



Note-Taking Pairs Strategy Towards Students' Critical Thinking Ability In Reading Comprehension

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Abstrak: Penelitian ini bertujuan untuk mengetahui pengaruh strategi Note-Taking Pairs terhadap kemampuan berpikir kritis siswa dalam pemahaman membaca. Penelitian ini menggunakan metode eksperimen dengan desain pre-test dan post-test. Sampel penelitian meliputi kelas XI-IPA2 yang digunakan sebagai kelompok eksperimen dan terdiri dari 26 siswa dan kelas XI-IPA1 digunakan sebagai kelompok kontrol yang terdiri dari 26 siswa. Instrumen yang digunakan dalam mengumpulkan data yaitu tes membaca dalam bentuk pilihan ganda dan lembar observasi kemampuan berpikir kritis. Data temuan selanjutnya dianalisis menggunakan SPSS 18. Hasil uji-t menunjukkan bahwa nilai uji-t (1,754) lebih tinggi dari t-tabel (1,671) pada tingkat signifikansi 0,05. Dengan demikian, dapat disimpulkan bahwa terdapat pengaruh positif penggunaan strategi Note-Taking Pairs terhadap kemampuan berpikir kritis siswa dalam pemahaman membaca siswa kelas sebelas SMAN 2 Narmada.

Abstract: This study aimed to seek the effect of the Note-Taking Pairs strategy on the students' critical thinking skill in reading comprehension. This study used an experimental method with pre-test and post-test design. The research sample covered class XI-IPA2 which was used as an experimental group and consisted of 26 students and class XI-IPA1 was used as a control group consisting of 26 students. The instruments used in collecting data were reading test in the form of multiple choice and observation sheets of critical thinking skills. The finding data were subsequently analyzed by using SPSS 18. The t-test results showed that the t-test value (1.754) was higher than the t-table (1.671) at the significance level 0.05. Therefore, based on these results, it can be concluded that there is a positive effect from the use of the Note-Taking Pairs strategy on the students' critical thinking skill in reading comprehension at the eleventh grade students of SMAN 2 Narmada.

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Introduction

In the context of education, English is used as the tool to access, share, and retrieve information. The necessity of the English has made it important to be taught at schools. The core objectives of English are to foster the ability to communicate among students, grow up students' consciousness to the emergence of the English as the tool of learning and extend the students' world insight. English has four fundamental skills which ought to be learned by the school students and among these skills, reading is presumed hard to be worked with. This presumption emerges since the activity of reading needs sharp analysis ability and vocabulary mastery. Johnson (2008: 3) states that, "reading is the practice of using text to create meaning. The two keywords here are creating and meaning. If there is no meaning being created, there is no reading taking place". Alyousef (2006:64) states that reading can be seen as an "interactive" process between a reader and a text which leads to automaticity or



(reading fluency). Sumaryani (2016) establishes that reading is not only a source of information and a pleasurable activity, but also a means of consolidating one's knowledge of a language. These definitions of reading indicate the necessity of possessing deep and critical analysis by the readers and in order to present meaningful information from the text read.

Generally, in the process of reading the text in the class, students often times face difficulties to give satisfying result in their reading the texts forwarded. Even, students rarely give relevant information in response to the questions by the teacher in their process of learning reading. This situation happens as result of most students do not have a high will and sharp analysis ability to dig in any information behind the words constructed in the text. The common problems which influence such situation are the students' poor knowledge of reading and the frequency of reading activity. This poor knowledge is reflected in the students' poor vocabulary mastery and low comprehension ability towards the detail information found in the text. According to Catherine (2002: 11), reading comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. The existence of many indicators or aspects during analyzing the reading text makes students find difficulty in learning reading.

