CHAPTER IV
RESEARCH FINDINGS AND DISCUSSION

In this result of study, researcher emphasizes two sub-chapters which contain of Research Finding and Discussion. These are the result of study which contains of:

A. Research Findings

1. The Critical Reading Strategies Treatment

To explain the critical reading strategies implementation, this point describes the summary of process of lesson plan. In the process of treatment, the researcher was observed by the real lecturer of the class who also became the one validated the instrument. The lesson plan has been crosschecked with the steps of critical reading strategies theory. Here is the description:

Pre-tests were given in the first meeting before critical reading strategies implementation. Students of English Teacher Education Department at State Islamc University were the objects of the study. The students did the pre-test very quietly. After the pre-test activity, the researcher gave short explanation about critical reading strategies using papers which she gave one to each student. The researcher also informed the students about what she was going to do in next three meeting with students which would be full with Critical reading strategies in analyzing voice material. The researcher also asked the students to read that paper at home before she close the class.

In the second meeting, the researcher started to do the critical reading strategies implementation, but, before it, the researcher did brain storming to the students to review short explanation which they have done in the previous meeting. To start the implementation, the researcher explained critical reading strategies through power point in LCD. After the explanation, the researcher opened question-answer session related to critical reading strategies explanation to the students. Then, the researcher gave an academic text to each student. The researcher asked the students to read it. The point which was needed to be concerned by students in the text is the "voice" which means statement or opinion of writer or linguist in the

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text. Then, the last activity in this meeting is the students are asked to find some voices of the text without analyzing the voice, using Critical reading strategies which have been explained and discussion between researcher and the students.

In the activities of third meeting of the implementation were; first, the researcher gave an academic text which is different with previous meeting to the students. The, she asked them to read it. After that, the students are asked to analyze the voices in the text, whether the voice belongs to the writer or the linguist. The researcher also asked the students to involve their experience and point of view while reading. This is also one of most important point of critical reading strategies. Next activity was; students were asked to write some questions about what they want to know from the text related to writer and linguist's voice. This activity is also one of critical reading strategies' important points. In the last activity, the researcher opened question-answer session related to critical reading strategies which have been applied in analyzing voice of the text.

In the last meeting, the researcher gave Posttest and Questionnaire to the objects of study which use same questions with pre-test. The objects of study are given questionnaire related to their improvement in their critical thinking ability that along those treatments and tests they have practiced critical reading strategies to analyze voice in their class.

Those are the processes of critical reading strategies which have done by the researcher. Then, those processes was crosschecked by the theory of critical reading strategies procedure.

2. Significance of Critical Reading Strategies Application

To answer research question number two which states how is students' critical thinking ability before and after treatment of critical reading strategies, this point shows questionnaire result and pre-test, post-test result which signifies students' critical thinking ability. Here are the results:

a. Questionnaire Result

In collecting data, the researcher presents questionnaire result about *"Effectiveness of Critical Reading Strategies on Students' Critical Thinking Ability"* in this study, which has been given to respondents from 40 students of fourth semester at English Education Department. The result has been turned to numbers of scores. The respondents' initials list is in ***appendix 1***.

The Questionnaire consists of 15 questions about *"Effectiveness of Critical Reading Strategies on Students' Critical Thinking Ability"*. Each question has four options, in each alternative options, served scoring standard according to Sugiono as:[1]

    a.   Alternative option *"Always"* has 4 score
    b.   Alternative option *"Often"* has 3 score
    c.   Alternative option *"Sometimes"* has 2 score
    d.   Alternative option *"Never"* has 1 score

To make clearer about the data, the researcher serves the data of questionnaire result which has been gotten form 40 students of fourth semester at English Education Department. The researcher gives score to each student based on the criterion above. The result is of the questionnaire which have done by the students can be seen in ***appendix 4***

b. Pre and Post-Test Result

Besides that questionnaire result above, students' critical thinking ability data in critical reading subject also gotten from pre and post-test score result, as seen in ***appendix 5***.

The significance of this study means the different score between pre-test and post-test which show improvement. From the list of pre and post-test score above, it shows that

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[1] Sugiyono, *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*, (Bandung: alfabeta, 2016), 3.

there are significant differences between the tests. For further explanation how that improvement is found, the next point will explain with patterns.

