An effort to encourage critical thinking in class 5 through media question cards in thematic learning

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1. Abstract

The 2013 curriculum is student-focused, demanding students to be active and critical thinking. Integrated thematic learning requires more effort due to the fact that students still have a lower tendency to show critical thinking skills. It is important for learners to get instructions on how to think critically so that they can identify problems, process problems, and conclude real-world problems to gain a better understanding of their world. One medium that can encourage students to become more active and critical thinking is using Question Qard. In an effort to enhance students' critical thinking abilities, the study used Question Card media as well as using learning models that support success in research. Data is collected by looking at previous research journals and books related to the subject. Next, the data is analyzed.

Research results show that the use of Quetion Qard learning media in integrated thematic learning improves critical thinking skills of students in the fifth grade of Elementary School in Bantul. The application of learning models tailored to current problems also

supports success. Test results showed improvements in cycle I, students' critical thinking test results increased from the average pre-action score of 66 percent to 81 percent, and in the second cycle, the average score of 85 percent while the observation results also improved from the first cycle with an average of 73 percent to 78 percent in the third cycle. These results also show that students become more active in learning, have more time to find and gather the desired information, and students also have a greater chance to study with their friends.

Keywords: Critical Thought, Question Card

2. Introduction

The quality of education at the moment is still a problem that is still in the effort to improve the quality of the national education system. The government is working on a number of programs to improve education in Indonesia. The efforts covered all educational components such as curriculum renewal, teacher quality improvement, as well as other efforts that support the improvement of education quality. The truth of learning is an attempt to systematically find out about facts through the process of seeking to obtain knowledge. Education in the 21st century students at the SD level in demand to think critically with students involved actively in learning activities while teachers as facilitators in learning activity (student center). It is very important to apply for the learning progress of learners. Basically, lessons should be sought to be fun learning, because many things about everyday life are taught based on concrete examples and finding out how to solve a problem.

The learning steps implemented are changes in the delivery of teaching materials, students analyze problems, the formation of discussion groups with the grouping of

students based on their achievements, students group to discuss, group members deliver the results of discussions in front of the class.

Students should be instructed to think critically so that they can identify problems, solve problems, and conclude real-life problems to gain a deeper understanding of the surrounding environment. (Fuad, 2017:101). With that, critical thinking becomes an important thing to be able to apply in everyday life. Through thematic learning the student is able to think critically to be able to make relevant decisions based on the problems that must be solved by the student.   The issues presented would be more meaningful if presented are related to real life so that the expected implications are achieved, not just accepting science theoretically but understanding the implications in real life. Critical thinking can be seen when students are able to compare two or more information obtained, such as information acquired from outside with information they possess. According to Robert Ennis (Mohamad, 2015:127) the critical thinking skills indicator is divided into 5 groups. What can be seen in the table:

Table of 1. Critical Thinking Indicators

No	Critical Thought Skills	Sub Critical Thinking Skills
1	Elementary clarification (Simple Explanation)	1. Focus on questions. 2. Analysis of Arguments 3. Ask and answer challenging questions
2	Building basic skills (basic support)	4. Assessing the credibility of a source 5. Observing and developing observations.
3	The Inference	6. Making deductions and considering the deduction results 7. Induction and consideration of induction. 8. Making and considering decision values

4	Additional Explanation (Advanced Clarification)	9. Identify the term, consider the definition
		10. isIdentifying the assumption
5	Strategic and Technical.	11. Deciding on an action.
		12. isinteracting with others.

Results of observations carried out in class V showed that during the process of learning activities students had a low interest in learning, passive behavior during learning, lack of questioning activity, and low curiosity. Furthermore, the learning process has not yet been able to direct students to improve their critical thinking abilities. This means that the critical thinking ability of the student will not develop well. Then it is necessary a strategy in practical learning to be able to improve the critical thinking ability of the students in following learning.

Based on the results of observations that have been made while learning takes place, teachers can use the problem-based learning model with the help of the media as a tool to help realize the desired learning goals with the aid of media as well as the appropriate learning model, then it is expected to stimulate students to apply the ideas they have and encourage students to use their own strategies to learn. Card media is a medium that is considered appropriate in helping teachers to the learning goals they want to.

