CHAPTER IV
RESEARCH FINDINGS AND DISCUSSION

This chapter discusses research findings which include data descriptions, statistical processing of data, and results of data processing.

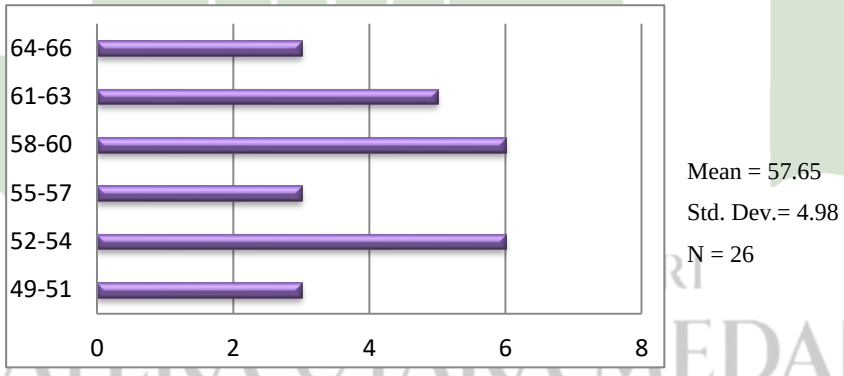
4.1 Research Finding

4.1.1 Data Description

Researchers obtained data from the experimental class (XI Mia-2) and the control class (XI Mia-4). The result shows that there are two different data. The researcher used the pre-test and post-test for the two experimental classes which were taught using the DRTA strategy and the control class did not use the DRTA strategy to obtain data. Pre-tests in both classes were given before the researchers treated the students. The researcher gave a pre-test in both classes at the first meeting. Then after the researcher did the treatment, the researcher gave a post-test to the students at the end of the meeting.

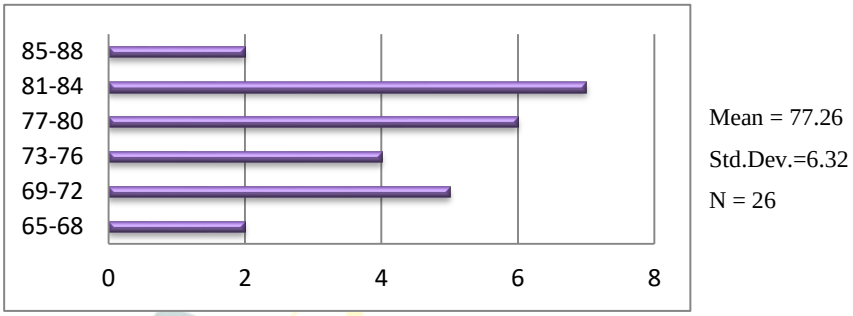
4.1.1.1 Experimental Class

Figure 4.1
Pre-Test of Experimental Class



From the pre-test of the experimental class, the research collects the required score. The pre-test scores showed that there were 3 students who got the lowest score, which was 49-51 out of 100. Then, there were 3 students who got the highest score, namely 64-66 out of 100. From the test results, the researcher found that the pre-test average was 57.65.

Figure 4.2
Post-Test of Experimental Class

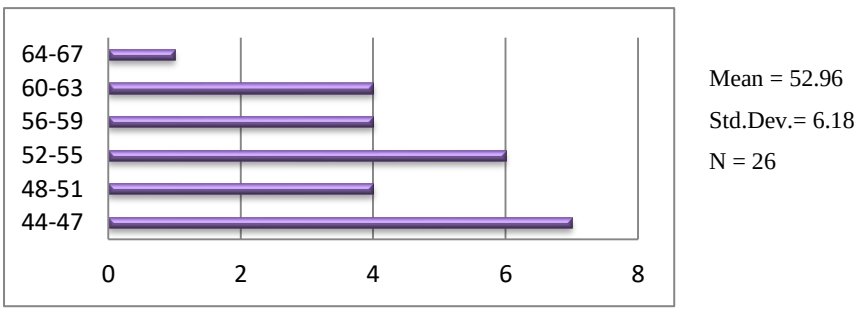


From the experimental class post-test the researcher collects the required score. The post-test scores showed that 2 students got the lowest score, which was 65-68 out of 100. Then, there were 2 students who got the highest score, which was 85-88 out of 100. From the test results, the researcher got the average of the post-test 77.26.