3. **The Effectiveness of Students' Critical Thinking Ability**

To answer research question number three which states how effective is the critical reading strategies on students' critical thinking ability, this point shows analysis result of effectiveness of critical reading strategies on students' critical thinking ability which classifies students' critical thinking ability . Here is the result:

a. **Analysis result of Effectiveness of Critical Reading Strategies on Students' Critical Thinking Ability**

Based on the questionnaire above, the researcher makes a table to know percentage of Effectiveness of Critical Reading Strategies on Students' Critical Thinking Ability for fourth semester students at English Education Department questionnaire. Here is the percentage:

Table 4.1 The Percentage Result of Effectiveness of Critical Reading Strategies on Students' Critical Thinking Ability Questionnaire

Question Number	Alternative Answers							
	Always (4)		Often (3)		Sometimes (2)		Never (1)	
	F	%	F	%	F	%	F	%
1	4	35	15	37,5	11	27,5	0	0
2	2	55	16	40	2	5	0	0
3	1	52,5	14	35	5	12,5	0	0
4	0	75	9	22,5	1	2,5	0	0
5	6	65	11	27,5	3	7,5	0	0
6	2	55	14	35	4	10	0	0
7	5	62,5	13	32,5	2	5	0	0
8	8	20	24	60	8	20	0	0
9	1	27,5	18	45	11	27,5	0	0
10	2	30	18	45	10	25	0	0
11	3	32,5	17	42,5	10	25	0	0

12	2	55	15	37,5	3	7,5	0	0
13	29	72,5	9	22,5	2	5	0	0
14	24	60	12	30	3	7,5	1	2,5
15	14	35	24	60	3	5	0	0
Total	293		229		78		1	

From the table above, it can be explained the percentage in each number of questionnaire as:

In question number 1, there are 35% respondents answer that they are able to solve the problem which is given in critical reading class after they got *Critical reading strategies* application. There are 37,5% of respondents answer often, 27,5% of respondents answer sometimes and 0% of respondents answer never.

In question number 2, it is known that there are 55% of respondents answer that they are able to identify a problem which is given by lecturer in critical reading class after critical reading strategies application. There are 40% of respondents who answer often, there are 5% respondents who answer sometimes and 0% respondents answer never.

In question number 3, it is known that there are 52,5% of respondents who answer that they are able to identify a conclusion in a text in critical reading class after critical reading strategies application. There are 35% of respondents who answer often, 12,5% of respondents who answer sometimes and 0% respondents who answer never.

In question number 4, it is known that there are 75% of respondents who answer that they are able to identify reasons in a text in critical reading class after critical reading strategies application. There are 22,5 % of respondents who answer often, 2,5% of respondents who answer sometimes and 0% respondents who answer never.

In question number 5, it is known that there are 65% of respondents who answer that they are able to identify an assumption in a text in critical reading class after critical

reading strategies application. There are 27,5 % of respondents who answer often, 7,5% of respondents who answer sometimes and 0% respondents who answer never.

In question number 6, it is known that there are 55% of respondents who answer that they are able to give conclusion an argument of writer in a text, in critical reading class after critical reading strategies application. There are 35 % of respondents who answer often, 10% of respondents who answer sometimes and 0% respondents who answer never.

In question number 7, it is known that there are 62,5% of respondents who answer that they are able to make conclusion from any answer they have made in critical reading class after critical reading strategies application. There are 32,5 % of respondents who answer often, 5% of respondents who answer sometimes and 0% respondents who answer never.

In question number 8, it is known that there are 20% of respondents who answer that they are able to mention reasons logically to strengthened their answer in critical reading class after critical reading strategies application. There are 60 % of respondents who answer often, 20% of respondents who answer sometimes and 0% respondents who answer never.

In question number 9, it is known that there are 27,5% of respondents who answer that they are able to differentiate logic argument and illogic argument in critical reading class after critical reading strategies application. There are 45,5 % of respondents who answer often, 27,5% of respondents who answer sometimes and 0% respondents who answer never.

In question number 10, it is known that there are 30% of respondents who answer that they are able to develop and maintain writer's opinion in a text in critical reading class after critical reading strategies application. There are 45 % of respondents who answer often, 25% of respondents who answer sometimes and 0% respondents who answer never.