Question card is a 10 x 10 cm paper that contains questions about the materials taught. Question cards can be performed through a contest between groups of students by answering questions in the form of cards. Students are assigned to be able to answer the questions on the question card to add points. The group that gets the highest points will be the winner. (Naniek , 2019:81).

Card media can be applied with some of its advantages to apply in classroom learning as a means to enhance the participant's active role and thinking ability. The researchers were conducted to try to address the problem of the need for cooperative, easy and practical learning media used in classroom learning by using learning media that can increase learning interest as well as involve students in learning activities so that they can play an active role and can improve critical thinking. According to research from (Dewi Ratnawati, 2020:50) using media question cards suggests that there is an influence on critical thinking students with a medium category.

According to (Nurul, 2019:63) the advantage of using cards in learning has several benefits among them as follows:

1. Cards are used to accentuate abstract concepts.

2. Cards can realize similar perceptions with background differences that students have so that they can minimize the likelihood of miscommunication.

3. The application of cards in learning activities makes students engage in direct interaction in the learning activities, so that the learning material delivered by the teacher can be accepted well.

4. The card can focus the attention of the student to one point.

5. There is an active interaction between teachers and students in learning activities.

The learning model as proposed by Joyce and Weil (Trianto, 2010:15) is a plan or pattern that can be used to form a curriculum (long-term learning plan), design learning materials and guide learning in the classroom or other. The meaning of the learning model is a conceptual framework that describes a systematic procedure in organizing experiences. Problem-based learning is an approach that gives new knowledge to learners to solve a problem, so this approach is a participatory learning approach that can help teachers create

a pleasant learning environment because it starts with important and relevant problems for learners, and allows students to gain a more realistic learning experience. Nevertheless, teachers remain expected to direct students to find relevant and current and realistic issues. (Suryani, 2018:12). One of the most effective ways to enhance students' critical thinking skills during integrated thematic learning is by choosing the appropriate or safe learning model to use. Similar research results from (Lieung, 2019:73) emphasize that one of the strategies to improve students' performance in critical thinking is to use learning models that match the subject matter, and facilitate their understanding of the subjects taught so that they can cool learning outcomes.

Teachers should be able to direct students to improve their critical thinking skills because Critical thinking becomes essential to being applied in everyday life. Through thematic learning, students are able to think critically in order to be able to make relevant decisions based on the problems that must be solved by students. The results of data analysis conducted (Guntari, Agnes, & Johnes, 2023:91) showed that the application of a problem-based learning model can improve critical thinking skills and learning outcomes of elementary school students. The critical thinking ability variable increased from the initial condition of 61 to a rate of 75 in cycle I and increased to 86% in Cycle II. Some researchers focused on the models used but still less involved media that could be used to magnify success in improving students' critical thinking. In learning teachers should facilitate the media, learning resources as well as the learning models required by students as an effort to enhance critical thinking of students.Therefore, the researchers focused on the application of the Question Card media as a supportive means to enhance students' critical thinking by applying supporting models to boost students' kritical thinking. Therefore, the

study was shown to enhance critical thinking of V-grade students by using Question Card media on thematic learning.

3. Methods

3.1 Participants and context

The study was conducted at one of the primary schools in Bantul. Research conducted to know the improvement of critical thinking students using the media Question Card as well as using the learning model problem based learning to improve the success in research

3.2 Materials

Data collection is a primary step in research, because it has the primary purpose of obtaining data. Without knowing how to collect data, it will not meet the standards of determination in conducting research (Danuri & Maisaroh, 2019:106) In this case, the researcher will use the data collection tools of observation and testing that can be described as follows.

a. Tes

The researchers used tests to find data on critical thinking abilities at the end of each given cycle. Questions are made based on the material and critical thinking indicators of students. The test as a data collection instrument is a series of questions used to measure the knowledge, intelligence, abilities or talents possessed by an individual. (kompetensi pada ranah kognitif). The theoretical ability test instruments are made based on grids according to the lesson material.

b. Observed

At the observation stage, the researcher observes and records all the things that are needed and happen during the implementation of direct action. The collection of observation data is carried out using the previously compiled observation format. Includes also in the careful observation of the implementation of action scenarios over time and their impact on the process and student learning outcomes. (Aqil & Amarullah, 2018:20)

3.3 Data Collection and analysis

This section of research methods outlines steps to solve problems. Clearly describe the research process. The method is selected to be adapted to the type of research. For example, for class action research can be submitted objects, time and duration of action, as well as the location of the research. Procedures should be detailed from planning, implementation of actions, observations, evaluations-reflections, which are recyclable or cyclical.For experiments can be submitted research variables with their operational definitions if any, time and duration of the research, sampling techniques used, instruments used, data analysis techniques and research hypotheses. Qualitative research is adapted.

