacher asks students to make predictions about the title using these questions:
  - a) What do you think a passage with a title like this might be about?
  - b) Why do you think so?
3. The teacher lists predictions on the board and initiates a discussion with the students by asking them to respond to the following questions:
  - a) Which of these predictions do you think would be the likely one?

- b) Why do you think this prediction is a good one?
- 4. The teacher invites students to work in small groups to complete the discussion following the same format.
- 5. The teacher asks students to read the passage silently and to confirm or reject their own predictions. Then he asks them the following questions:
  - a) Were you correct?
  - b) What do you think now?
  - c) Why do you think so?
- 6. The teacher asks students to reflect on their predictions through responding to the following questions:
  - a) What prediction did you make?
  - b) What made you think of this prediction?
  - c) What in the passage supports this prediction?
  - d) Do you still agree with this prediction? Why?

Moreover, direct reading thinking activity (DRTA) may be used with an individual, a small group, or a whole class. This activity can be easily adapted for a variety of subjects and reading levels. This strategy helps strengthen reading and critical thinking skills. As the teacher guides the process, the DRTA teaches students to determine the purpose for reading and make adjustments to what they think will come next based on the text. It means that, the direct reading thinking activity (DRTA) encourages students to think critically and it explore students mind.

Based on the theoretical framework that has been explained by experts above which has correlation with the researcher's study that she intended to investigate the effect of direct reading thinking activity (DRTA) on students'

reading comprehension. The theory showed that 'Reading, arguably the most essential skills for success in all education contexts' (Brown, 2003: 85). It means that, it is true that reading is the essential skill because it needs in Educational System, besides that, all the knowledge starts from reading. Then, it was proved by the study that students should use Direct Reading Thinking Activity (DRTA) to make their reading comprehension better. After that, it is also proved by the result of the researcher study that "the result of the  $t_{\text{test}}$  value is 14.136 and the value of degree of freedom (df) is 58. The value in  $t_{0.05}$  level significance  $t_{\text{table}}$  is 1.684 and the value in  $t_{0.01}$  of significance is 2.423. The result of the test can be described as  $14.136 > 1.684 < 2.423$ . It means that  $t_{\text{calculated}}$  is higher than  $t_{\text{table}}$ , the Alternative Hypothesis ( $H_a$ ) is accepted and the Null Hypothesis ( $H_o$ ) is rejected. This study concluded that Directed Reading Thinking Activity (DRTA) effect on student's reading comprehension". Moreover, the presents study which conducted by the researcher fits with the previous study. The 1st previous study conducted by entitles "The Effects of the Direct Reading Thinking Activity on EFL students' Referential and Inferential Comprehension". The result of this study was "In light of the results of the study, the researcher can conclude that: (1) The teaching of reading at the literal level does not help students develop referential or inferential comprehension, (2) The development of referential and inferential comprehension skills can only result from using a strategy which forces students to apply these skills while reading, (3) The DR-TA strategy is an effective strategy for developing both referential and inferential comprehension skills. However, these conclusions are limited by the participants'

level, the length of the study and the operationalization of the dependent and independent variables of the study". In addition, even though the focus was not for reading comprehension but referential and inferential comprehension was the part of the topic or material of reading comprehension. The 2<sup>nd</sup> previous research conducted entitled "The Effects of Directed Reading Thinking Activity on Second Grade Reading Comprehension showed that "However, based on the analysis of the data collected in this investigation, the difference between students who received the DRA instruction and the DRTA instruction was not significant at the .05 probability level. It can be concluded that there is no significant difference between the groups, since  $.952 < 2.042$ ; so,  $p > .05$ . Sample data do not exist in this investigation to state that the DRTA method is probable to have been the cause of the differences in the *mean* score of the two different groups". In addition, in this study the researcher intended to find reading comprehension score in 2nd grade classroom where reading instruction was provided using the traditional direct reading approach (DRA) to reading comprehension score in a second grade classroom where reading instruction was provided using directed Reading Thinking Activity Approach. However, this previous study focuses on the reading constructions by using DRTA. The gaps that occur in this research with the presents study is the present study which conducted by the researcher more focus to give the effect of direct reading thinking activity on students reading comprehension by treatment the students.