In question number 11, it is known that there are 32,5% of respondents who answer that they are able to guess about what issues will happen next in the text in critical reading class after critical reading strategies application. There are 42,5 % of respondents who answer often, 25% of respondents who answer sometimes and 0% respondents who answer never.

In question number 12, it is known that there are 55% of respondents who answer that they are able to give an example from the text which can strengthened their answer, in critical reading class after critical reading strategies application. There are 37,5 % of respondents who answer often, 7,5% of respondents who answer sometimes and 0% respondents who answer never.

In question number 13, it is known that there are 72,5% of respondents who answer that they are able to differentiate opinion and fact from a text in critical reading class after critical reading strategies application. There are 22,5 % of respondents who answer often, 5% of respondents who answer sometimes and 0% respondents who answer never.

In question number 14, it is known that there are 60% of respondents who answer that they are able to differentiate their experience with what happened in the text, in critical reading class after critical reading strategies application. There are 30% of respondents who answer often, 7,5% of respondents who answer sometimes and 2,5% respondents who answer never.

In question number 15, it is known that there are 35% of respondents who answer that they are often to ask to lecturer about the content of the text given, in critical reading class after critical reading strategies application. There are 60 % of respondents who answer often, 5% of respondents who answer sometimes and 0% respondents who answer never.

Starting from the result of *Effectiveness of Critical Reading Strategies on Students' Critical Thinking Ability* questionnaire above, it can known that the number of all ideal questionnaire score is 60 x 40 = 2400, the number of questionnaire which

gotten is 2015 it is from 15 items of questions and the number of respondents which there are 40 students. Thus, here are the pattern of how to know students' critical thinking ability level:

$$P \qquad = \frac{F}{N} \text{ x } 100\%$$

$$P \qquad = \frac{2015}{2400} \text{x } 100\%$$

$$P \qquad = 83,9 \%$$

Explanation:

P = Questionnaire Percentage

F = Frequency which is looked for its percentage (number of all questionnaire score)

N = Number of frequency (number of overall ideal score)

Through the result of counting above, it can be known that students' critical thinking ability level of fourth semester at English Education Department is 83,9 %. After the result is gotten from percentage counting, thus, the result of percentage need to be stated in quantitative statements according to Anas Sudijono, as this way:

75% - 100%   = Very good

50% - 75%   = Good

25% - 49%   = Good enough

≤ 24%   = Bad

The result which is gotten through questionnaire counting of critical thinking ability of fourth semester students at English Education Department of Islamic State University of Sunan Ampel Surabaya 83,9 % in interval 75% - 100% which means the objects of study have very good level in critical thinking after the treatment of critical reading strategies.

Besides the result of the questionnaire, data about students' critical thinking ability also can be gotten from the result of pre-test and post-test. The result of pre-test and post-test can be seen in *appendix 5.*

Based on the result of pre-test, means before the treatment of critical reading strategies are applied, it is gotten that the highest score is 85 and the lowest score is 42,5 To know students' critical thinking ability level before they were given the treatment of critical reading strategies, the researcher uses this pattern:

Range (R)   = highest datum – smallest datum

                 = 85 – 42,5

                 = 42,5

Number of interval class (k)

k = 1 + 3,3 log n

k = 1 + 3,3 log 40

k = 1 + 3,3 (1,60), where 'n' is the number of data (n=40)

k = 1 + 5,28

k = 6,28 ~ 7

So, the total classes which should be made is 7 classes.

Interval class length (C)

$C = \frac{J}{K}$

$C = \frac{42,5}{7}$

C = 6,71

So, the interval class length is 7

First class is:

Length class = (smallest datum + interval class length) − 1

First interval class length   = (42,5 + 6) − 1

= 47,5

So, first interval class is (42,5 - 47,5)

Second interval class   length   = (48,5 + 6) − 1

= 53,5

So, second interval class is (48,5 - 53,5)

Third interval class   length   = (54,5 + 6) − 1

= 59,5

So, third interval class is (54,5 − 59,5)

Fourth interval class   length   = (60,5 + 6) − 1

= 65,5

So, fourth interval class is (60,5-65,5)