The type of research used by researchers is collaborative class action research.The model used by the researchers are the models proposed by Kemmis and Mc Taggart in the form of a spiral and continuous, as long as when the results of the research obtained have not met the target that has been determined then the action taken is by continuing on the next cycle. The implementation cycle of research covers the stages of planning, implementation, observation and reflection. The research used a study model of the action class of a spiral shape. The study of class action is carried out through a dynamic and complementary

process consisting of four essential "moments", namely: planning, action, observation, and reflection. (Kunandar, 2013:76). In this study there are two cycles and each cycle has four stages: planning, action, observation, and reflection. (Reflection). The model and explanation for each stage is as follows:
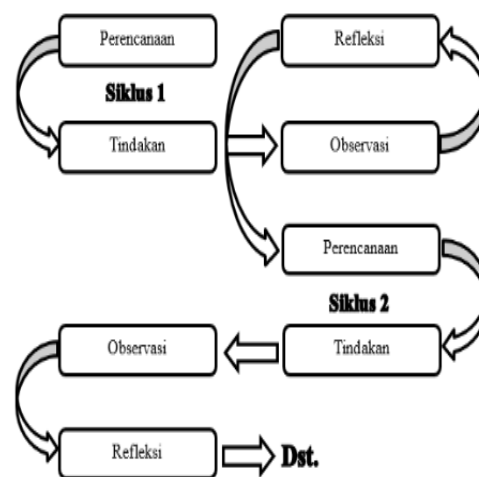

Figure 1. Design PTK model Kemmis and Mc Taggart

This study was conducted in primary schools. The study was conducted in May 2023. The subject of this research was the entire 5th grade students of primary school which totaled 24 students. The objective of the study is to know the entire process and think critically students with the application of media Question Card as well as using the problem-based learning model to improve success in research. The data collection techniques used in this class of action research are observation, testing, and documentation. Data analysis techniques in this study use qualitative descriptive analysis. Analysis of observation and test data is processed using the formula:

NP = $\frac{R}{SM}$ ×100

NP = Requested Presentation

R = raw scores obtained by students

SM = Maximum Ideal Score

100 is a fixed number

 (Ngalim, 2013)

Then the presentation of the data can be translated into qualitative sentences referring to the following table:

Table of 2. The Peninsula Scale

Nilai	information
81 – 100 %	good once
61 – 80 %	good
41 – 60 %	is sufficient
21 – 40 %	Less
< 20 %	less than once

(Arikunto & Cepi, 2014:35)

3.4 Ethical Considerations

The information collected during the study will be kept confidential by the researchers. Data confidentiality should beined to help protect the privacy of students, teachers and the research site. This is to ensure that the information obtained during the research process is not disclosed to unauthorized persons.

3.5 Limitations to the study

Based on the description that has been shown on the background of the problem, then the scope of this research problem is limited to the use of the Question Card media in an effort to enhance critical thinking of class V students

on thematic learning. The indicator of success in this study is the achievement of an improvement in critical thinking of students using Question Qard media above 75% of the number of students, that is, at least 18 students out of a total of 24 students. Limitations to the Study

Limitations to this Aaction Research study are that findings are closely integrated with their context. Thus, they are not generalizable to other contexts. There are also limitations to the study as regards the knowledge and experience of the authors. Being researchers with a background in language education, we have constructed the study out of our knowledge-base and view of the matter.

4. Results and Discussion

In pre-cycle activities, the activity begins with interviews with class teachers to gather data as well as learning observations as the basis of initial data on student abilities. Cycle I is carried out according to the problem-based learning steps using the media Question Cards. This includes planning stages for the learning devices to be used, making the cards you want to use, taking action during learning, performing observations, and reflecting at the end of learning. Thro learning, researchers act as educators and observe class teacher. Learning is done through group discussion. Students will remember more of what was discussed during group discussions than just listening to the teacher explaining (Aprilianti, 2018:58). The first cycle faced barriers in time management because students were too engaged in group discussions, which resulted in a lack of time displine and unattractive card designs. In this cycle I, the critical thinking ability of students from the results of observations has not yet been seen to stand out, but there is an improvement in both the student's critical thought ability and the learning results obtained by students. Results on cycle 1 are good but cycle 2 is needed to strengthen the results of the study.