After that, in this research the researcher stated that does direct reading thinking activity (DRTA) has an effect on

students' reading comprehension in SMA Negeri 4 Bogor. Next, the objective of this study was to investigate the effect of direct reading thinking activity on students' reading comprehension. Then, the expected research benefit can be used for educators, government, stakeholders and for the other researcher; this research can be used to conduct the further research in implementing DRTA in Elementary School and Junior High School.

## METHOD

In this part discusses the methodology which the researcher followed in the present study. It includes research design of study, the source data, the research instruments of the study, data collection technique and data analysis technique.

### Research Design

The research was conducted at SMA Negeri 4 Bogor. It is located in Jl. Dreded V Nomor 36. The population of the research is the second grade students of SMA Negeri 4 Bogor. There are two classes of the second grades students; each class consists of 30 students. Thus, the number of the sample is 30 students. The selected samples are categorized into two groups. There are 30 students as experimental group. Then, 30 students are chosen as the control group.

The researcher used the pre test and post test true-experimental design. The pre-test was used to evaluate students' reading comprehension. Then, the treatment was carried out for four times. The participants were divided into two groups. In the experimental group, the teacher used Directed Reading Thinking Activity (DRTA) to help students comprehend the text comprehensively and effectively. In the control group, reading comprehension was taught by using the common teaching method that is usually used by the teacher.

### The Source Data

As mentioned by Iswara 2013 p.5 in Arikunto (2010:172) defined the source of data as a subject in which the research data obtained. The source data in this study are students and students' sheet or work.

### Research Instrument

The instrument that is used to collect the data is a series of test (Reading Test). The test is given to measure students' reading comprehension. The pre-test is given to the experimental and control group. Finally, the post-test is given to both groups by test with the same topic.

### Data Collection Technique

In conducting the research, firstly, reading test was given as pre-test to

experimental group and control group to investigate students' reading comprehension. Then, the treatment was given four times by applying Directed Reading Thinking Activity (DRTA) to experimental group and the common teaching method that is usually used by the teacher – to control group. After that, reading test was given to the experimental and control group as the post-test to the students to assess their reading comprehension. Furthermore, analyzing students' reading comprehension score in pre-test and post-test are based on the criteria for assessing a summary (Imao, 2001, p.184) in Brown (: 214). Finally, the score of pre-test and post-test are calculated by using t-test formula to find out the effect of the treatment. To score reading test, the writer used assessment of Imao, p.184 in Brown (214).

Table 1. Criteria for assessing a summary (Imao, 2001, p.184)

|   |                                                                                                    |
|---|----------------------------------------------------------------------------------------------------|
| 1 | Express accurately the main idea and supporting ideas                                              |
| 2 | Is written in the students' own words; occasional vocabulary from the original text is acceptable. |
| 3 | Is logically organized.                                                                            |
| 4 | Displays facility in the use of language to clearly express idea in the text.                      |

### Data Analysis Technique

The data are analyzed to find out the effect of Directed Reading Thinking Activity (DRTA) on students' reading comprehension. The formula that is used for counting the data is t-test formula as stated by Arikunto (2010:354) is used to analyze the pre-test and post-test data.

The design is shown as follows:

$$t = \frac{Mx - My}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2}\right) \left(\frac{1}{Nx} + \frac{1}{Ny}\right)}}$$

Notes:

t = Test value

M = Means of each group from deviation

x = Deviation of every  $X_1$  and  $X_2$

y = Deviation of every  $Y_1$  and  $Y_2$

N = Number of students

## RESULT AND DISCUSSION

### Findings

In collecting the data of the research, reading test was given before and after the treatment. The data are intended to find out the result of the pre-test and post-

test from the effect of Directed Reading Thinking Activity (DRTA) on student's reading comprehension. In experimental group, the pre-test and post test are presented as X1 and X2, while in control group, the pre-test and post test are presented as Y1 and Y2.