Fifth interval class   length   = (66,5 + 6) − 1

= 71,5

So, fifth interval class is (66,5 − 71,5)

Sixth interval class   length   = (72,5 + 6) − 1

= 77,5

So, sixth interval class is (72,5 − 77,5)

Seventh interval class   length $= (78,5 + 6) - 1$

$$= 83,5$$

So, seventh interval class is (78,5 – 85,5)

Here is list of students' *pre-test* score frequency distribution in critical reading class before they were given *critical reading strategies* treatment in the class. The list will be shown in this table:

Table 4.2 List of Students' Pre-test Score Frequency Distribution

No	Interval Class	Frequency Absolute	Frequency Relative (%)
1	42,5 – 48,5	8	20
2	49,5 – 55,5	10	25
3	56,5 – 62,5	8	20
4	63,5 – 69,5	6	15
5	70,5 – 76,5	2	5
6	77,5 – 85,5	1	2,5
	Total	**40**	**87,5**

Besides the questionnaire and pre-test result as the data of students' critical thinking ability, here is shown students' post-test result score after the critical reading treatment. The score can be seen in *appendix 5*.

Based on the *Post-test* score, after given the critical reading strategies treatment, students get score 95 as the highest score and 52,5 as the lowest score. To know students critical thinking ability level after the critical reading strategies treatment, it can be explained by pattern like this:

Range (R)   = highest datum – smallest datum

$$= 95 - 52,5$$

$$= 42,5$$

Number of interval class (k)

k = 1 + 3,3 log n

k = 1 + 3,3 log 40

k = 1 + 3,3 (1,60), where 'n' is the number of data (n=40)

k = 1 + 5,3

k = 6,3 ~ 7

So, the total classes which should be made is 7 classes.

Interval class length (C)

$C = \frac{J}{K}$

$C = \frac{42,5}{7}$

$C = 6$

So, the interval class length is 6

First class is:

Length class = (smallest datum + interval class length) – 1

First interval class length = (52,5+ 6) – 1

$\qquad\qquad\qquad\qquad\qquad\qquad = 57,5$

So, first interval class is (52,5 – 57,5)

Second interval class   length   = (58,5+ 6) – 1

$\qquad\qquad\qquad\qquad\qquad\qquad = 63,5$

So, second interval class is (58,5 – 63,5)

Third interval class   length   = (64,5 + 6) – 1

$\qquad\qquad\qquad\qquad\qquad\qquad = 69,5$

So, third interval class is (64,5- 69,5)

Fourth interval class   length   = (70,5 + 6) − 1 = 75,5

So, fourth interval class is (70,5 − 75,5)

Fifth interval class   length   = (76,5 + 6) − 1

                                         = 81,5

So, fifth interval class is (76,5 − 81,5)

Sixth interval class   length   = (82,5+ 6) − 1

                                         = 87,5

So, sixth interval class is (82,5 − 87,5)

Seventh interval class   length   = (88,5+ 6) − 1

                                         = 93,5

So, seventh interval class is (88,5 − 93,5)

Here is list of students' *post-test* score frequency distribution in critical reading class after they were given *critical reading strategies* treatment in the class. Here is the table:

Table 4.3 Students' Post-test Score Frequency Distribution

No	Kelas Interval	Frekuensi Absolut	Frekuensi Relatif (%)
1	52,5-57,5	3	7,5
2	58,5-63,5	2	5
3	64,5 – 69,5	9	22,5
4	70,5 – 75,5	4	10
5	76,5 – 81,5	9	22,5
6	82,5 – 87,5	6	15
7	88,5 – 95,5	7	17,5
Jumlah		**40**	**100**

From the table, it can be seen that there are 3 students who have score around 52,5 until 57,5. There are 2 students who have score around 58,5-63,5. There are 9 students who have score around 64,5-69,5. There are 4 students who have score around 70,5-75,5. There are 9 students who have score around 76,5-81,5. There are 6 students who have score around 82,5-87,5 and there are 7 students who have score around 88,5-95,5.