In this case, two tables in the experimental class for the pre-test and post-test, there are differences in student scores. The difference of the student scores is due to an increase in student scores in the post-test. During the research process, the researcher used the DRTA strategy, where the DRTA strategy was able to focus students' involvement in the text. So that it will make students more focused in understanding the contents of the text and students are more active in thinking (Rahim, 2008). With that the results of student scores at the pre-test were still low, then with the researchers using the DRTA strategy the scores on the post-test students increased. This DRTA strategy has a good influence on learning to critical thinking students' on reading comprehension.

4.1.1.2 **Control Class**

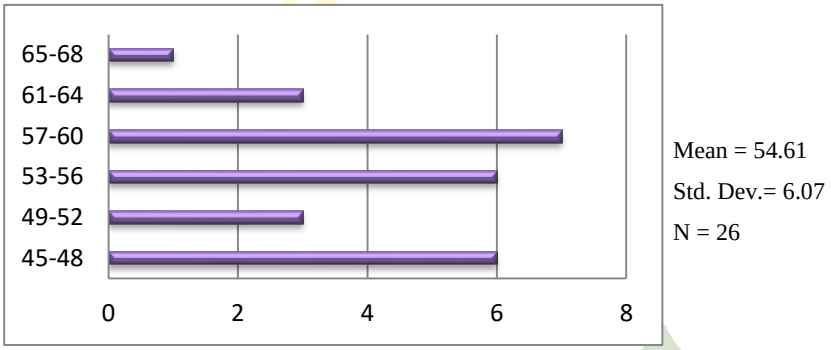
Figure 4.3
Pre-Test of Control Class



From the pre-test of the control class, the research collects the required scores. The pre-test scores showed that there were 7 students who got the lowest score, which was 44-47 out of 100. Then, there was also 1 student who got the highest score, which was 64-67 out of 100. From the test results, the researcher got the pre-test average is 52.96.

Figure 4.4

Post-Test of Control Class



From the post-test control class, the research collects the required score. The post-test scores show that there are 6 students who get the lowest score, which is 45-48 out of 100. Then, there is 1 student who gets the highest score, which is 65-68 out of 100. From the test results, the researcher gets the average of the post-test 54.61.

So with that, the two tables in control class for the pre-test and the post-test, there is an increase in the post-test but not high or still low. This is because the method used in the control class is the conventional method, and there is no specific way to teach critical thinking to students' reading comprehension by using the DRTA strategy in this control class.

4.1.2 **Analysis of Data**

4.1.2.1 **Normality Test**

Shapiro-Wilk was used to test normality because the researcher used a small sample or sample less than 50 samples. To test the research hypothesis, the data must be normally distributed and homogeneous. So that the normality test can be done first. The normality test was carried out from the Pre-Test using the Shapiro-

Wilk test which was calculated using SPSS 22.0 with a significance of 0.05 to find out whether the data was normally distributed or not.

Table 4.1 Normality Test

Tests of Normality

	Class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Result of The Study	Pre-Test Experiment Class (DRTA)	,143	26	,186	,953	26	,274
	Post-Test Experiment Class (DRTA)	,167	26	,060	,936	26	,107
	Pre-Test Control Class (Conventional)	,102	26	,200*	,951	26	,241
	Post-Test Control Class (Conventional)	,102	26	,200*	,958	26	,360

1) Normality Test of Experimental Class

Based on the results of the normality test using SPSS 22.0 in the experimental class and control class, it can be seen in the table above. The researcher obtained pre-test data for the experimental class using Shapiro-Wilk. Researchers get rcount 0.274, rcount > rtable (0.274 > 0.05). It means that the pre-test scores in the experimental class are normally distributed. Then, the researcher obtained post-test data for the experimental class using Shapiro-Wilk. Researchers get rcount 0.107, rcount > rtable (0.107 > 0.05). That is, the post-test scores in the experimental class are normally distributed.

2) Normality Test of Control Class

The researcher obtained pre-test data from the control class using Shapiro-Wilk. Researchers get rcount 0.241, rcount > rtable (0.241 > 0.05). That is, the pre-test scores in the control class are normally distributed. Then, the researcher got post-test data from the control class using Shapiro-Wilk. The researcher got an rvalue of 0.360, rvalue > rtable (0.360 > 0.05).