In analyzing the data, t-test formula from Arikunto (2010:354) is used to analyze the pre-test and post-test data. The scores of the pre-test of experimental and control are presented on Table 1.1

Table 2. Pre-Test Score of Experimental Group and Control Group

| <b>Respondent</b> | <b>Experimental Group Score (X1)</b> | <b>Respondent</b> | <b>Control Group Score (Y1)</b> |
|-------------------|--------------------------------------|-------------------|---------------------------------|
| 1                 | 50                                   | 1                 | 50                              |
| 2                 | 70                                   | 2                 | 55                              |
| 3                 | 50                                   | 3                 | 65                              |
| 4                 | 95                                   | 4                 | 50                              |
| 5                 | 85                                   | 5                 | 60                              |
| 6                 | 80                                   | 6                 | 55                              |
| 7                 | 50                                   | 7                 | 40                              |
| 8                 | 50                                   | 8                 | 45                              |
| 9                 | 50                                   | 9                 | 50                              |
| 10                | 90                                   | 10                | 35                              |
| 11                | 70                                   | 11                | 50                              |
| 12                | 65                                   | 12                | 50                              |
| 13                | 55                                   | 13                | 40                              |
| 14                | 60                                   | 14                | 50                              |
| 15                | 80                                   | 15                | 65                              |
| 16                | 70                                   | 16                | 65                              |
| 17                | 50                                   | 17                | 60                              |
| 18                | 75                                   | 18                | 55                              |
| 19                | 75                                   | 19                | 30                              |
| 20                | 65                                   | 20                | 60                              |
| 21                | 50                                   | 21                | 50                              |
| 22                | 85                                   | 22                | 65                              |
| 23                | 40                                   | 23                | 40                              |
| 24                | 40                                   | 24                | 55                              |
| 25                | 50                                   | 25                | 60                              |
| 26                | 70                                   | 26                | 40                              |
| 27                | 90                                   | 27                | 50                              |
| 28                | 85                                   | 28                | 60                              |
| 29                | 50                                   | 29                | 50                              |
| 30                | 85                                   | 30                | 55                              |
|                   | <b>1980</b>                          |                   | <b>1555</b>                     |

Different pre-test scores between experimental and control group:

$$Mx1 = \frac{X1}{N} = \frac{1980}{30} = 66$$

$$My1 = \frac{Y1}{N} = \frac{1555}{30} = 51.8$$

Table 1.1 shows that the sum of the pre-test scores of experimental group is 1980 with the average 66 and the sum of the control group score is 1555 with the average 51.8. It shows that there is different average between experimental group and control group.

The result of post-test of experimental group and control groups are shown on Table 1.2.

Table 3. Post-test Score of Experimental Group and Control Group

| <b>Respondent</b> | <b>Experimental Group Score (X2)</b> | <b>Respondent</b> | <b>Control Group Score (Y2)</b> |
|-------------------|--------------------------------------|-------------------|---------------------------------|
| 1                 | 85                                   | 1                 | 55                              |
| 2                 | 85                                   | 2                 | 60                              |
| 3                 | 85                                   | 3                 | 70                              |
| 4                 | 90                                   | 4                 | 45                              |
| 5                 | 90                                   | 5                 | 50                              |
| 6                 | 90                                   | 6                 | 40                              |
| 7                 | 75                                   | 7                 | 50                              |
| 8                 | 85                                   | 8                 | 40                              |
| 9                 | 75                                   | 9                 | 45                              |
| 10                | 95                                   | 10                | 50                              |
| 11                | 85                                   | 11                | 60                              |
| 12                | 85                                   | 12                | 55                              |
| 13                | 75                                   | 13                | 45                              |
| 14                | 85                                   | 14                | 60                              |
| 15                | 85                                   | 15                | 70                              |
| 16                | 85                                   | 16                | 60                              |
| 17                | 80                                   | 17                | 45                              |
| 18                | 80                                   | 18                | 70                              |
| 19                | 90                                   | 19                | 50                              |
| 20                | 75                                   | 20                | 65                              |
| 21                | 75                                   | 21                | 50                              |
| 22                | 90                                   | 22                | 70                              |
| 23                | 65                                   | 23                | 50                              |
| 24                | 85                                   | 24                | 60                              |
| 25                | 65                                   | 25                | 60                              |
| 26                | 85                                   | 26                | 50                              |
| 27                | 95                                   | 27                | 65                              |
| 28                | 90                                   | 28                | 54                              |



