

The Use of the Everyone is Teacher here Learning Strategy in Affecting Class X SMA Students' Mathematical Critical Thinking Ability

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Abstract: The ability to think critically mathematically is one of the important abilities required in learning mathematics at the senior high school level in the independent curriculum. This ability is also one of the abilities demanded by the 21st century educational revolution. The importance of this ability is not in line with the mathematical critical thinking abilities of high school students, as was the problem of research in class X MIA at SMA Negeri 1 Natar Lampung Selatan. Given the importance of critical thinking skills, the purpose of this study was to determine the effect of using Everyone is a Teacher Here strategy on students' mathematical critical thinking abilities. This research is a quasi-experimental study with a population of all students of class X MIA even semester of SMA Negeri 1 Natar Lampung Selatan consisting of 8 classes with a total of 228 students, while 2 classes were taken, namely class X MIA 8 as the experimental class totaling 36, and class X MIA 7 as the control class, totaling 36. The sample was taken using a random sampling technique. Students' mathematical critical thinking ability is measured by a test in the form of a description of 5 questions which have previously been tested for validity and reliability. Testing the hypothesis in this study using the t test. From the results of hypothesis testing, it can be concluded that the use of the Everyone is a Teacher Here strategy can influence the mathematical critical thinking skills of class X MIA students at SMA Negeri 1 Natar Lampung.

Keywords: *Critical Thinking, Strategy Every One, Teacher.*

I. INTRODUCTION

The ability to think critically is the ability possessed by each individual to solve a problem by focusing on processes and steps taken carefully that can be accounted for. Critical thinking is a very important ability. In social life, humans are always faced with various kinds of problems that require very detailed solutions. Importantly, critical thinking skills are mandated in the 2013 curriculum to the current independent learning curriculum. This ability is one of the goals of learning mathematics, especially for high school students who are prepared to face various challenges.

According to Hendriana, et al (2013: 82) the ability to think critically is the ability in which students are able to carry out activities to compare, create contradictions, link between problems and prove their solutions. Pickett and Foster (1996) in Hendriana et al (2013: 82) state that critical thinking is a higher type of thinking that not only memorizes material but uses and manipulates materials learned from new situations. In other words, the ability to think critically is the ability of students to manipulate existing information data to become simpler.

Noer (2009: 474) states that critical thinking is a process that leads to drawing conclusions about what we should believe and what actions we will take. Not just to look for answers, but more importantly to question answers, facts, or existing information. Strengthened by Fithriyah, et al (2014: 581), that according to Paul in Gueldenzoph and Snyder (2008) critical thinking is an orderly intellectual process in which actively and skillfully conceptualizes, applies, analyzes, synthesizes,

and or evaluates information obtained by observation, experience, reflection, reasoning, or communicating as a guide as to what to believe and what to do.

This opinion is also in accordance with the objectives of learning mathematics which aims to enable students to use mathematics as a way of reasoning (logical, critical, systematic, and objective thinking) that can be used in solving problems, both problems in everyday life and studying various sciences. In contrast to this, high school students' mathematical critical thinking skills have not shown the expected results for the purpose of learning mathematics. As happened to students of class X MIA SMA Negeri 1 Natar Lampung Selatan. Based on the results of the initial study conducted, information was obtained that students' critical thinking skills were still low. Class X students find it difficult to make a written interpretation of a problem, it is difficult to determine a strategy for solving a problem, so it is difficult to make inferences from a problem. Of course, this condition is an indication of the low ability of students' mathematical critical thinking.

When learning mathematics takes place students are more required to complete assignments in the form of questions given by the teacher taken from the student handbook. Mathematical problems that invite students' critical abilities are still rarely presented. Students are more concentrated in receiving information provided by the teacher without being active independently. The fact that students' mathematical critical thinking skills are low is supported by the results of pre-tests which also show that it is very difficult for students to make a written interpretation of a problem, difficulty in determining a solution strategy, carrying out calculations, making it difficult to make inferences from a problem.

Critical thinking is very important in the information and technology era. One must respond quickly and effectively to change, so it requires flexible intellectual skills, the ability to analyze information, and integrate multiple sources of knowledge to solve problems. Critical thinking skills increase creativity, remembering to produce creative solutions to a problem not only need new ideas, but new ideas must be useful and relevant to the task to be completed. Critical thinking is useful for evaluating new ideas, selecting the best, and modifying as needed. This ability should be possessed by high school students.

The importance of critical thinking skills in the current revolutionary era, with the problems above requires a strategy to hone students' critical thinking skills. One strategy that can be used is an interactive learning strategy that encourages student participation and if used properly can enhance knowledge and accustom students to being critical in various ways. One such strategy is Everyone is a Teacher Here. This strategy provides an opportunity for each student to act as a "teacher" to other students. This means that students are required to be independent in exploring their mathematical abilities and are required to be independent in dealing with various problems critically. According to Suprijono (2009: 110), the Everyone is a Teacher Here strategy is an easy strategy to gain large class participation and individual responsibility. Through the Everyone is a Teacher Here strategy, students can actively participate by asking questions, answering questions and explaining them in front of the class and providing responses to the answers of other students. In the learning process you don't have to learn from the teacher, students can teach each other with other students.

Rohmawati and Rohaeti (2015: 2), stated that Everyone is a Teacher Here can be done by each student trying to solve problems or questions obtained from other students while explaining the answers in front of the class. Each student feels responsible for answering the questions they get from other students and each student tries independently to understand and explain the answers to their friends. Everyone is a Teacher Here is an easy strategy for gaining large class participation and individual responsibility.

