Improvement of Student's Critical Thinking Ability Through Problem-Solving on the Evaluation of Education Policy

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IMPROVEMENT OF STUDENT'S CRITICAL THINKING ABILITY THROUGH PROBLEM-SOLVING ON THE EVALUATION OF EDUCATION POLICY

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ABSTRAK

Penyelenggaraan program magister adalah untuk membekali mahasiswa memiliki berbagai kecakapan baik akademik, spiritual, sosial, maupun keterampilan. Berkaitan dengan kecakapan akademik, maka salah satunya mahasiswa dituntut untuk memiliki kemampuan berpikir kritis, yang pada akhirnya mahasiswa diharapkan memiliki kecakapan dalam menyelesaikan permasalahan disertai dengan kemampuan merumuskan alternative-alternatif solusi permasalahan yang ada di dalam diri dan masyarakatnya. Penelitian ini bertujuan untuk: 1) mengetahui bagaimana meningkatkan kemampuan berpikir kritis mahasiswa melalui implementasi metode problem solving pada mata kuliah evaluasi kebijakan pendidikan, 2) bagaimana peningkatan kemampuan berpikir kritis mahasiswa dengan implementasi metode problem solving dalam pembelajaran mata kuliah evaluasi kebijakan pendidikan. Penelitian ini menggunakan metode Classroom Action Research. Hasil penelitian menunjukkan bahwa: Penerapan metode perkuliahan problem solving dapat meningkatkan kemampuan berpikir kritis mahasiswa dalam proses perkuliahan system informasi manajemen mutu pendidikan. Hal tersebut dapat dibuktikan dengan adanya peningkatan kemampuan berpikir kritis mahasiswa pada setiap siklus.

Kata Kunci: berpikir kritis, problem solving, dan evaluasi kebijakan.

ABSTRACT

The holding of a master's program is to equip students to have a variety of skills, both academic, spiritual, social, and abilities. Related to academic skills, one of them is students who are required to have critical thinking skills, which in the end, students are expected to have the ability to solve problems accompanied by the ability to formulate alternative solutions to the issues that exist in themselves and their communities. This study aims to: 1) find out how to improve students 'critical thinking skills through the implementation of problem-solving methods in educational policy evaluation courses, 2) how to improve students' critical thinking skills by implementing problem-solving methods in learning education policy evaluation courses. This research uses the Classroom Action Research method, which is carried out through the steps of planning, implementation and observation, and reflection. Data sources are students who take education policy evaluation courses. The results showed that: The application of the problem-solving lecture method can improve students' critical thinking skills in the education quality management information system lecture.

Keywords: critical thinking, problem-solving, and policy evaluation.

INTRODUCTION

When the Indonesian people faced complex problems caused by various crises, the challenges in meeting the era of globalization characterized by openness and free competition were increasingly pressing. Like it or not, the Indonesian people must strive to improve the ability and competitiveness of their human resources in the international arena. In a period of relative urgency, Indonesia must be able to prepare human resources that are professional, resilient, and ready to use. Indonesian human resources need to have the provision of intellectual abilities and high-mindedness and power of innovation, also know, and the habit of implementing good moral attitudes. The quality of national education needs to be improved immediately so that overall national education goals can be achieved. In other words, education reform, with its various segments, is a necessity and an urgent action (Zamroni, 2001: 158).

Law No. 20 of 2003 Article 1 paragraph 2 is explained that national education is always required to keep abreast of the times. Public school as a system is part of the life system of society, nation, and state so that it can be understood that the education system, besides being free of values or free of culture, is also related to local communities, national communities, and global communities. Every nation or society that wants to maintain and develop its existence should always strive to make its education system more dynamic and more responsive to ongoing changes and trends (Siswoyo, 2013: 82). The ability to think critically is the ability to believe that includes the ability to explain, analyze an argument, conclude, give a consideration result, and give a decision or action (http://repository.ut.ac.id/6005/1/ 2011_9.pdf).