|    |             |    |             |
|----|-------------|----|-------------|
| 29 | 85          | 29 | 55          |
| 30 | 90          | 30 | 58          |
|    | <b>2505</b> |    | <b>1657</b> |

Different post-test scores between experimental and control groups:

$$Mx2 = \frac{\sum X^2}{N} = \frac{2505}{30} = 83.5$$

$$My2 = \frac{\sum Y^2}{N} = \frac{1657}{30} = 55.2$$

Table 1.2 shows that the sum of the post-test scores of experimental group is 2505 with the average 83.5 and the sum of the control group score is 1044 with the average 55.2. It shows that there is different average between experimental group and control groups.

The result of deviation of Pre-Test Experimental group and Control group are shown on Table 1.3.

Table 4. Deviation of Pre-Test Experimental Group and Control Group

| <b>Respondent</b> | <b>Experimental Group<br/>Pre-Test (X1)</b> | <b>(X-Mx)<sup>2</sup></b> | <b>Control Group<br/>Pre-Test (Y1)</b> | <b>(Y-My)<sup>2</sup></b> |
|-------------------|---------------------------------------------|---------------------------|----------------------------------------|---------------------------|
| 1                 | 50                                          | 256                       | 50                                     | 3.24                      |
| 2                 | 70                                          | 16                        | 55                                     | 10.24                     |
| 3                 | 50                                          | 256                       | 65                                     | 174.2                     |
| 4                 | 95                                          | 841                       | 50                                     | 3.24                      |
| 5                 | 85                                          | 361                       | 60                                     | 67.24                     |
| 6                 | 80                                          | 196                       | 55                                     | 10.24                     |
| 7                 | 50                                          | 256                       | 40                                     | 139.24                    |
| 8                 | 50                                          | 256                       | 45                                     | 46.24                     |
| 9                 | 50                                          | 256                       | 50                                     | 3.24                      |
| 10                | 90                                          | 576                       | 35                                     | 282.24                    |
| 11                | 70                                          | 16                        | 50                                     | 3.24                      |
| 12                | 65                                          | 1                         | 50                                     | 3.24                      |
| 13                | 55                                          | 121                       | 40                                     | 139.24                    |
| 14                | 60                                          | 36                        | 50                                     | 3.24                      |
| 15                | 80                                          | 196                       | 65                                     | 174.2                     |
| 16                | 70                                          | 16                        | 65                                     | 174.2                     |
| 17                | 50                                          | 256                       | 60                                     | 76.24                     |
| 18                | 75                                          | 81                        | 55                                     | 10.24                     |
| 19                | 75                                          | 81                        | 30                                     | 475.24                    |
| 20                | 65                                          | 1                         | 60                                     | 67.24                     |
| 21                | 50                                          | 256                       | 50                                     | 3.24                      |
| 22                | 85                                          | 361                       | 65                                     | 174.2                     |
| 23                | 40                                          | 676                       | 40                                     | 139.24                    |