B. Discussion

1. The Effectiveness of Critical Reading Strategies

In this point, the researcher involves theory about effectiveness of critical reading strategies into the process of researcher's critical reading strategies application. This point is also to answer research question number one which states that the researcher tried to describe the implementation of critical reading strategies on students' critical thinking ability. The critical reading strategies are declared as effective way on students' critical thinking if the implementation was suitable with the steps of critical reading strategies theory. Here is the involvement between the researcher's critical reading strategies application and critical reading strategies theory.

The process of critical reading strategies which are done by the researcher, there are two treatments. In the first treatment, the researcher did the critical reading strategies number one until number four. Which the strategies are Previewing: Learning about a text before really reading it, Contextualizing: Placing a text in its historical, biographical, and cultural contexts, Questioning to understand and remember: Asking questions about the content and Reflecting on challenges to your beliefs and values: Examining your personal responses. In the second treatment, the researcher applied critical reading strategies number five until number seven. Those are: Outlining and summarizing: Identifying the main ideas and restating them in your own words, Evaluating an argument: Testing the logic of a text as well as its credibility and emotional

impact and Comparing and contrasting related readings: Exploring likenesses and differences between texts to understand them better.[2] From the process which is done by the researcher, the treatments were done effectively. It is because the treatments are suitable with the critical reading strategies.

From the processes which had been done by the researcher, the researcher felt satisfied. That feeling is because, based on the processes which also crosschecked with lesson plan, it is also appropriate with critical reading strategies procedure theory. Other reason also came from the students' good respond and students' scores after the treatment.

2. **Critical Reading Strategies as a Treatment of Students' Critical Thinking Improvement**

In this point, the researcher involves theory about critical reading strategies as a treatment of students' critical thinking improvement into the result of before and after critical reading strategies application (Questionnaire and Pre,Post-test). It is also for discussing research question number two which tries to signify students' critical thinking ability before and after treatment of critical reading strategies. Here is the involvement between the result of questionnaire and pre,post-test and critical reading strategies as a treatment of students' critical thinking improvement theory.

Critical reading strategies in this study are 7 steps which are used by the researcher as a treatment to measure its effectiveness on students' critical thinking.[3] While, Students' critical thinking is the upper three levels of

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[2] Samuel W – Marllyn C.Salisbury, Critical Reading strategies. *Universitas Academics* (http://www.salisbury.edu/counseling/new/7critical_reading_strategies.html, accessed on November 29th, 2016)

[3] Samuel W – Marllyn C.Salisbury, Critical Reading strategies. *Universitas Academics* (http://www.salisbury.edu/counseling/new/7critical_reading_strategies.html, accessed on November 29th, 2016)

Blooms' taxonomy of educational objectives (analysis, synthesis and evaluation). That brain's activity also known as questioning, analyzing and criticizing (included in critical thinking aspects used in this study).[4] In this study, the researcher examined students' critical thinking ability by using critical reading strategies.

The effects of students' critical thinking ability themselves, according to Ennis are the text itself and how common the reader reads a text.[5] Although there are many other effects which can increase students' critical thinking, but critical reading strategies become significant strategies which effect students' critical thinking. the prove is that in this study, critical reading strategies give 84% of students improvement of their critical thinking ability.

Here is frequency distribution of students' critical thinking ability pre-test and post-test result based on criterion scoring used by researcher. It is shown in this table:

Table 4.4 Frequency Distribution of Students' Critical Thinking Ability Pre-Test and Post-Test Result Based on Criterion Scoring[6]

No	Interval	Frequency *Pre-Test*	Frequency *Post-test*	Categories
1	75 – 100	3	11	Advance Thinker
2	50 – 75	10	20	Critical Thinker

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[4] H.Ennis "Critical Thinking Assesment; *Theory into Practice, the Ohio State University*". Vol. 32, No.3, Summer 1993, 180.

[5] H.Ennis "Critical Thinking Assesment; *Theory into Practice, the Ohio State University*". Vol. 32, No.3, Summer 1993, 171

[6] Linda Elder – Richard Paul, "Critical Thinking Development: A Stage Theory" *The Critical Thinking Community,* (http://www.criticalthinking.org/pages/critical-thinking-development-a-stage-theory/483, accessed on March 1st, 2017)

3	25 – 50	15	5	Beginning Thinker
4	0 – 25	12	4	Unreflective Thinker

From the result which is shown above, it shows significant difference on students' critical thinking ability between before and after critical reading strategies. It is one line with a study which has been explained in previous study by Jinhong Yu's study. According to her, those critical reading strategies are proven effective on students' critical thinking ability. In Jinhong's study, besides critical thinking ability, it is also explained that critical reading strategies have other effect which are good for reading class. That is English reading improvement.[7] The difference between this study and that previous study is; this study measured the effectiveness of students' critical thinking ability using critical reading strategies. While in the previous study, the researcher analyzed what effects which students have after using critical reading strategies.

