

## THE EFFECT OF DIRECTED READING THINKING ACTIVITY (DRTA) ON READING COMPREHENSION

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### Informasi Artikel

#### Riwayat Artikel :

Submit, 23 Juni 2023

Revisi, 4 Juli 2023

Diterima, 23 Juli 2023

Publish, 15 Januari 2024

#### Kata Kunci :

DRTA,

Reading Comprehension,

Report Text,

Vocational Students.



### ABSTRAK

This study focuses on the effect of the Directed Reading Thinking Activity (DRTA) method on students' reading comprehension. This study established the population of this research based on the vocational school in East Java. The design of this study used a quasi-experimental with the experimental and control groups. The treatment of the experimental group acquired 83.64 (SD = 8.02) while the mean scores before and after taking the treatment of DRTA, the effect were significant ( $P > 0.05$ ). The mean scores of the experiment group were significantly higher than those of the control group ( $P > 0.05$ ). In addition, the treatment was effective in enhancing students' logical improvement in reading comprehension. In conclusion, this study demonstrates that the Directed Reading Thinking Activity (DRTA) method can improve students' reading comprehension.

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## 1. INTRODUCTION

Reading has been mentioned as one of the essential skills because it is necessary to be proficient in reading (Grabe & Stoller, 2014). The role of reading is a core in the learning process through reading, students or people will learn something new. It will be difficult for students to understand a piece of information when they have low reading skills. In order to perform better in school and after school, reading skills need to be put into consideration to master them.

Nevertheless, the activities of reading cannot be interpreted only by reading a text itself. Reading activities must be followed by the reader's understanding of the text (Oakhill et al., 2015). The level of readers' reading comprehension is important because accuracy helps the readers learn and work easily. Following this, if students have a low accuracy of comprehension, the tendency to perform low in their academic activities increases.

Moreover, comprehending text is not easy as it seems. In order to comprehend a reading text, it needs

to focus on discourse, make a reasonable conclusion, and differentiate between implicit and explicit information from the text (McNamara, 2017). The activities also involve the readers' prior knowledge to make them aware of what they are about to read. In addition, the readers need to determine the purpose, plot, character, and many more. Thus, acquiring a good comprehension of text requires numerous things to do while reading the text at the same time.

Teaching reading in a non-native country such as Indonesia, where English is not the national or second language for most citizens, is quite challenging. According to (Tsang, 2022), English foreign language (EFL) learners do not get the same amount of exposure as native students or students who studied English as their second language. Moreover, (Duran et al., 2019) argue that there are still significant difficulties for English teachers in the classroom, one of which is the variety of students' skill levels. EFL learners only get material and exposure to English only at school in teaching-learning activities in a limited amount of time. Additionally, in their daily

life, students barely used English as a language or medium for communication since mostly they use their national language or vernacular. This routine makes students feel that reading in English is some kind of burdensome because of a lack of exposure to English in their daily activities.

In the education field, according to (Balqis, 2022), students struggle to understand words or vocabulary, sentences, and paragraphs which makes them translate all of the words in order to get the essentials of the text. This makes students too dependent on translator applications and students tend to be slow and confused in understanding the meaning of the text that has been read. It causes students highly lost in the learning process.

Meanwhile, based on the curriculum most schools still use nowadays, reading still a key role in teaching and learning. It can be seen from the textbook used by junior and senior students, that reading takes up most of the book for teaching-learning activities. In order to overcome the problem, (Song et al., 2020) suggested that teachers and educators establish various ways to help students comprehend a text starting from educational games, and interactive presentations and developing diverse techniques to support learning activities. One technique that can support students to level up their comprehension is the Directed Reading Thinking Activity (DRTA).

Directed reading thinking activity (DRTA) is an approach to help students better comprehend reading (Crawford et al., 2005) The approach can be used for the whole class setting and during the learning section is helpful in order to increase critical thinking so that the students can have a better comprehension of the text given. According to (Purba & Lubis, 2019), while using this technique, students' ability before, while, and after reading is being observed because students will be required to make predictions and then prove those predictions during using this technique. Moreover, using DRTA as a game help students engage with the learning process and boost students learning interest, especially focusing on reading. Therefore, this technique will help students to have a better comprehension ability. This technique was originally for narrative text however the researcher intended in testing this technique for another long text, which is report text. Related to this, the researcher develops a problem which is: is there any effect of using Directed Reading Thinking Activity (DRTA) on the reading comprehension of vocational students?

