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HIGH SCHOOL STUDENTS' RESPONSE TOWARD GUIDED INQUIRY TYPE PICTORIAL RIDDLE IN IMPROVING CRITICAL THINKING SKILLS

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Abstract

The lack of concern toward critical thinking skills affect the low rate of students' critical thinking skills. The research aim to describe the response of high school students toward guided inquiry type in improving students' critical thinking skills. This research conducted in 3 experiment classes of SMAN 1 Ngronggot. Instrument used in this research is response sheet contains 10 points of response. Data collected by giving response sheet to all students in three experiment classes after guided inquiry type pictorial riddle applied in learning. Collected data then analysed by response sheet analysis. Results show that based on response sheet analysis, students' response toward the implementation of guided inquiry type pictorial riddle in improving critical thinking skills is in very good category.

Keywords: guided inquiry, pictorial riddle, critical thinking skills

INTRODUCTION

The increasingly tight global competition in the 21st century demands every individual to have the skills to compete and survive, one of the most important skills possessed is critical thinking skills. Critically thinking people believe that many situations where the best way to decide what to believe or do is to reason and think reflectively and then use the right methods (Fisher, 2001). Someone with good critical thinking skills can choose and determine the solution of a problem effectively.

However, the importance of critical thinking skills is receiving less attention in Indonesia. According to data from the 2015 Program for International Student Assessment (PISA) organized by the Organization for Economic Cooperation and Development (OECD), the reading, math and science skills of Indonesian students are still at the bottom of the list among the 72 participating countries. In the field of science, the PISA score of Indonesia is 403, much lower than the average PISA score of all participating countries, 496. This is also corroborated by pre-research results at SMAN 1 Ngronggot, Based on critical thinking tests given to 32 students in XI MIA 1 SMAN 1 Ngronggot, out of 14 critical thinking test questions given as much as 80% of students have scores less than 30 and 20% of students have a score of 30-42.

Due to the low critical thinking skills in Indonesia, it is necessary a learning that can improve critical thinking skills. According to Matthew & Kenneth (2013) to improve the critical thinking skills and creative students, the learning model that can be used is guided inquiry, where students can interact directly with teaching materials and actively involved in learning. The guided inquiry learning model focuses on students' activeness to solve problems through independent inquiry and cultivating the facts obtained to find out new concepts with the teacher as mentors.

Because the application of Physics concepts is easy to find in everyday life, Physics needs to be taught by learning models with images that can represent physics concepts. The guided inquiry learning model using pictorial riddles can be used to improve critical thinking skills through puzzle-filled images or problems that can represent physics concepts. According to Chusni (2016), learning with guided inquiry model of pictorial riddle type can improve students' learning concept and learning motivation. According to Jannati et al (2015) guided inquiry learning model with pictorial riddle can improve learning outcomes and learning activities of students.

Guided Inquiry learning type of pictorial riddle is expected to improve the critical thinking skills of students, so conducted research titled "High School Students' Response to Guided Inquiry Type Pictorial Riddle in Improving Critical Thinking Skills"

METHOD

Type of research used is one group pre-test post-test with 3 experiment class. Subjects of the study were students in 3 classes of MIA X SMAN 1 Ngronggot taken based on the advice of the subject of physics teacher.

Data collection method is a questionnaire method. The instrument used is response questionnaire given after inquiry of the guided type of pictorial riddle applied in momentum and impuls lesson. Questionnaire contains 10 items of response that can be chosen by students.

Response questionnaire data was analysed by analysis of responders' questionnaire sheets. Response students good if based on response sheet analysis results obtained value of more than 61% (Riduwan, 2010).

Tabel 1. Response Category

Percentage	Category
0% - 20%	Much Less
21% - 40%	Less
41% - 60%	Average
61% - 80%	Good
81% - 100%	Very Good

(Riduwan, 2010)

RESULTS AND DISCUSSION

The student's response data was collected by questionnaire responses of students after a guided inquiry study of the pictorial riddle type. Comparison of students' responses between classes can be seen in Table 2.

Table 2. Classroom Response

Response	Exp. 1	Exp. 2	Exp. 3
I	86	83	84
II	88	92	78
III	85	87	75
IV	81	87	82
V	88	79	79
VI	88	90	79
VII	88	77	74
VIII	85	88	77
IX	88	88	77
X	77	72	74

Based on Table 2, the response of the experimental class 1 students is better than the other 2 classes, while the response of the experimental class students 3 is the lowest response. The response data of students obtained can be seen in Figure 1.

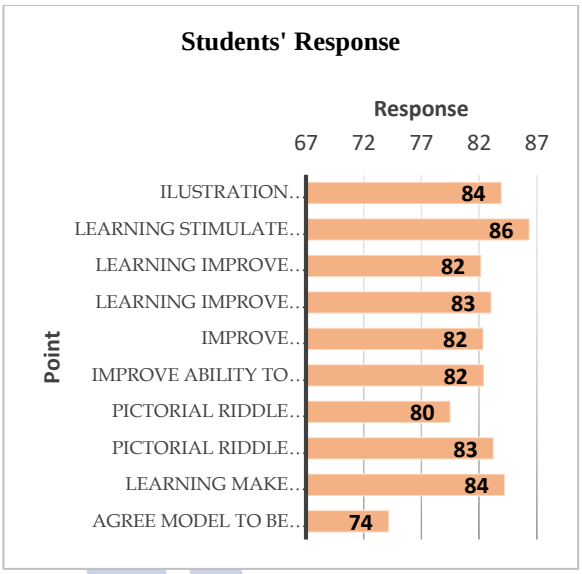

Figure 1. Students' Response

Based on Figure 1, the students 'responses are excellent on points 1 up to 9, the students' responses are good at the last point. Students agree that the inquiry model of guided inquiry type of pictorial riddle increases the interest of students in learning and the phenomenon shown in the pictorial riddle makes the curiosity of students increased. Positive students' responsiveness that guided inquiry learning of the pictorial riddle type can improve critical thinking and help students solve problems that require critical thinking skills.

Although the average response of students is very good, but some students have an unfavourable response to learning, 5% of students disagree if inquiry learning guided type of pictorial riddle applied to other materials, this is suspected because of differences in students' views and differences learning style of each students. The guided inquiry learning of the pictorial type containing the images is only suitable for students who have a visual learning style. Based on data in 3 experimental classes at SMAN 1 Ngronggot, students have a good response to the use of guided inquiry models of the pictorial riddle type to improve critical thinking skills.

CLOSURE

Conclusion

Based on the data collected, students have a good response to the use of guided inquiry model type

pictorial riddle to improve the critical thinking skills of high school students.

Suggestion

1. The guided inquiry learning model of the pictorial riddle type should be applied to other materials to improve the critical thinking skills of students, with the condition that the students already have good science process skills.
2. The guided inquiry learning model of the pictorial riddle type takes a lot of preparation and a long time in its implementation, so that things that can reduce the learning time should be minimized as the previous subject teachers are late out and also the readiness of the students to receive the learning.

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