It means that the post-test scores in the control class are normally distributed.

4.1.2.2 **Homogeneity Test**

After testing the normality test, the researcher continued to test the homogeneity. It would be calculated by using SPSS 22.0 to know while the data variance of post-test (experimental class and control class) would be homogeneous. The researcher used the Levene statistic test to calculate the homogeneity test. The data would be homogenous if the result of the data calculation is higher than 0.05.

Table 4.2 Homogeneity Test

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
The Result of Study on The Student	Based on Mean	,142	1	50	,708
	Based on Median	,119	1	50	,731
	Based on Median and with adjusted df	,119	1	49,618	,731
	Based on trimmed mean	,120	1	50	,730

The data shows that the significance of the post-test in the experimental class and the control class is 0.708. These results indicate that it is greater than 0.05, which means that both the experimental class and the control class have the same variance and are homogeneous.

4.1.2.3 **Hypothesis Test**

After calculating the normality test and homogeneity test and gained the result that show the data was normally distributed and homogeneous, the researcher measured the t-test by using SPSS 22.0. To test the hypothesis, the t test is used which is useful for showing the partial effect of each independent variable and on the dependent variable.

Table 4.3 Hypothesis Test

Group Statistics

	Class	N	Mean	Std. Deviation	Std. Error Mean
Result of The Study	Post-Test Experiment Class (DRTA)	26	77,27	6,322	1,240
	Post-Test Control Class (Conventional)	26	54,62	6,080	1,192

Based on the table above, it is known that there are significant differences between the experimental class and the control class. This can be seen from the group statistics which show the average (Mean) score obtained by the experimental class is 77.27 while the average (Mean) score obtained in the control class is 54.62. So, descriptive statistics can be concluded that there is a difference in the average student learning outcomes between the experimental class and the control class. Furthermore, to prove whether the difference is significant or not, we must interpret the following independent test output below:

Table 4.4

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Result	Equal variances assumed	,142	,708	13,170	50	,000	22,654	1,720	19,199	26,109
	Equal variances not assumed			13,170	49,924	,000	22,654	1,720	19,199	26,109

In the table above that the researcher used an independent sample T-test. Because the samples used in this study were not the same or the two groups were not paired. This study tested two different classes, namely class XI-MIA 2 and class XI-MIA 4. If the value of Sig. (2-tailed) 0.000 < 0.05, which means that there is a significant influence between the learning outcomes of the experimental class and the control class. Conversely, if the value of Sig. (2-tailed) of 0.000 <0.05 means that there is no significant effect between learning outcomes in the experimental class and the control class. Thus it can be concluded that there is a significant difference between the average student learning outcomes in experiment class and control class

The last calculation is hypothesis testing. This calculation is very important to answer the formulation of the research problem to find out the results of students' speaking skills that have been achieved after learning using the direct method at MAS Muallimin UNIVA Medan. So, the conclusion is as follows:

a. Ha : There is a significant difference in students' critical thinking skills on reading comprehension who are taught using the DRTA Strategy and students who are taught without using the DRTA Strategy.
b. H_0 : There is no significant difference in students' critical thinking skills on reading comprehension who are taught using the DRTA Strategy and students who are taught without using the DRTA Strategy.

Then, the criteria for testing the hypothesis are as follows:

1. Ha is accepted if tcount > ttable or if Sig. (2-tailed) < 0.05
2. H_0 is accepted if tcount < ttable or if Sig. (2-tailed) > 0.05.

Based on post-test t-test calculations in the experimental class and control class, it is known that tcount = 13.170 > ttable = 1,676 and Sig. (2-tailed) is 0.000 < 0.05. To summarize, it can be illustrated that t-count > T table and Sig. (2-tailed) < 0.05. Therefore, Ha is accepted, which means the DRTA Strategy is effective to critical thinking on students' reading comprehension.

4.2 **Discussion**

The research conducted at MAS Muallimin UNIVA Medan in class XI-Mia 2 and XI-Mia 4 aims to improve students' critical thinking skills on reading comprehension by using the DRTA strategy. In this case the researcher took three steps to collect data. The first step is given pre-test to students. Then the researcher carried out the treatment using the DRTA strategy in the experimental class and without the DRTA strategy in the control class. In the last step, the researcher gave a post-test. The researcher gave a post-test to students to find out the effect after treatment. So that, there is a difference the average student learning outcomes between the experimental class and the control class. The difference between the two classes is due to the learning strategy used. Previously, at the time of the pre-test student scores are still relatively low. And after being given treatment, there was an increase in student scores. This is what distinguishes between the pre-test and the post-test.