## 2. RESEARCH METHOD

This research is a quasi-experimental study involving two classes a control class and an experimental class. The reason for choosing this type of research is because the research aims to find causal relationships between variables where the experimental class will receive treatment using the Directed Reading Thinking Activity (DRTA)

technique. The research was conducted at a Vocational school and involved the eleventh graders' students

The research was conducted 4 times and taken a report text as material for implementing this technique. At the first meeting, a pretest was carried out for both classes to measure the extent of student's English proficiency. At the second and third meetings, students in the experimental class will be given DRTA treatment and the control class will learn English in a conventional way. At the last meeting, a post-test will be carried out for both classes to find out the effectiveness of using the technique. Pretest and post-test were done by answering the reading about the report text. There are 25 multiple-choice questions about the natural disaster report text.

## 3. FINDING AND DISCUSSION

This section explained the collected data and discussion of the research's results.

### The calculation of the try-out test

There were 25 multiple-choice types of questions were distributed to the students to find out the reliability of the questions. The result of the reliability can be seen below:

Table 1 Reliability Statistics

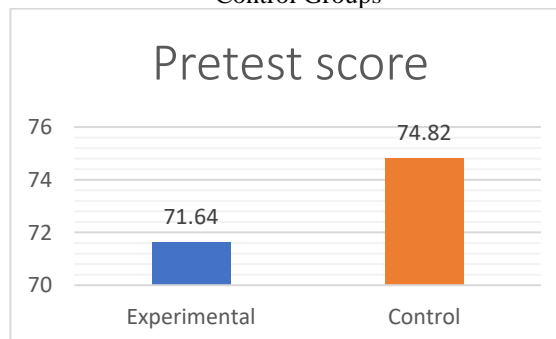
Reliability Statistics	
Cronbach's Alpha	N of Items
.842	25

Based on the table, the result reported that Cronbach's Alpha score for this statistic is .842. Based on that score, it can be concluded that the level of reliability for the questions is very reliable.

### The calculation of students' pretest score

At the first meeting, a pretest was carried out in the experimental class and the control class. From the results obtained, the pretest results between the two groups were not much different. the experimental class got an average result of 71.64 and the control class got an average result of 74.82. The result data can be seen in the table below

Figure 1 The Pretest Score of Experimental and Control Groups



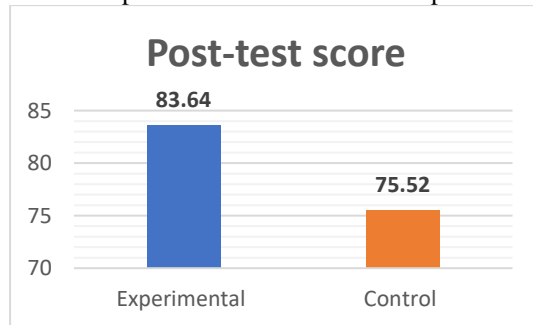
Based on the table above, it can be seen that the average pretest scores were not much different from one group to another.

### The calculation of students' post-test scores

The last meeting is to conduct a post-test. This is to find out whether the Directed Reading Thinking

Activity (DRTA) effective or not to boost students' reading comprehension. based on the post-test result, the experimental class got 85.64 and the control class got 75.52. The data can be seen in the table below.

Figure 2 The Post-Test Score of Experimental and Control Groups



### The test of normality and homogeneity

The normality is a test that is carried out to determine whether the data have a normal distribution or not. The researcher chose Kolmogorov-Smirnov for the normality test because the subjects of the research are quite big and the subjects are from two different populations or groups (Dodge, 2008). Here is the result of the normality test.

Table 2 Test of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PretestEx	.134	34	.130	.967	34	.378
PosttestEx	.119	34	.200 <sup>*</sup>	.964	34	.309
PretestCo	.146	34	.064	.930	34	.030
PosttestCo	.124	34	.200 <sup>*</sup>	.956	34	.187

<sup>\*</sup>. This is a lower bound of the true significance.  
a. Lilliefors Significance Correction

Based on the analysis above, from the table in Kolmogorov-Smirnov, it can be seen that the value is greater than .05, which means that the data was normally distributed.

After running the normality test, the next test is conducted a homogeneity test. This homogeneity test aims to determine whether the population comes from the same group or is homogenous. The homogeneity test results can be seen in the table below.