3. **The Improvement of Students' Critical Thinking Ability**

In this point, the researcher involves theory about the improvement of students' critical thinking ability into the result of researcher's analysis using SPSS. It is also for discussing research question number three which tries to classify the effectiveness of critical reading strategies on students' critical thinking ability. Then, here is the involvement:

Effectiveness, according to Fraser is a measurement of the match between stated goals and object of study's achievement. It is always possible to achieve 'easy', low-standard goals. In other words, quality in higher education

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[7] Jinhong Yu, "Analysis of critical reading strategies and its effect on college English reading". *Theory and Practice in Language Studies.* Vol.5 No.1, January 2015, 135

cannot only be a question of achievements 'outputs' but must also involve judgment about the goals.[8] While the effectiveness of critical reading strategies encourage students to be more critical and deeper in interacting with the text and the writer, and with the ideas and argument.[9]

In this point, the study is declared as an effective study if 70% of the objects of study got advance level after the critical reading strategies. It can be seen from the objects' of study scores of pre and post-test.

Before the researcher applied critical reading strategies in this study, she gave pre-test to measure critical thinking of the object of study. Thus, this pre-test result meant students' critical thinking ability level before critical reading strategies application by the researcher. The result of the pre-test showed that 70% of students have low level of critical thinking ability which based on the theory used by the researcher is *Unreflective Thinker*.[10]

Then, this study declares whether critical reading strategies effects students' critical thinking ability or not. The strategies is effective if 70% of the students have *The Advance Thinking and Practicing Thinker* (4 or 3 score) based on the criteria explained by Linda Elder after the application of critical reading strategies.[11] Thus, According

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[8] Fraser, 'Quality in higher education: an international perspective' in Green, D. (Ed.), *What is Quality in higher Education?* 1994 P. 101 (Buckingham, Open University press and society for Research into Higher Education (**http://www.qualityresearchinternational.com/glossary/effectiveness.htm**, assessed on February 28th 2017)

[9] Samuel W – Marllyn C.Salisbury, Critical Reading strategies. *Universitas Academics* (http://www.salisbury.edu/counseling/new/7critical_reading_strategies.html, accessed on November 29th, 2016)

[10] Linda Elder – Richard Paul, "Critical Thinking Development: A Stage Theory" *The Critical Thinking Community,* (http://www.criticalthinking.org/pages/critical-thinking-development-a-stage-theory/483, accessed on March 1st, 2017)

[11] Linda Elder – Richard Paul, "Critical Thinking Development: A Stage Theory" *The Critical Thinking Community,* (http://www.criticalthinking.org/pages/critical-thinking-development-a-stage-theory/483, accessed on March 1st, 2017)

to effectiveness measurement which used by researcher in this study, this study is effective, because after the analysis of statistics in this chapter, 84% of students have *Advance Thinker* level.[12]

After the researcher does the analysis like what has been shown in previous sub-chapter, it is still needed hypothesis testing analysis to prove the effectiveness of variable X (Critical reading strategies) on variable Y (Students' critical thinking ability) in Critical reading class at English Education Department of Sunan Ampel Islamic State University. The researcher uses statistic analysis T-test Paired – Sample T-test by using SPSS for windows. The result will be shown as:

Table 4.5 Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 students' critical thinking ability before critical reading strategies treatment	57.5000	40	10.19049	1.61126
students' critical thinking ability after critical reading strategies treatment	75.7000	40	11.10140	1.75529

[12] Linda Elder – Richard Paul, "Critical Thinking Development: A Stage Theory" *The Critical Thinking Community,* (http://www.criticalthinking.org/pages/critical-thinking-development-a-stage-theory/483, accessed on March 1st, 2017)