After the data has been collected, the researcher performs a calculation of the normality test and homogeneity test using SPSS 22.0. So it can be proven that the normality test on pretest and post-test data in the experimental class and control class is normally distributed, and in the homogeneity test the data is stated to be homogeneous. Furthermore, researchers analyzed using the t-test. the results of the t-test show that the data has a significant effect on students' critical thinking skills on reading comprehension. The results contained in the independent sample test table show that the tcount is 13.170 (tcount > ttable) or if sig. (2-tailed) is 0.000 < 0.05. Means that Ha (alternative hypothesis) is accepted and H_0 (null hypothesis) is rejected. So it can be concluded that there are significant differences in students' critical thinking skills on reading comprehension using the DRTA Strategy.

Using the DRTA strategy has internal benefits because by using the DRTA strategy students can read the contents of the reading and capture the main ideas in it, so that there is an increase in the learning process of critical thinking on students' reading comprehension. According to Pascual et al., (1995) reading comprehension is an activity that is carried out by reading the reading material by capturing the main points of the mind more sharply and also deeper, giving rise to

a sense of satisfaction in itself after reading the reading material to completion. As with critical thinking, using the DRTA Strategy has an influence on students' critical thinking, students become more aware of what is behind the story. According to Grigg et al., (1998) argues that critical thinking is the process of evaluating evidence with several claims to determine a logical conclusion derived from this evidence which is carried out alternatively. This is because students want to do reading activities.

In addition, the existence of this reading activity will be able to influence students' critical thinking skills, especially by using the DRTA Strategy this will make students understand more about the meaning of the contents of the reading and also improve students' critical thinking skills. According to Muhammad et al., (2019) reading affects critical thinking skills in a person, because by reading a person's insight will broaden, this comes from the reading material that someone reads. The more reading sources that are read, the more insight they have, so that this will make students' thinking skills develop. Critical thinking on students' reading comprehension increases, because students want to do reading activities to increase their knowledge, and students also want to do thinking activities to understand the contents of reading material.

The explanation above is supported by Fadillah (2020) thesis entitled Improving Students' Critical Thinking in Reading Comprehension through Directed Reading Thinking Activity at SMAN 2 Enrekang. The results showed that there was an increase in students' critical thinking on reading comprehension before and after giving treatment using narrative text. So the results of the pre-test and post-test are significantly different. Based on descriptive statistics, the pre-test and post-test prove that the post-test is higher. Based on this explanation, Directed Reading Thinking Activity (DRTA) can increase students' critical thinking on reading comprehension. There is an increase in critical thinking in students' reading comprehension because there is an increase in students' critical thinking in terms of relevance and accuracy, this is supported by the average score of students between the pre-test and post-test.

In addition, there is also related research by Azahro (2022) entitled Improving Students' Reading Comprehension through Directed Reading Thinking

Activity (DRTA) Method (A Pre-Experimental Research of Twelfth Grade Students of SMAN 3 Bulukumba). The results of his research show that there is an influence on students' reading comprehension, because students understand more easily with predictions that identify the main ideas and supporting details and that can be seen from the results of better students' reading scores. This is because the DRTA strategy makes students become active readers, besides that students are able to use predictions when reading. So that learning to read comprehension is very effective.

Meanwhile, the research by Putra (2017) entitled The Correlation between Critical Thinking and Reading Comprehension Achievement of English Education Study Program Students' of UIN Raden Fatah Palembang. The results of the research that there is no significant relationship between students' critical thinking and reading comprehension. Because students with a high level of critical thinking, of course they will have good reading comprehension. Meanwhile students who have low critical thinking skills have poor reading comprehension. This means that if students have reading comprehension, it is not certain that they can think critically.

Based on the explanation above, the study found that critical thinking skills on students' reading comprehension had a significant effect on class XI students at the MAS Muallimin UNIVA Medan school. This is supported by the significant results in the pre-test which are lower than the post-test. In other words, students experience more improvement when using the DRTA Strategy, students can understand the contents of the reading so that student learning outcomes also experience a better improvement.