Table 3 Homogeneity Test

Pretest	Levene Statistic	df1	df2	Sig.
Based on Mean	.243	1	66	.624
Based on Median	.217	1	66	.643
Based on Median and with adjusted df	.217	1	64.840	.643
Based on trimmed mean	.230	1	66	.633

Based on the analysis above, the significance value based on the mean is .925. This result shows that it was bigger than .05 which means that the data was homogenous.

### T-test

After the normality and homogeneity tests were run, the next step is to examine the hypothesis using a t-test. The first data to analyze is the pretest score from the experimental and control groups. The data were analyzed using an independent sample t-test. The analysis can be seen in the table below.

Table 4 Independent Sample T-Test of Pretest Score

		Pretest	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.243	
	Sig.	.624	
t-test for Equality of Means	t	-1.579	-1.579
	df	66	65.084
	Sig. (2-tailed)	.119	.119
	Mean Difference	-3.17647	-3.17647
	Std. Error Difference	2.01171	2.01171
	95% Confidence Interval of the Difference	Lower	-7.19298
	Upper	.84004	.84109

The table shows the statistics of the pretest score from the experimental and control groups. According to the data, the mean score of the experimental class was less than the control group. The Experimental Class Group Acquired 71.64 (SD = 8.77) and the control group's mean achieve 74.82 (SD = 7.78). The Sig value for the equality of variances in this analysis is .624 greater than .05. It means that the two variables were not significantly different.

The second data to analyze is the post-test score from the experimental and control groups. The result can be seen in the table below.

Table 5 Independent Sample T-Test of The Post-Test Score

		Posttest	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.009	
	Sig.	.925	
t-test for Equality of Means	t	4.150	4.150
	df	66	65.993
	Sig. (2-tailed)	.000	.000
	Mean Difference	8.11765	8.11765
	Std. Error Difference	1.95589	1.95589
	95% Confidence Interval of the Difference	Lower	4.21258
	Upper	12.02272	12.02272

Table 4 shows the statistics of the post-test from the experimental and control group. Based on the data, the mean score from the experimental group increased and surpassed the control group. After the treatment, the experimental group acquired 83.64 (SD = 8.02) while the control group achieve 75.52 (SD = 8.10).

Furthermore, the researcher intended to know how far the effectiveness of the DRTA technique is in learning reading comprehension. The researcher compared the pretest and posttest scores of students in the experimental class and tested them using SPSS. the results can be seen in the table below.

Table 6 Paired Sample Statistics

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PretestEx	71.6471	34	8.77283	1.50453
	PosttestEx	83.6471	34	8.02225	1.37580

The result from the paired samples statistics shows that there is an improvement in students' mean scores before and after taking the treatment. The mean

score before the students taking the treatment was 71.64 (SD = 8.77). On the other hand, the average score of students after taking the treatment was 83.64 (SD = 8.02). It shows that there is an enhancement in students' reading comprehension after using Directed Reading Thinking Activity (DRTA).

Table 7 Paired Sample T-Test of The Experimental Class

Paired Samples Test		Pair 1 PretestEx - PosttestEx
Paired Differences	Mean	-12.00000
	Std. Deviation	10.87672
	Std. Error Mean	1.86534
	95% Confidence Interval of the Difference	Lower -15.79507 Upper -8.20493
	t	-6.433
	df	33
	Sig. (2-tailed)	.000

The students' results on the pretest and post-test differed by a mean of 12.00, according to the study above. The data analysis shows that the t-value (6.43) is larger than the  $t_{table}$  (2.03). Furthermore, the sig value (.000) which was less than .05. Both of these results indicate that the treatment of Directed Reading Thinking Activity (DRTA) considerably impacts the reading comprehension of vocational students.

The researcher also examined the pretest and post-test results from the control group by using paired sample t-test. The result of the test can be seen in the table below.