|                                                                                                       |    |                                                                                                             |    |        |
|-------------------------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------|----|--------|
| 24                                                                                                    | 40 | 676                                                                                                         | 55 | 10.24  |
| 25                                                                                                    | 50 | 256                                                                                                         | 60 | 67.24  |
| 26                                                                                                    | 70 | 16                                                                                                          | 40 | 139.24 |
| 27                                                                                                    | 90 | 576                                                                                                         | 50 | 3.24   |
| 28                                                                                                    | 85 | 361                                                                                                         | 60 | 67.24  |
| 29                                                                                                    | 50 | 256                                                                                                         | 50 | 3.24   |
| 30                                                                                                    | 85 | 361                                                                                                         | 55 | 10.24  |
| $\Sigma x = 1980$<br>$Mx = 66$<br>$\Sigma (X-Mx)^2 = 7870$<br>$S^2 = \frac{7870}{29}$<br><b>271.3</b> |    | $\Sigma y = 1555$<br>$My = 51.8$<br>$\Sigma (Y - My) = 2474.04$<br>$S^2 = \frac{2474}{29}$<br><b>= 85.3</b> |    |        |

Table 1.3 shows that the total score of deviation of pre-test Experimental group is 7870. The total score of quadrate deviation is 271.3, while the total score deviation of pre-test Control group is 2474.04 and the total score of quadrate is 85.3.

The result of deviation of Post Test Experimental Group and Control Group are shown on Table 1.4

Table 5. Deviation of Post-Test Experimental Group and Control Group

| Respondent | Experimental Group<br>Post-Test (X2) | (X-Mx) <sup>2</sup> | Control Group<br>Post-Test (Y2) | (Y-My) <sup>2</sup> |
|------------|--------------------------------------|---------------------|---------------------------------|---------------------|
| 1          | 85                                   | 2.25                | 55                              | 0                   |
| 2          | 85                                   | 2.25                | 60                              | 25                  |
| 3          | 85                                   | 2.25                | 70                              | 225                 |
| 4          | 90                                   | 42.25               | 45                              | 100                 |
| 5          | 90                                   | 42.25               | 50                              | 25                  |
| 6          | 90                                   | 42.25               | 40                              | 225                 |
| 7          | 75                                   | 72.25               | 50                              | 25                  |
| 8          | 85                                   | 2.25                | 40                              | 225                 |
| 9          | 75                                   | 72.25               | 45                              | 100                 |
| 10         | 95                                   | 132.25              | 50                              | 25                  |
| 11         | 85                                   | 2.25                | 60                              | 25                  |
| 12         | 85                                   | 2.25                | 55                              | 0                   |
| 13         | 75                                   | 72.25               | 45                              | 100                 |
| 14         | 85                                   | 2.25                | 60                              | 25                  |
| 15         | 85                                   | 2.25                | 70                              | 225                 |

|                                                                                                      |    |                                                                                                    |    |     |
|------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------|----|-----|
| 16                                                                                                   | 85 | 2.25                                                                                               | 60 | 25  |
| 17                                                                                                   | 80 | 12.25                                                                                              | 45 | 100 |
| 18                                                                                                   | 80 | 12.25                                                                                              | 70 | 225 |
| 19                                                                                                   | 90 | 42.25                                                                                              | 50 | 25  |
| 20                                                                                                   | 75 | 72.25                                                                                              | 65 | 100 |
| 21                                                                                                   | 75 | 72.25                                                                                              | 50 | 25  |
| 22                                                                                                   | 90 | 42.25                                                                                              | 70 | 225 |
| 23                                                                                                   | 65 | 342.25                                                                                             | 50 | 25  |
| 24                                                                                                   | 85 | 2.25                                                                                               | 60 | 25  |
| 25                                                                                                   | 65 | 342.25                                                                                             | 60 | 25  |
| 26                                                                                                   | 85 | 2.25                                                                                               | 50 | 25  |
| 27                                                                                                   | 95 | 132.25                                                                                             | 65 | 100 |
| 28                                                                                                   | 90 | 42.25                                                                                              | 54 | 1   |
| 29                                                                                                   | 85 | 2.25                                                                                               | 55 | 0   |
| 30                                                                                                   | 90 | 42.25                                                                                              | 58 | 9   |
| $\Sigma x = 2505$<br>$Mx = 83.5$<br>$\Sigma (X-Mx)^2 = 1657$<br>$S^2 = \frac{1657}{29}$<br>$= 57.13$ |    | $\Sigma y = 1657$<br>$My = 55$<br>$\Sigma (Y-My)^2 = 2285$<br>$S^2 = \frac{2285}{29}$<br>$= 78.79$ |    |     |