Chesla (2002) writes at least nine indicators of reading showing comprehension which are (1) main idea, the most important component in written text is main idea or general statement. The main idea is commonly put in the beginning, middle, and in the end of the text. (2), vocabulary refers to lexical items appear in the text. The lexical items show the readers that a word may have different form and meaning in a text. (3), specific fact or detail information refers to the reader's ability of finding the detail information given in the text. The detail information is the supporting idea which provides author's evidence of the main idea, (4) exception refers to question about what is not mentioned in the text. This question aims to test the reader whether they really understand the text or not. (5), location of information, an author often organizes ideas or specific information in different way in a paragraph and the reader has to locate the specific information given by the author such as chronological order (time), order of importance, comparison and contrast, cause and effect, (6) inferences, it is important for readers to make their own perception of the text read. (7), references, an author often uses specific vocabulary as references for particular words and sentences in a text. (8), Paraphrase sentences (computer-based-test only). First readers read the paragraph and think about what it means while reading. Then readers ask themselves to identify the main idea of the paragraph. Finally, readers put the main idea and supporting details into their own words. i. Sentence Insertion (computer-based test only). In these stage readers allowed putting a sentence in paragraph and making it into well-organized paragraph.

Cottrell, (2005: 1) writes that critical thinking is a cognitive activity, associated with using the mind. Learning to think in critically analytical and evaluative ways means using mental processes such as attention, categorisation, selection, and judgement. Meanwhile, Paul and Elder (2007: 6) state critical thinking is the process of analyzing and assessing thinking with a view to improve it. Critical thinking presupposes knowledge of the most basic structures in thinking (the elements of thought) and the most basic intellectual standards for



thinking (universal intellectual standards). Paul and Elder (2007: 9) write indicators of critical thinking involving 1. Purpose, in which critical thinking should be aware of the condition that when reasoning. It may have different purposes and critical thinker should be able to identify. 2. Question, critical thinking should be giving question to gaps some of information to know the issue. 3. Information, actively decide which possible experiences, data, and evidence, we will use. 4. Point of view, critical thinker should understand the limitation of perspective, orientation, points. 5. Assumption should be made clear and justified by sound evidence. 6. Reasoning, it claims or truths that logically follow from other claims or truths. 7. Inference or interpretation use to draw conclusion and give meaning to data, inferences as interpretation or conclusion. 8. Implication and Consequences are the actual result of acting upon our reasoning. The implication of reasoning is an implicit creation of our reasoning. Once these indicators are applied by the students in their analyzing the text, high performance and their satisfying reading achievement will be showed.

However, referring to result of the observation ever conducted, it was found that students' reading ability was still low. This could be seen from the students' reading the text result; mostly students could not show the purpose of the text being read. This happened due to the students' difficulty to identify the main message intended by the author. Due to this, it was seen that purpose aspect had yet been shown by the students to reflect critical thinkers. Besides, the ability to give detailed information related to questions of the text forwarded also became a deep concern. This condition referred to the students' questions and information aspect of critical thinkers. Some of these problems were presumed caused by the teaching strategy used by the teacher; the teacher still had a monotonous teaching style which made the learning looked not active and did not trigger the students to use their thinking skill when analyzing the text. To solve these problems, the researcher had deep intention to use Note-Taking Pairs strategy in teaching reading. Barkley et. all (2012: 200-201) state that note taking pairs is strategy which involves students' roles as teacher and students in groups. The placement of the students in groups motivates students to actively learn and show their best. Students join and make a group consisting of two students which have different tasks. One student makes a note and one student add information and revise it (Rebecca & Teddler, 2008:8). Barkley et. all (2005: 135) in Aisyah et. all (2014) states note taking pairs was originally designed to improve lectures notes, teacher now also use it to help students improve their notes others kind of learning activities. In Note Taking Pairs the student's partner's work together to improve their note.

Regarding to the elaboration above, the purpose of this study is seeking whether or not Note-Taking Pairs strategy is able to give positive effect towards students' critical thinking in reading comprehension. The significance of this study, theoretically, presents optional teaching strategy to maximize the students' critical thinking to create variation and result in the teaching of reading comprehension in the class. Practically, the students are expected to practice learning reading by themselves through Note-Taking Pairs by which their reading comprehension can be well achieved.