UNY Postgraduate Students History Education Study Program is equipped with Educational Policy Evaluation courses. Educational Policy Evaluation Course is the

elective course in semester 2. This course discusses the original conception (1) evaluation of education policy, (2) objectives, functions, and importance of evaluating education policy and (3) and some of the latest educational systems that exist in Indonesia. According to Widoyoko, (2010: 6), evaluation is a systematic and ongoing process for collecting, describing, interpreting, and presenting information about a program to be used as a basis for making decisions, formulating policies, and developing further applications. As for one of the learning outcomes of educational policy evaluation courses, students can utilize science and technology to comprehensively analyze the objectives, functions, and importance of evaluating educational policies, as well as assessing the strategic systems of government programs in education (Semester Lesson Study Program S2 Study Program Historical Education UNY Postgraduate Program, 2018).

The results of the study by Hermin Widiya Utami on the Application of the Problem-Solving Method through Visual Media to Improve Mathematics Learning Outcomes of Students in Class IV SD Negeri 10 Metro Pusat. The purpose of this study is to analyze and find out the improvement of students' mathematics learning outcomes by applying the method of problem-solving through visual media. This type of research is a classroom action research (CAR) conducted in 2 cycles. The results showed that the application of problem-solving methods through visual media could improve student mathematics learning outcomes. This is seen from the average value of student learning outcomes in the first cycle, with the category "Enough" increased in the second cycle to the "Good" group. The percentage of completeness of student learning outcomes in the first cycle with the category "Enough," increased in the second cycle to the "Outstanding" group. The problem-solving method is very flexible so that it can be applied at various levels of education, including strata 2, depending on the complexity and breadth of the study area.

METHODS

This research uses Classroom Action Research (CAR) or what is often called Classroom Action Research. According to Karwati and Priansa (2015: 292) PTK is a research conducted on the behaviors and actions that occur in the learning process that takes place in class. CAR is carried out as an effort to improve the quality of learning done by teachers in the classroom, as well as to understand aspects relating to students and the environment around the class. PTK is not set up to disrupt the learning process, because it is done in a natural learning process in class, according to the lesson schedule. CAR is situational, conceptual, small-scale localized, and relevant directly related to real situations in the classroom. PTK involves students and collaborators as teacher partners. Kunandar (2011: 46) that classroom action research is a scientific activity carried out by the teacher in his class by designing, implementing, observing, and reflecting actions through several collaborative and participatory cycles that aim to improve or improve the quality of the learning process in his class.

RESEARCH RESULTS AND DISCUSSION

This research lecturer was conducted in the II cycle. Each cycle carried out at one meeting with a time allocation of 2 x 50 minutes. Each cycle consists of planning, implementing actions followed by observation, and finally, reflection. The details of each cycle are as follows:

Cycle I

In the first cycle of work, a meeting was held on Wednesday, May 30, 2018. In this cycle, the teaching lecturer was a research lecturer, during the action activities, the collaborator lecturer and colleagues observed the course of the study and recorded the implementation of the actions in the lecture process. The description of the research lecturer that has been carried out in the first cycle is as follows:

a. Cycle Action Planning I

In the planning, many things must be prepared by the research lecturer who collaborates with the lecturer, including the following:

1)Lecturers and research lecturers discuss to determine the material to be taught when the research takes place.
2)Develop a Semester Lecture Plan (RPS) with the problem-solving lecture method related to the material.
3)Discuss the problem-solving lecture method.
4)Preparing lecture media that can be used during lectures is by making a problem-solving card consisting of 15 answer cards.
5)Make a hand out about the material to be taught in class.
6)Prepare research instruments in the form of observation sheets, questionnaire sheets, and prepare field notes.

b. Implementation of Cycle Actions I

Implementation of lectures in the first cycle carried out on Wednesday, May 30, 2018 in the first hour until the second hour with an allocation of time 100 minutes. The division of time in lectures is as follows. The steps in this type are as follows:

1) Students are divided into groups. Each group member gets a number.
2) Lecturers give assignments, and each group does it.
3) The group discusses the correct answer and ensures that each group member can do it / know the answer.
4) The lecturer calls one of the student numbers randomly to report the results of their collaboration.
5) Other students respond to students who are communicating.
6) The lecturer points to the other numbers in turn.

c. Observation

1) Observation of Lecturers

Observations of lecturers in the first cycle carried out at the beginning to the end of the lecture. Based on observations of lecturers during the lecture process using the problem-solving lecture method, it shows that when teaching lecturers already look good. Lecturers have made Semester Lecture Plans (RPS). Before entering the lecture material, the lecturer first performs apperception in the form of the formation of the earth and conveys the purpose of the lecture. Then the lecturer explains the lecture material interspersed with questions and answers. Lecturers also provide opportunities for students to ask questions about unclear material to be discussed later with students.