Table 5 shows that the total score of deviation of post test experimental group is 2505. The total score of quadrate deviation is 57.15, while total score of post test is 1657 and the total score of quadrate is 78.79.

The calculation of  $Mx$  and  $My$  are:

$$Mx = \frac{\Sigma X}{N} = \frac{2505}{30} = 83.5$$

$$My = \frac{\Sigma Y}{N} = \frac{1657}{30} = 55.2$$

After the mean of each group is counted then  $\Sigma x^2$  and  $\Sigma y^2$  are calculated by using the following formula:

$$\begin{aligned} \Sigma X^2 &= \Sigma x^2 - \frac{(\Sigma x)^2}{N} & \Sigma Y^2 &= \Sigma y^2 - \frac{(\Sigma y)^2}{N} \\ &= & &= \\ &1657 - \left(\frac{57.13}{30}\right)^2 & &2285 - \left(\frac{78.79}{30}\right)^2 \end{aligned}$$

$$\begin{aligned} &= 1657 - 3.62 & &= 2285 - 6.89 \\ &= 1653.38 & &= 2278.11 \end{aligned}$$

Calculating the t-test value by using t-test formula. T-test formula is used :

$$\begin{aligned} t &= \frac{Mx - My}{\sqrt{\left(\frac{\Sigma x^2 + \Sigma y^2}{N_x + N_y - 2}\right) \left(\frac{1}{N_x} + \frac{1}{N_y}\right)}} \\ &= \frac{83.5 - 55}{\sqrt{\left(\frac{1653.38 + 2278.11}{30 + 30 - 2}\right) \left(\frac{1}{30} + \frac{1}{30}\right)}} \\ &= \frac{28.5}{\sqrt{\left(\frac{3931.49}{58}\right) \left(\frac{2}{30}\right)}} \\ &= \frac{28.5}{\sqrt{67.78 \times 0.06}} \\ &= \frac{28.5}{\sqrt{2.016}} \end{aligned}$$

$$= \frac{28.5}{2.016}$$

$$= 14.136$$

The value of degree of freedom can be counted by using the following formula:

$$\begin{aligned} df &= N_x + N_y - 2 \\ &= 30 + 30 - 2 \\ &= 58 \end{aligned}$$

Based on the calculating, it is found that the result of the  $t_{\text{test}}$  value is 14.136 and the value of degree of freedom (df) is 58. The value in  $t_{0.05}$  level significance  $t_{\text{table}}$  is 1.684 and the value in  $t_{0.01}$  of significance is 2.423. The result of the test can be described as  $14.136 > 1.684 < 2.423$ . It means that  $t_{\text{calculated}}$  is higher than  $t_{\text{table}}$ , the Alternative Hypothesis ( $H_a$ ) is accepted and the Null Hypothesis ( $H_o$ ) is rejected. This study concluded that Directed Reading Thinking Activity (DRTA) effect on student's reading comprehension.

