

The Effect of Directed Reading—Thinking Activity on Students' Critical Thinking Abilities

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ABSTRACT

The objective of the study is to know the effect of directed reading - thinking activity on students' critical thinking abilities at English Department Politeknik Negeri Sriwijaya Palembang in the academic year 2018-2019. This research applied a quantitative approach of quasi-experimental research. The sampling technique used simple random sampling. The number of samples in this study were 36 students. In this design there are two groups, namely one experimental group and one control group. The experimental group was treated using the directed reading thinking activity while the control group was given treatment using guided reading procedure. The data collection technique used in this study was a test. In analyzing the data obtained from the test, researchers divided the student scores into two groups Data were analyzed using (SPSS). The results show that there is a significant difference between students who learnt using the directed reading thinking activity with students who were taught using guided reading procedure. This can be seen from the results of the analysis using intergroup t-tests. From the post-test data of the experimental group and the control group, the t-count was greater than t table ($3.953 > 2.00$) at the 5% significance level.

Keywords: *directed reading thinking activity, critical thinking*

1. INTRODUCTION

Harmer [1] states that reading habits can improve vocabulary, grammar, and writing. The same thing was stated by Richards, Jack and Renandya [2] that reading is one of the most important goals for students. they hope to be able to read in English to get information, for pleasure, for careers, as well as for the purpose of their studies. At Politeknik Negeri Sriwijaya Palembang, English Department, reading subject is taught for four semesters as Reading 1, Reading 2, Reading 3 and Reading 4. The description of the Reading 2, reading comprehension involves thinking skills, identifying key ideas and details. This means that to understand a reading text a student does not only have the ability to identify basic ideas and details but it must be supported by an ability that is the ability to think, one of the abilities to think that is critical thinking. Research shows that reading habits can improve one's ability to understand concepts easily. This develops the ability to think critically. Understanding concepts and critical thinking are two important qualities of a successful individual as stated by Trudell Beth and Shaila Yasmin [3]. Critical thinking ability brings students to be able to see a problem with a different perspective. Where the thinking ability leads them to be able to analyze a phenomenon that occurs by looking at the strengths and weaknesses of existing circumstances. The ability to think critically also leads students to continue to learn from everything that happens. In addition, just being a smart person is not enough. In order to be able to face competition in the future, students who are capable of

critical thinking are needed. Many people say that one characteristic of smart people is being able to think critically.

There are several studies related to directed reading thinking activity and critical thinking. (1) Research conducted by as in Megawati [4] entitled "The effect of using directed reading-thinking activity on the students' reading comprehension viewed from the students' motivation". The results of this research show that there is a significant difference in value between the control group and the experimental group. Furthermore, the research conducted by as in Arisetyawati [5]. This study aims to determine whether there is a significant influence between students' reading comprehension taught by using Directed Reading Thinking Activity and Cooperative Learning. The results of the study indicate that there is a significant influence on students' reading comprehension. This result also shows that students who are taught by using Directed Reading Thinking Activity have higher reading ability compared to students who are taught with Cooperative Learning. Then, research entitled "The effect of directed reading thinking activity (drta) methods on students' reading comprehension for Islamic state senior high school", conducted by as in Abdullah [6]. It shows that the DRTA method is suitable for application in teaching reading comprehension in State Islamic High School (MAN) 1 Pekanbaru. The similarities among the recent research and previous research namely (1) implementing a reading strategy that is Directed thinking activity (2) those focusing on subjects or reading lessons in English (3) using experimental research. While the differences are as follows: (1) research conducted by Ida Megawati [4] took

a sample of high school students (high school) while the recent research took a sample of students (2) The previous study measured reading skills while the recent assignment measured critical thinking skills.

The pilot study conducted by the research team in 2018 to find out students' problems in reading, namely (1) lack of ability to find main ideas, (2) lack of vocabulary (3) lack of understanding of good reading strategies, (4) lack of comprehension of reading so that the ability to solve problem written in a reading due to lack of critical thinking skills. (5) The critical thinking skills of the second semester English language students are in the fair category. The research team assumed that one of the causes of student reading problems was the lecturer learning model. One alternative learning strategy that can improve student reading skills indirectly improves critical thinking skills, namely the directed reading-thinking activity. According to Tierney [7] this strategy trains students to improve critical reading skills, the ability to understand and filter information, the ability to provide ideas or affirmations and the ability to make decisions based on information obtained read.

2. LITERATURE REVIEW

2.1. Directed Reading Thinking Activity

DRTA or directed reading thinking activity is a direct reading and thinking strategy, so students can focus on the text and predict the contents of the story by proving it while reading. The DRTA reading strategy was developed by Tierney [7]. According to Tierney, the DRTA Strategy focuses on student involvement with text, because students predict and prove it when reading. With the DRTA strategy, lecturers can motivate students' efforts and concentration by involving them intellectually and encouraging them to formulate questions and hypotheses, process information and evaluate temporary solutions. The purpose of using the DRTA reading strategy is to make it easier for students to understand the information contained in the readings so that they can gain more knowledge, develop the potential and critical thinking power in understanding the contents of the story to have a broader picture of the material to be studied.