Table 8 Paired Samples T-Test Control Group

Pair 1	Mean	N	Std. Deviation	Std. Error Mean
PretestCo	74.8235	34	7.78682	1.33543
PosttestCo	75.5294	34	8.10625	1.39021

The result from paired samples statistics shows that the pretest and post-test scores in the control group were not different from one to another. The average score of students in the pretest situation was 74.82 (SD = 7.78). Meanwhile, the average score for the post-test was 75.52 (SD = 8.10). The further analysis for the control group can be seen below:

Table 9 Paired Samples T-Test Control Group

		Paired Differences		95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
Pair	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
1 PretestCo -	-	10.16092	1.74258	-	2.83943	-	33	.688
PosttestCo	.70588			4.25119		.405		

Based on the table, it shows that the average score in the control group does not differ very much. There are only 0.7 differences between the pretest and post-test scores. In addition, the sig value (.688) was higher than .05, which indicates that there is no significant difference between the test scores.

In order to ensure that the Directed Reading Thinking Activity is effective rather than the conventional method of teaching reading, the researcher examined the effect size from both of the

groups. The effect size is measured with Cohen's d to determine how much the significance of one method. According to the calculation of Cohen's d, the experimental group achieved 1.42 (large effect) and the control group achieved 0.08 (small effect). Based on the result, the experimental group has a higher significance than the control group. This means that the Directed Reading Thinking Activity (DRTA) is effective compared with the conventional method of teaching reading comprehension to vocational students.

### Discussion

This research aims to determine whether the Directed Reading Thinking Activity effectively improves vocational students' reading comprehension. Therefore, this part is purposed to highlight the findings and confirm the above technique's effectiveness.

Reading is an essential element in the teaching-learning procedure and as a complex procedure, it requires proficiency, scheme, and basic knowledge (Arya Azzahara & Eka Putrawan, 2018). In order to help students in understanding the text, the use of the appropriate technique is needed. This research determined the effect of the Directed Reading Thinking Activity (DRTA).

Based on the previous explanation, the  $t_{table}$  from the paired sample t-test is 6.43. This is greater than the  $t_0$  which is 2.03. This means that the  $H_0$  that stated the Directed Reading Thinking Activity (DRTA) significantly affects students' reading comprehension. This is similar to previous research which reported that the technique has a great advantage in developing students' reading comprehension skills (Ardhian et al., 2020).

Based on the analysis, it can be seen that there are significant differences in the score from the post-test of the experimental and control class. The average post-test score in the experimental is 83.64 while the average post-test score in the control class is 75.52. This result is quite similar to the previous research (Nurmadina & Yuliah, 2021), which said that the Directed Reading Thinking Activity (DRTA) makes a good input to the students' logical improvement.

The Directed Reading Thinking Activity (DRTA) also effectively boosts students' scores. It can be seen from the experimental class that they improve their average score after the implementation of the technique. The average score of the pretest was originally 71.64 and after the treatment, the average score increased to 83.64. This result is also in line with the previous studies which claimed that the Directed Reading Thinking Activity (DRTA) is beneficial for enhancing students' reading understanding (Yazdani & Mohammadi, 2015).

Based on the explanation above, it proved that the Directed Reading Thinking Activity (DRTA) is effective in improving students' reading comprehension. Specifically, for this quasi-experimental research, the technique is influential in

improving students' logical improvement in determining certain information clearly stated in the text and detailed information about the text.

#### 4. CONCLUSION AND SUGGESTION

The research concluded that there was a significant difference between the students who were taught using Directed Reading Thinking Activity (DRTA) and those who were not. The result displayed that the average score of the post-test for the experimental is higher than the control class. Further, the result showed that the  $t_0$  (6.43) is bigger than the  $t_{table}$  (2.03). It implies that  $H_a$  was accepted and the  $H_0$  was rejected. The technique established the students into dynamic students in order to understand more from the reading text. The technique also helps students in determining given and detailed information. It can be concluded that the Directed Reading Thinking Activity (DRTA) was effective in the teaching and learning process in reading comprehension of the report text.

As the method is effective in improving students' reading comprehension, the researcher would like to offer suggestions. As for the teacher, In the learning procedure, the instructors are expected to be more creative. The selection of the method used must also be by the criteria of students and the learning objectives to be achieved. Therefore, teachers can carry out learning easily and can help students to understand the material even further. In teaching reading, the Directed Reading Thinking Activity (DRTA) method can be used to learn comprehension to increase students' understanding. Alongside that, teachers can use digital technology as a paper substitute to carry out the teaching and learning process easier. Furthermore, as for the future researcher In order to continue to innovate and have a positive impact on educational development, future researchers can arrange research involving the implementation of the method. Although it is synonymous with reading skills, the application of this method can involve other language skills such as writing, listening, or speaking.

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