## Discussion

The major problem faced the students in reading comprehension is in poor in reading comprehension. It is because the students ignored teacher's instruction while the students are asking to read the text passage. Then, the students lack to read the book and students limited on vocabulary, so it makes students did not have idea while having discussion in the class with the teacher. However, when the students find difficulties words, they prefer to find the translation in "Google Translate". The last is students' lack of reading strategies. To overcome these problems, in this research Direct Reading Thinking Activity (DRTA) was given as

the treatment to the student. Directed reading Thinking Activity (DRTA) was a main activity in this research. For the first meeting the teacher gave pre-test for 11 IIS A as Experimental Group and 11 IIS B as Control Group. Second, the experimental group was given treatment by using Direct Reading Thinking Activity (DRTA) and the control group is taught by common teaching method that is usually used by the teacher. Finally, the post-test was given to both by reading comprehension test with the same topic.

From the calculations, it is found that the result of the t-test value is 14.136 and the value of degree of freedom (df) is 58. The value in  $t_{0.05}$  level significance  $t_{\text{table}}$  is 1.684 and the value in  $t_{0.01}$  of significance is 2.423. The result of the test can be described as  $14.136 > 1.684 < 2.423$ . It means that  $t_{\text{calculated}}$  is higher than  $t_{\text{table}}$ , the Alternative Hypothesis ( $H_a$ ) was accepted and the Null Hypothesis ( $H_o$ ) was rejected. This study concluded that a Directed Reading Thinking Activity (DRTA) effect on student's reading comprehension

The result of the research represents that Direct Reading Thinking Activity (DRTA) effects on students' reading comprehension. The research finding also represent that there is different result of the students' score between experimental group which is taught reading comprehension by Direct Reading Thinking Activity (DRTA) and control group which is taught reading comprehension without Direct Reading Thinking Activity (DRTA). Teaching reading comprehension by using Direct Reading Thinking Activity (DRTA) makes students confidence because students can share their idea based on what students have read before, students able to make prediction related to text passage and

able to create the topic discussion, then able to elaborate, able to stimulate other students while discussion in the classroom. After that, it creates and building independent reader. The students become active in discussions among student and teacher. In addition, Directed Reading Thinking Activity (DRTA) can creates students critical thinking, because in this part the students are encourage to think deeply and try to use students previous knowledge and correlate it with the present discussions about the certain topic which given by teacher. So, indirectly the students pass the process of thinking and try to interpret by using students own words. Finally, it indicates that Directed Reading Thinking Activity (DRTA) can be effective way to teach reading comprehension.

## CONCLUSION

In the light of the result of the study based on the analyzing the data, it can be concluded that Directed Reading Thinking Activity (DRTA) affects students' reading comprehension. It is proved by the result of the t-test value is 14.136 and the degree of freedom is 58. The value in t0.05 level significance table is 1.684 and the value in t0.01 of significance is 2.423. The result of the test can be described as  $14.136 > 1.684 < 2.423$ . It means that if t-calculated is higher than t-table, the Alternative Hypothesis ( $H_a$ ) was accepted and the Null Hypothesis ( $H_o$ ) was rejected. It indicates that Directed Reading Thinking Activity is can be effective way to teach reading comprehension.

After conducting the research and getting the result, it is found that Directed Reading Thinking Activity (DRTA) gives a great contribution to students' reading comprehension in the classroom. Therefore,

Direct Reading Thinking Activity (DRTA) is an effective way in teaching reading comprehension. Furthermore, it is suggested for practitioners, policy makers that applying Direct Reading Thinking Activity (DRTA) in the classroom as the process of teaching and learning. Try to make new contribution that teaching by using Direct Reading Thinking Activity (DRTA) is effective such as can build the atmosphere alive by stimulating the students first then give the students clues to guess what the topic is or by put the updating or correlate the topic which is happening. After that, by implementing that the students can lead the discussion among their friends and by applying Direct Reading Thinking Activity students are expected can solve the problem discussion. Then, as the teacher in the classroom teachers are not allowed to limit students' expression, meaning that while the students begin to open their mind in certain discussion. In addition building on the present study, future researchers are recommended to: investigate the relationship between reading comprehension, thinking skill and students ability in speaking. Then, correlate it with the students' ability in critical thinking.

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