Research Method

This research was a quasi-experimental. The researcher used non-equivalent in order to examine the effectiveness of Note-Taking Pairs strategy towards students' critical thinking skill in reading comprehension. Sugiyono (2018: 116) writes that nonequivalent control group design is almost the same as the pretest-posttest control group design, expected that in this design the experimental group and the control group are not randomly selected. Population of this research was the entire eleventh grade students of SMAN 2 Narmada, West Lombok consisting of four classes with the total number 119 students. The sample of the research was XI-IPA2 class was used as experimental group and consisted of 26 students and XI-IPA1 class was used as control group consisting of 26 students. Purposive sampling technique was used to taken the samples. Experimental group was treated by Note-Taking Pairs Strategy and control group was treated by Discovery learning.

The instruments used in collecting data were reading test in the form of multiple-choice which consisted of 20 items. If the students answered correctly they got 1 score and if they answered incorrect they got 0 score. Thus, the total score which could be gotten by students was 100. Based on the validity test by using SPSS it was found that 25 from 35 questions were valid, because the $r\text{-value} \geq r\text{-table}$. And, 10 from 35 questions were invalid because the $r\text{-value} < r\text{-table}$. However, to make the researcher easier to commit the computation 20 questions were used to collect data. Based on the result of reliability statistics, the value of Cronbach's Alpha was 0,684 and $r\text{-table}$ was 0,334 ($0,486 \geq 0,334$), the instrument was found reliable. The second instrument that researcher used to know the students critical thinking in reading was observation sheet. This observation sheet was intended to search for the students' critical thinking skill in reading comprehension during the learning process of reading comprehension. The researcher must observe all kinds of students' activities in the classroom while learning process and record all the data on how many students actively and critically learn and the quality of students reading comprehension. The technique of data collection that the researcher used was pre-test and post-test. As data gained, the data were statistically analyze to compare the mean of the scores between pre-test and post-test among the groups and were subsequently processed by using statistical calculation of t-test formula by using SPSS 18. If the result of t-test were higher than $t\text{-table}$ or $t\text{-test} > t\text{-table}$, the alternative hypothesis would be accepted, which means that teaching by using Note-Taking Pairs was effective towards students' critical thinking in reading comprehension. However, if the result of t-test was lower than $t\text{-table}$ or $t\text{-test} < t\text{-table}$, then the null hypothesis would be rejected. It means that teaching by using Note-Taking Pairs is not effective towards students' critical thinking in reading comprehension

Finding and Discussion

Data Description of Experimental Group Pre-Test and Post-Test

The result of pre-test for experimental group showed that the highest score was 76 and the lowest score was 45. After computing the data by using SPSS 2.0 with method frequency command, the researcher found the mean score was 53.65, the mode score was 50, the



median score was 52.50, and standard deviation was 9.117. Meanwhile, the result of post-test for experimental group showed that the highest score was 95 and the lowest score was 55. After computing the data by using SPSS 2.0 with method frequency command, the researcher found that the mean score was 79.40, the mode score was 80, the median score was 80.00, and standard deviation was 8.834.

Data Description of Control Group Pre-Test and Post-Test

The result of pre-test for experimental group showed that the highest score was 65 and the lowest score was 35. After computing the data by using SPSS 2.0 with method frequency command, the researcher found the mean score was 75.19, the mode score was 75, the median score was 75.00, and standard deviation was 6.853. Meanwhile, the result of post-test for control group showed that the highest score was 80 and the lowest score was 60. After computing the data by using SPSS 2.0 with method frequency command, the researcher found the mean score was 49.04, the mode score was 45, the median score was 50.00, and standard deviation was 8.946.