Zaini, et al (2002: 58) also added that the Everyone is a Teacher Here strategy is a strategy to get class participation as a whole and individually. This strategy provides an opportunity for each student to act as a teacher for his friends. Students in this strategy all play an active role and inevitably have to be active. The goal is to eliminate student boredom in learning while at the same time

motivating students who are less willing to ask questions and can also invite students to more easily understand the material being taught.

The Everyone is a Teacher Here strategy is a strategy that can be used to improve the student learning process, and can be adapted to the goals to be achieved by learning in various subjects, especially achieving goals which include several aspects: the ability to express opinions, the ability to analyze problems, the ability to write opinions (group) after making observations, the ability to conclude, and others (Maisura and Ridwan, 2012: 3).

By implementing the Everyone is a Teacher Here strategy, students who have not wanted to be involved so far will actively participate in learning. Students become the main source of learning in learning. Students more easily understand the delivery of their own friends, so that what is explained will be more easily understood by other students (Zaini, Munthe, & Aryani, 2008). This basis is the background for research on the use of Everyone is a Teacher Here learning strategy in influencing the mathematical critical thinking skills of high school students.

II. RESEARCH METHODS

This research is a quasi experimental research conducted at SMA Negeri 1 Natar Lampung Selatan for the 2022/2023 academic year. This study uses two classes as research samples. The sample is determined by cluster random sampling technique. The experimental class that was chosen was class X MIA 8 and the control class that was selected was class X MIA 7. This technique was carried out because each class X MIA SMA Negeri 1 Natar Lampung Selatan had the same average ability. Data collection techniques for mathematical critical thinking skills are carried out using test techniques. This test was carried out to obtain data in the form of numbers or values about students' mathematical critical thinking abilities which aim to test the truth of the hypothesis. The test instrument used has been tested for validity and reliability. Hypothesis testing uses the t test, which has gone through the analytical prerequisite test process in the form of a normality test and homogeneity of variance.

III. RESEARCH RESULTS AND DISCUSSION

The results showed that the use of the Everyone is a Teacher Here strategy had an effect on the mathematical critical thinking skills of class X students. The learning was carried out in two classes. One class is an experimental class which uses the Everyone is a Teacher Here strategy in its learning and one class is a control class which applies conventional learning strategies in its learning. After the end of the learning program a test was carried out to obtain data on students' mathematical critical thinking abilities. The test material is related to the teaching material that has been given, namely trigonometry.

The values obtained by each student from both the experimental class, namely class X MIA 8, which totaled 36 students, and the control class, namely class X MIA 7, which consisted of 36 students, can be seen in the following table.

Table 1. Data Distribution of Mathematical Critical Thinking Ability
Experiment Class & Control Class

Class	Sum of Students	Minimum Score	Maximum Score	Average
Eksperimen	36	40	100	76,77
Kontrol	36	15	84	50,50

Based on Table 1 above, it appears that there is an average difference in mathematical critical thinking skills between the experimental and control classes. It can be seen that the experimental class obtained a higher score than the control class. These results are in accordance with the calculations of the IBM SPSS Statistics v.16 for windows program which uses t-test analysis for samples from different distributions. Independent samples test. The calculation results show that the value of Sig = $0.000 < 0.05$. This means that the Sig value is smaller than the t table value at a significant level of 5%, so the research hypothesis is accepted or it can be said that there is an effect of using Everyone is a Teacher Here strategy on students' mathematical critical thinking abilities.

From the results of testing the hypothesis using the independent t test, it can be concluded that the use of the Everyone is a Teacher Here strategy can affect the mathematical critical thinking skills of class X students. The influence given is due to differences in the learning process in the two classes. In the experimental class using the Everyone is a Teacher Here strategy, it seems that students are more critical in dealing with problem situations. Students think more about making questions, answering, issuing ideas, to be responsible for the discussion process which is led independently by students. In discussions with the Everyone is a Teacher Here strategy, students always exchange opinions so that students with low abilities can better understand the material being studied. This is in line with the opinion of Heru (2019), which states that the Everyone is a Teacher Here strategy is able to activate students in discussions who have high, medium, to low abilities.

According to Heru (2019) the Everyone is a Teacher Here strategy is one way to get individual participation from all classes. Students will listen actively, explain to friends, ask questions to the teacher, respond to questions and argue. This condition is also seen in the experimental class that uses the Everyone is a Teacher Here strategy. where learning appears to be student-centered. Each student is able to think critically in dealing with situations that are led independently. The problem solving process also relies on student responsibility. The teacher only acts as a facilitator in the experimental class. This condition looks different from the control class which uses conventional learning.

The results of this study are also in line with several previous studies such as those conducted by Suriani and Nenowati (2020), whose research resulted that the Everyone is a Teacher Here strategy can influence student learning outcomes. The results of this study also show that the learning outcomes of students who use the Everyone is a Teacher Here strategy are higher than classes that use conventional strategies. In classes that use the Everyone is a Teacher Here strategy, learning is more fun, by giving students the opportunity to become teachers for other students. Students also become more critical in dealing with various situations. This result is in line with the opinion of Djamarah (2014) that the Everyone is a Teacher Here strategy is the right strategy to gain overall student participation.

Based on the results of the descriptive and inferential statistical analysis carried out, it can be concluded that the use of the Everyone is a Teacher Here strategy is able to influence the mathematical critical thinking skills of class X MIA Even Semester SMA Negeri 1 Natar Lampung Selatan.

IV. CONCLUSION

Based on the results of the research, it can be concluded that the use of the Everyone is a Teacher Here strategy has an effect on the mathematical critical thinking skills of class X students of SMA Negeri 1 Natar Lampung Selatan for the 2022/2023 academic year. The average acquisition of

students' mathematical critical thinking skills using the Everyone is a Teacher Here strategy is 76.77, which is higher than the average critical thinking skills of students using expository learning, namely 50.5.

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