The procedures of DRTA (Directed Reading Thinking Activity)

- Pre Activities

1. The lecturer gives the topic of reading material prepared-

- Whilst activities

There are three stages in the reading process applying DRTA, namely: (A) predicting, (B) Reading (C) Proving.

2.1.1. Prediction (students predict the content of the material to be learned without reading in advance)

1. Students read material selected by the lecturer
2. The lecturer tells students to predict the contents of the material by looking at the title and image.
 - What do you think content with this title might be about?
 - What do you think might happen in this topic?
 - Which of these predictions do you agree with?
3. Each student delivers verbally to their friends about their predictions about the material they are about to read.
4. Lecturer encourages students to make different ideas and discuss agree or disagree among students' opinions. Lecturer encourages students to interact more actively.

2.1.2. Reading (reading the topic carefully to examine whether their predictions fit the topic they are reading)

1. The lecturer then assigns students to read the topic carefully to examine whether their predictions are in accordance with the topic they are reading.
2. After all students have read the first segment on the topic. the lecturer instructs students to close the book and the process of understanding material and critical thinking begins. The lecturer asks students about the material they have read and the predictions they have conveyed.
 - Were you correct?
 - What do you think now?
 - What do you think will happen?

At this stage students give reasons and evidence verbally in front of friends and other groups.

2.1.3. Prove it (At this stage students read fully and prove whether their predictions are correct or not accompanied by strong reasons. Students report it in front of the class)

Lecturer and students discuss topics together after the process of predicting, reading and proving has been completed.

- Post activities

1. Lecturer provides motivation and enthusiasm to students
2. Lecturer asks students to study the material that will be discussed at the next meeting.

2.2. Guided Reading Procedure

Guided Reading Procedure is one of the learning strategies for reading comprehension developed by Tierney [7]. This strategy aims to improve students' reading comprehension. Learning activities carried out using guided reading strategies can clearly display the state of each student in the class and require students to have a strong mentality. Guided reading procedures can help students to have better memories. In the implementation of learning, students are required to be able to concentrate fully when reading reading texts. This needs to be done so that students are able to remember more information from the text read. Lecturers have a very important role in this matter. Lecturers are expected to be able to guide students so that the goals in learning to read comprehension can be achieved. The purpose of the guided reading procedure are as follows: The students are able to express information in the reading text both in writing and orally. Then they are also required to be able to express the main ideas of the text read based on information obtained from the text read. Thinking is needed by humans in their daily lives. Through thinking humans can recognize problems, understand and solve them. Among students, thinking activities are also very much needed in lectures. Learning is the dominant activity in student lectures. Thinking is the first step in learning. Thinking itself has four aspects, namely the preparation of concepts, problem solving, formal reasoning, and decision making. Many things are gained by instilling students' thinking skills. Strengthen students to think critically creates them for higher education Stobaugh [8].

Many expert opinions regarding the concept of critical thinking. According to Hunter [9] critical thinking is to determine what will be done and believed. Then critical thinking in general deals with two points, namely the way how to counter problem then reason as in Starkey [10]. Critical thinking is to consider ideas, evaluate the opinions that have been understood and make decisions about the benefits of these ideas. The purpose of critical thinking is to keep you in an "objective position" (the open university) [11]. Critical thinking requires the function of the analytical and evaluative thinking process and this thought process contains logical and consistent argumentation analysis to understand the biased and erroneous reasons [12].

3. METHODOLOGY

This research applied a quantitative approach and it is a type of quasi-experimental research. In principle, experimental research is conducted to examine the effect of treatment that has been given to something Emzir [13]. This research involves two independent variables and one dependent variable, namely the strategy of directed reading thinking activity (X1), guided reading procedure (X2). The dependent variable is critical thinking ability (Y). In this design there are two groups, namely one

experimental group and one control group. The experimental group was treated using the Directed Reading Thinking Activity while the control group was given treatment using guided reading procedure. This research was conducted in the second semester, Reading 2 at the English Department, Politeknik Negeri Sriwijaya Palembang in the academic year 2018-2019. The population of this study was 78 students, the second semester. The sampling technique used simple random sampling. The number of samples in this study were 36 students.

3.1. Technique for Collecting the Data

The data collection technique used in this study was a test. Giving tests is used to determine the ability to think critically about the readings that have been provided. This study used content validity. Content validity testing was carried out by testing the reliability test instrument critical thinking of thirty students of the English Department, Palembang Sriwijaya State Polytechnic. The results of the trial were then analyzed using product moment correlation at a level of error of 5% with the SPSS program 20. Items that did not meet the requirements in terms of their validity were declared null or could be revised as in Arikunto [14]. The results of the analysis showed that of the 50 items, 20 items were declared invalid (fall) and 30 questions were stated to fulfill validity.