The two different score above showed that the two groups had different scores, in which the mean score of pre-test in the experimental group was 53.65, while the mean score of pre-test in the control group was 75.19. The significant difference in scores between pre-test score of the experimental and control groups basically showed that the control group firstly scored better compared to those scored by the experimental one. However, a contrast result was achieved by the two groups in the post-test scores, in which the experimental group scored higher than those scored by the control one, where the mean score of post-test for the control group was 49.04 and the mean score of post-test for the experimental group was 79.40. This result explicitly showed that the implementation Note-Taking Pairs Strategy played significant role towards students' reading comprehension compared to Discovery learning in this context of research.

The Result of Observation Sheet for Critical Thinking of Experimental and Control Group

The result of observation sheet for experimental group showed that the students' quality of critical thinking ability within the learning process of analyzing the texts given in the class reached the highest score was 28 and the lowest score was 21. After computing the data by using SPSS 2.0 with method frequency command, the researcher found the mean score was 24.73, the mode score was 25, the median score was 25.00, and standard deviation was 1.511. And, the result of observation sheet for control group showed that the highest score was 25 and the lowest score was 21. After computing the data by using SPSS 2.0 with method frequency command, the researcher found the mean score was 23.50, the mode score was 23, the median score was 23.00, and standard deviation was 1.140. After finding the mean, mode, media, and standard deviation, the t-test by using SPSS was counted. The goal was to find out how significant was the effect of Note-Taking Pairs towards students' critical thinking in reading comprehension.



Based on the result of the analysis that $t\text{-test} > t\text{-table}$, in which the value of $t\text{-test}$ (3.315) was higher than $t\text{-table}$ (1.671) at the level of significance 0.05. From this finding, it showed that Note-Taking Pairs had significant effect towards students' critical thinking in reading comprehension. It could be seen that there had difference in quality scores of critical thinking ability responding to the use of two different teaching strategies in teaching reading comprehension by the students. The mean score of the students' response towards the use of Note-Taking Pairs Strategy towards their critical thinking quality which represented the students' critical thinking ability in the experimental group was 24.73 with the highest score was 28 and the lowest score was 21, while in the control group the mean score of the students' response towards the use of Discovery learning was 23.50 the highest score was 25 and the lowest score was 21. These different mean scores implied difference in the success of the treatment with two different teaching strategies. On the other words, the students treated by Note-Taking Pairs Strategy showed better performance towards their critical thinking ability than the students treated by Discovery learning did.

Independent Sample Test

After finding the result of mean, mode, media, and standard deviation, the researcher looked for the $t\text{-test}$ using SPSS. The goal was to find the significant effect of Note-Taking Pairs towards students' critical thinking in reading comprehension.

		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
Students learning achievement	Equal variances assumed	.430	.515	3.315	50	.002	1.231	.371	.485	1.977
	Equal variances not assumed			3.315	46.492	.002	1.231	.371	.484	1.978

Test Normality and Homogeneity

Normality test between groups was tested by using Shapiro-Wilk in which it was found that the sig. value for experimental class pre-test was 0.052, and for experimental group post-test was 0.45, while the sig. value for control group pre-test was 0.448, and for the control group post-test was 0.010. It means that the data was in normal distribution because each of data was ≥ 0.05 . Based on the SPSS output table Homogeneity of Variance test of Levene Statistic, in the sig column it was obtained a significant score (0.438), where this data > 0.05 . It means that the data was homogeneous, in which it had the same variance between the groups; Note-Taking Pairs in experimental group and Discovery learning in control group.



Testing Hypothesis (t-test)

After knowing the result of mean, mode, media, and standard deviation, the researcher sought to find the t-test by using SPSS. The goal was to find the significant effect of Note-Taking Pairs towards students' critical thinking in reading comprehension.