After giving the lecture material, the lecturer then divided the class into three groups. Furthermore, lecturers hand out handouts to be read by students. Before carrying out lectures using the problem-solving lecture method, the lecturer first explains the steps of the problem-solving lecture method. When conducting lectures, lecturers also motivate students by giving praise and grades to students who can guess the words in the Answer Card. Furthermore, lecturers and students together conclude the material that has been studied. The lecturer also provides an evaluation of the material that has been learned to determine the success of the material that has been studied by students. The lecturer then gave an assignment to students to study the next material about the types of ancient humans in Indonesia. Finally, the lecturer closed the lecture activities by saying greetings.

2) Observation of Students

a) ***Students critical thinking skills***

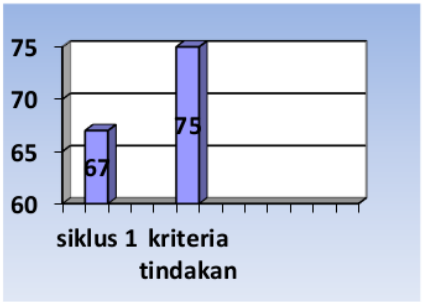
Based on the results of observations of students 'critical thinking skills conducted in the first cycle using the problem-solving lecture method shows that students' critical thinking skills are still

relatively passive. This is indicated by the attitude of students who have not focused on paying attention to lecturers' explanations, students have not been actively asking questions, and also activities in the classroom are not conducive because many students are still playing cellphones. When students from other groups come to the front of the class to play problem-solving, students who do not progress tend to be busy themselves. Besides that, students are also not eager to attend lectures using the method of problem-solving lectures. Students thinking of solving problem-solving cards showed an average of 67%. For further information, here is a table of students' critical thinking skills as follows:

Table 1. Average Percentage of Students' Critical Thinking Ability Siklus I

Kemampuan berpikir kritis Mahasiswa Siklus I		
Siklus I	Kriteria Keberhasilan	Keterangan
67%	>75 %	Belum Berhasil

From the table above, in the first cycle, the average percentage of indicators of Critical Thinking Ability of students was not optimal or had not yet reached the applied success criteria. The success criteria set in this cycle are 75%, while the average percentage of students' critical thinking skills in the first cycle has only reached 67%. Based on the table can be presented in the form of bar charts as follows:



Graph 1. Critical Thinking Ability Diagram for Cycle I Students

Student test results in the form of pre-test and post-test below are used to control whether an increase also follows an increase in students' Critical Thinking Ability in student learning outcomes in the way of tests. Pre-test results are used to determine the ability of students' understanding of lecture material that will be taught to students before it is conducted

d. Reflection

In the process of learning the Education Quality Management Information System using the

problem-solving lecture method in the first cycle, it can be concluded that the lecture is not good enough, and the application of the problem-solving lecture method in the first cycle shows it has not been implemented optimally. The average percentage of indicators of critical thinking skills of new students reached 67%. In the first cycle of action, the research lecturer found several obstacles, namely as, First, research lecturers have not conveyed conclusions about the material that has been taught to students. Second, Students are still confused with the application of the problem-solving lecture method. Third, there are still many students who are busy and busy with their mobile phones. Fourth, Enthusiastic students to come to the front of the class are still lacking.

Based on the results of reflection on cycle I, the aspects that need to be improved are as follows, the research lecturer (lecturer) must explain more clearly about the regulation of the problem-solving lecture method, so students can understand and be able to follow the lecture with the lecture method well. Research lecturers (Lecturers) need to motivate students to be more enthusiastic about learning Quality Management Information Systems in Education by using problem-solving techniques.