Cycle II is carried out in the same way as the first phase of cycle I by changing the design of the questionnaire and avoiding mistakes made during the teaching. The problem-based learning phase is carried out using question card media. After the lesson is over, activities are carried out to evaluate critical thinking skills and learning outcomes. Each cycle consists of essays designed to test students' ability to think critically. This phase enhances the ability to think critically. The second cycle improves the student's ability to ask questions during learning. In the second cycle, the researchers corrected the mistakes that occurred in the first cycle by becoming more time-disciplined and increasing student participation.

Descriptive analysis will be used to evaluate the learning results of the Problem based learning model in the V class of elementary school in Bantul. This analysis will show the results of observation and learning results after learning is done. In each cycle, critical thinking indicators are used to perform observations. The observation phase is carried out while learning continues. As students learn, their critical thinking ability to ask questions to teachers also improves. Students are also able to argue during group discussions. By the time learning is over, students can draw conclusions and find the right solution to the problems faced. This was demonstrated by an increase in the results of observations related to critical thinking of class V students from the initial condition of 56% increased to 73% in cycle I. After making improvements in the next cycle that had an impact on improved performance in the second cycle, students appeared enthusiastic in following learning activities, paying attention to the cards given, more courageous in expressing their opinions, as well as more students asking questions to teachers. His ability to make conclusions in correct problem solving is also increased. Results from the ability to think critically in the second cycle increased to an average of 78%. This improvement in critical

thinking is not exempt from the use of Question Card media as well as the application of Problem-based learning models as an effort to increase success in research activities. In this study, the problem orientation is presented in the form of concrete media or technology-based related to the subject studied. From the issues presented to students to be discussed such is expected to stimulate the critical thinking ability of elementary school students. In such situations, people can directly develop learning skills in their field to find problems. There are a number of steps that students can take to this goal. For example, give instructions on problems to students, organize their research, assist them in independent and group investigations, develop and present findings, and analyze and evaluate problem-solving processes. Increased activity related to students' ability to think critically It is also seen in student observations. Students' results in Cycle I and Cycle II can be seen in the following table:The observation data is as follows:

Table of 3.Students' critical thinking skills in early conditions, Cycle I and Cycle II

No	Critical Thought Skills	Early conditions	Cycle I	Cycle II
1	Elementary clarification (Simple Explanation)	51%	74 %	82 %
2	Building basic skills (basic support)	64 %	78 %	76 %
3	The Inference	63 %	80 %	84 %
4	Additional Explanation (Advanced Clarification)	59 %	72 %	73 %
5	Strategic and Technical.	45 %	60 %	75 %
average critical thinking		56 %	73 %	78 %

The results of the research that has been carried out in line with the statements of (Ratnawati, Handayani, & Hadi, 2020:50) in his research he revealed that overcoming less critical thinking abilities can be achieved through a problem-based learning model assisted by a questionnaire. The results of the study showed that students' critical thinking abilities

increased according to the indicators of success. In Cycle I, test results showed success in students' critical thinking abilities from 66% to 81% in Cycle II. The data analysis results are also excellent and meet the criteria for research success. In Cycle II, the results of the study showed an improvement in test outcomes for each set indicator from 81 percent to 85 percent. The results of the test on cycles I and II can be seen in the table below:

Table 4. Results of students' critical thinking tests

Criteria	Pre Cycle	Cycle I	Cycle II
Average value	66 %	81 %	85 %
Highest value	80	100	96
Lowest value	46	52	74

The research was considered successful because the research objectives of class action with the Question Card media have been achieved overall, according to the results of observations and tests. The study concluded that critical thinking skills of 5th grade students in thematic subjects could be enhanced by applying a problem-based learning model.

5. Conclusion

Based on the results of class action research, it can be concluded that the application of Question Card media to improve critical thinking abilities of class V students can be successful. An increase in critical thinking in class V students can be seen from Cycle I to Cycle II test results of 81% and 85%, while observation results also increased from an average of 73% to 78%.

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