3.2. Technique for Analyzing Data

In analyzing the data obtained from the test, researchers divided the student scores into two groups, the experimental group and the control group. Test results are presented in descriptive form and also from the t-test. The researcher calculates the difference; pretest and posttest in the experimental and control groups. If the value of t obtained is higher than the value of freedom. This means that the research hypothesis "there is a statistically significant difference in students' thinking abilities before and after being taught through the Directed Reading Thinking Activity. If the statistical value is lower than the table-t value, it indicates that the null hypothesis "There is no statistically significant difference in students' critical thinking abilities before and after being taught the Directed Reading Thinking Activity is rejected. Data are analyzed using (SPSS).

4. RESULTS AND DISCUSSION

4.1. Results

4.1.1. *The critical thinking ability of the students in the experimental group before and after applying directed reading thinking activity*

Before being given a treatment through Directed Thinking Activity the researcher gave pretest. The purpose of pretest is to know students' critical thinking activity before treatment. In the pretest, the highest score was 75 which was obtained by 2 students, and the lowest score was 55 obtained by 1 student. The average score is 64.72, the standard deviation is 6.057. In the posttest, it was found that the highest score was 80 which was achieved by 6 students, and the lowest score of 70 was achieved by 4 students. For the posttest scores of students in the experimental group, it was found that average score was 75.00, the standard deviation is 4,537.

4.1.2. *The critical thinking ability of the students in the control group before and after applying guided reading procedure*

Similar to the experimental group, researchers also gave pretest to control group students. Based on pretest data analysis in the control group, the highest score was 70 which was achieved by 3 students and the lowest score was 50 which was achieved by 4 students. Based on posttest data analysis in the control group. It was found that the highest score was 75 which was achieved by 1 student and the lowest score was 60 which was achieved by 7 students. In the descriptive statistics of the posttest score of students in the control group, it was found that the total number of samples had 18 students. With a total average score of 65.00, the standard deviation is 4,851. Based on posttest data analysis in the control group. It was found that the highest score was 75 which was achieved by 1 student and the lowest score was 60 which was achieved by 7 students. In the descriptive statistics of the posttest scores of students in the control group, it was found that a total average score of 65.00, the standard deviation is 4,851.

4.1.3. *Analysis results of paired sample t-test in the experimental group*

Based on the scores of students in the pre and post test in experimental, the researchers analyzed data using paired sample t-test. According to Mckenzie (2013: 97), "A paired sample t-test is appropriate for comparing the means of groups measured twice, or two separate groups that are matched to variables." It was calculated to find out

whether or not the post test was significantly different before and after giving the experiment.

From the results of the paired sample t-test, it was found that the average difference between the pretest and posttest experimental group was 10.27778, and the significant level was 0.000 because it was lower than the 0.05 value, it showed that the experimental group had significant critical thinking ability.

4.1.4. *Results of Independent Sample T-Test Analysis*

Independent sample t-test, according to Fraenkel et al [6], "Independent Sample T-test is used to compare the mean values of two different groups, or independent." is there a significant difference between teaching using the "Directed Reading Thinking Activity" and those who do not.

Independent analysis of the sample t-test showed that the average difference from the posttest of each group was 10.00000 and the significant level was 0,000 because 0,000 was lower than the alpha value of 0.05, meaning that there were significant differences between the two groups. This confirms that students in the experimental group make better achievements than students in the control group.

4.2. Discussion

In the experimental group before being given reading lessons by applying the directed thinking activity the average score of critical thinking ability is 64.72. this shows that critical thinking ability are in the moderate category. Furthermore, the researcher gave enrichment to the second semester students of the English Department of Sriwijaya State Polytechnic by providing learning aimed at knowing the effect of the Directed Thinking Activity on critical thinking skills. After applying the Directed Thinking Activity learning for 10 meetings with the learning material prepared, the researcher gave the post test.

After the data was analyzed, it is obtained that the average critical thinking ability of students has increased to 75 or in the good category. In the good category of critical thinking means that the second semester students of the English Department are able to evaluate, have metacognitive awareness and have problem solving abilities. As explained by as in Arends [12] that the three cognitive domains are the ability to analyze, synthesize and evaluate, including aspects of critical thinking both. Analyzing is the ability to separate material into the necessary parts, looking for relationships between parts, being able to see components, how the components are related and organized, the ability to solve non-routine questions. Furthermore, what is meant by synthesis is the ability to work with its parts, its elements and form them into a new roundness such as patterns and structures

In the control group, the average score of thinking ability of students is 60. This value indicates that their critical thinking skills are in fair category. After applying the learning process by applying conventional strategies and given the final test, it does not show a significant increase in critical thinking skills. The average value of critical thinking skills in the control group is 65 or in the fair category. Critical level thinking is covering the first three aspects of the cognitive domain, namely aspects of knowledge, understanding and application. Arends [12] gives an explanation to each of these aspects, namely knowledge relating to memorization and memory, for example memorization or remembering symbols, terms, facts, concepts, definitions, propositions, procedures, approaches, and methods. Understanding is related to mastering or understanding about something but the stage of understanding still needs time and the help of lecturers or other people to understand it, for example changing information into parallel forms that are more meaningful, giving interpretations, all that is done at the command. There are three types of understanding, namely change (translation), giving meaning (interpretation), and making extrapolation (extrapolation). Application is the ability of students to use what they get in new and concrete special situations.

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