Table 4.6 Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	students' critical thinking ability before critical reading strategies treatment & students' critical thinking ability after critical reading strategies treatment	40	.442	.004

Table 4.7 Paired Samples Test

		Paired Differences							
			Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
		Mean			Lower	Upper			
Pair 1	students' critical thinking ability before critical reading strategies treatment - students' critical thinking ability after critical reading strategies treatment	-1.82000E1	11.27557	1.78282	-21.80610	-14.59390	-10.209	39	.000

From three tables above, it can be explained that:

1. In *Paired sample statistic* table, it shows description about students' critical thinking ability in critical reading class which is seen from *pre-test* (before treatment of critical reading strategies implementation) and *post-test* (after before treatment of critical reading strategies implementation). It is included the number of data, mean, standard deviation and standard error mean.

2. The number of data (N) in each *pre-test* and *post-test* is 40, the mean of pre-test (before treatment of critical reading strategies implementation) is 57,5000 and the mean of post-test (after treatment of critical reading strategies implementation) is 75,7000. Besides it, it is also shown that the standard deviation in each pre-test is 10,19049, and the standard deviation of post-test is 11,10140. Next is standard error. Each standard error for pre-test is 1,61126, while the standard error of post-test is 1,75529.

3. Based on the ratio or comparison between mean score of pre-test = 57,5000 and the post-test = 75,7000, it indicates that there is significant improvement on four semester students' critical thinking ability in critical reading class at English Education Department of Sunan Ampel Islamic State University.

4. Next is; in paired sample correlation table, it shows about data of correlation between students' critical thinking ability with the pre-test and post-test. Based on this table, there is a correlation that is 0,442. This table shows that there is a correlation between students' critical thinking ability in critical reading class before the implementation of critical reading strategies treatment and after the implementation of critical reading strategies treatment.

5. In paired sample test, it shows data of t-test analysis result two tailed samples which includes t-counting and significance.

6. Based on the data which has been gotten above, then it can be done a hypothesis testing by two ways as:
   a. Comparing t-counting and t-table
      If the t-counting is > t-table, means H_0 is rejected

While, if the t-counting is $<$ t-table, means H_0 is accepted

To see the value of t table, it needs to be based on freedom degree (df) which the number is $N - 1$, that is $40 - 1 = 39$. Based on the result of t-testing two tailed samples analysis, so the result is:

T-counting $\quad$ > T-table

10,209 $\quad\quad$ > 1,684

H_0 is rejected and H_a is accepted

Thus, it means that there is difference in students' critical thinking ability in critical reading class between before the implementation of critical reading strategies treatment and before the implementation of critical reading strategies treatment.
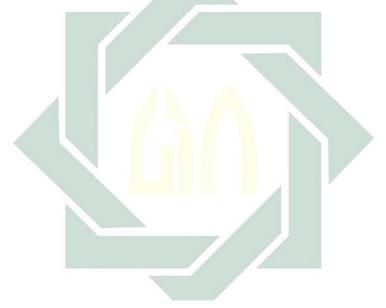
b. Comparing significance standard (*P-Value*) with its galat

If the significance is $> 0,05$, so H_0 is accepted

While, if the significance is $< 0,05$, so H_0 is rejected

In this case, it can be seen from paired sample correlation table that the significance is $0.000 < 0.05$, thus, H_0 is rejected and H_a is accepted. It means, form the hypothesis testing, it explains that there is difference in students' critical thinking ability in critical reading class between before the implementation of critical reading strategies treatment and after the implementation of critical reading strategies treatment.

Based on the result of t-test paired analysis, it can be concluded that that there is difference in students' critical thinking ability level in critical reading class between before the implementation of critical reading strategies treatment and after the implementation of critical reading strategies treatment. Based on comparison of between each pre-test and post-test mean, it shows that the result of *pre-test* (before the implementation of critical reading strategies treatment) mean is lower than the mean of *post-test* (after the implementation of critical reading strategies treatment). It means that there is an increase in fourth

semester students' critical thinking ability level in critical reading class (analyzing voice material) at English Education Department in Islamic State University of Sunan Ampel. Thus, it also means that *Critical reading strategies* is effective in increasing fourth semester students' critical thinking ability level in critical reading class (analyzing voice material) at English Education Department in Islamic State University of Sunan Ampel.