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
Students' learning achievement	Equal variances assumed	.259	.613	3.417	50	.001	5.57692	1.63224	2.29848	8.85537
	Equal variances not assumed			3.417	49.904	.001	5.57692	1.63224	2.29832	8.85553

Based on the result of data analysis, it was found that the value of t-test (3.417) was higher than t-table (1.671) at the significant level 0.05. It means that Note-Taking Pairs had positive effect towards students' critical thinking in reading comprehension at the second grade students of SMAN 2 Narmada. On the other hands, it was clear that the Null hypothesis (Ho) was rejected and Alternative hypothesis (Ha) was accepted. Based on the result showed above, the value of sig (2-tailed) was 0.001. The value of sig two tailed was lower than the significance level (0.05). It can be concluded that there was a significant effect of Note-Taking Pairs Strategy towards student's critical thinking in reading comprehension.

The positive effect made by the use of Note-Taking Pair strategy had caused a positive change in the students' ability of maximizing their critical thinking in analyzing and giving a response to the questions related to the texts given by the teacher. Most students had been able to find the purpose of the text being read. This ability to find the purpose of the text by the students had reflected critical thinkers, in which they were easier to note the main message conveyed by the author in the text. Next to this, the students were also able to give various information, such as the main idea of the text and the specific information from the texts related to questions asked by the teacher. Besides, the students were also able to predict the meaning of the words based on the context of the statements found in the text. Interestingly, some of the students seemed to have the ability to make a inference by their own words. This condition had strengthened the presence of the Pair Note Taking teaching strategy used by the teacher as a response to the teaching strategy previously used in teaching reading comprehension in the class. This positive result of the research was established by the one studied by Fenny Anita (2012) on note-taking pairs strategy finding that in general there is a difference on reading competence between students who are taught using note-taking pairs technique than Directed Reading-Thinking Activity (DR-TA) Technique. This result implied that the ability to comprehend a reading text depended on the teaching strategy used by the teacher.



This result of the study also indicated that there was relationship between the ability to have critical thinking by the students with their reading comprehension achievement. This statement was in line to what had been resulted by Zare et al. (2018: 25) stating that there is a significant relationship between ESP learners' critical thinking and their reading comprehension skill ($p=0.00\leq 0.01$). The correlation is also strong and positive ($r=0.87$). It means the higher critical thinking ability ESP students have, it is likely they show higher reading ability. This strong relationship was supported by the result of literature review by Aloqaili (2012: 39) that exposed an agreement between theorists and researchers that there is a strong relationship among reading comprehension, critical thinking, and prior knowledge. This relation is interdependent, which means that prior knowledge serves as a foundation for critical thinking and inference-making. Critical thinking and inference-making work as effective means to activate prior knowledge. Prior knowledge and thinking skills can be viewed as interdependent. Thus, referring to above research results, the use of appropriate teaching strategy would be influential to the success of making difference in scores by the students in their learning of reading comprehension. Students' critical thinking played significant role in the students' reading comprehension quality. The use of Note-Taking Pair strategy could make a significant difference in the scores gotten by the students during learning reading comprehension in the class.

Conclusion and Suggestion

Based on the result of the data findings and discussion above, it can be concluded that Note-Taking Pairs strategy has positive effect towards students' critical thinking in reading comprehension at second grade students of SMAN 2 Narmada. The students who were treated by Note-Taking Pairs Strategy showed better performance towards their critical thinking ability in learning reading comprehension than the students ever treated by Discovery learning did. Critical thinking ability plays a significant role to the students' reading comprehension, in which students having high critical thinking quality tended to have high reading comprehension achievement. On the other words, there is relationship between the students' critical thinking ability and their reading comprehension.

Related to this result, it is suggested that the teacher be more creative in finding a teaching strategy to teach and make students maximize their critical thinking ability in learning. Note-Taking Pairs strategy is one of the teaching strategies recommended to use in order to foster the students' critical thinking skill to learn reading comprehension. For further finding of the research, it important that other researchers can do the same research with the same subject to find more effective strategy for activating the students' critical thinking ability in learning English, particularly in learning reading comprehension.

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