Cycle II

Education Quality Management Information System lectures in the second cycle is an improvement from the implementation of actions in the previous cycle I am using the same lecture method, namely the problem-solving lecture method. The stages in cycle II are also the same as the stages of a cycle I, which include planning, implementing actions, observations or observations, and finally, reflection. Following are the stages of cycle II:

a. Planning for Cycle Actions II

Based on the results of reflection in the first cycle, the research lecturer conducted the following steps, First, develop a Semester Lecture Plan (RPS) with the problem-solving lecture method related to the material. Second, making lecture media that are used

during lectures is by making a problem-solving card that is the answer card. Third, make a hand out about the material to be taught in class. Fourth, Research lecturers prepare instruments in the form of observation sheets, prepare field notes and documentation.

Based on the results of reflection in the first cycle, it is necessary to have some improvements, including the following, First, the lecturer must explain more clearly about the steps of the problem-solving lecture method so that students can understand and be able to follow lectures with the lecture method well. Second, Lecturers need to motivate students to have higher enthusiasm in attending lectures by dividing students into groups and holding competitions between groups and giving points as rewards to students who can answer questions related to the material.

In the second cycle in applying the method of problem-solving lecturers, the lecturer will modify more so that the class situation becomes active and organized so that students are more focused on attending the Education Quality Management Information System lectures using the problem-solving lecture method. The action in the second cycle of this research lecturer divides students into 3 groups of each group, holds a competition between groups, the lecturer will also give points to each group that can solve more problem-solving cards, so students are more eager to take classes using the problem-solving method. Course planning is also made better and more mature so that lectures in cycle II are better than in cycle I.

a. Implementation

The second cycle of action was carried out on June 2, 2018. Lectures took place at 1-2 hours for 100 minutes (2 x 50 minutes). The steps at this stage are as follows: 1) Preliminary Activities (Allocation of time 10 minutes), 2) Core Activities (Time Allocation 65 minutes), 3) Closing Activities (Allocation time 15 minutes)

b. Observation

1) Observation of Lecturers (Research Lecturers)

In this cycle, the lecturer modifies it in a way before going to the front of the class. Students compete in an orderly and smooth manner because each group advances alternately to solve answers to problem-solving. Besides, the lecturer also motivates students by continuing to provide rewards in the form of praise, points, and added by giving prizes to groups that win. Finish using the problem-solving lecture method. Then the lecturer helps students to conclude the lecture material that they just learned. Furthermore, lecturers provide evaluations in the form of verbal questions to students to find out the success of the material that has been learned. Moreover, the lecturer announced the group that won in the competition using the problem-solving lecture method and giving prizes. Finally, the lecturer closes the lecture with a greeting.

2) Observation of Students

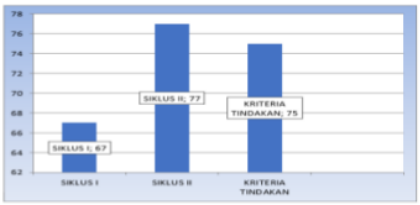
Observations on students, namely the ability to think students critically, in general, can be said to have increased from the previous cycle. Further description of students' critical thinking skills is as follows: Students' Critical Thinking Ability Based on observations when conducting lectures using the problem-solving lecture method, students' critical thinking skills have increased. In cycle II students are willing to read lecture material, students pay attention to lecturers' explanations, are active in asking questions, are engaged in expressing opinions, students are also more motivated to play by going to the front of the class to answer existing questions on the cards, students also seemed more enthusiastic about attending lectures. Based on the observation sheet, critical thinking skills of students conducted in the second cycle obtained an average of 77%. The following table is the ability to think students critically in cycle II:

Table 2 Average Percentage of critical thinking skills Cycle II

Kemampuan berpikir kritis Mahasiswa Siklus II			
Siklus I	Siklus II	Kriteria Keberhasilan	Keterangan
67%	77 %	>75 %	Berhasil

Based on the table above, in Cycle II students 'critical thinking abilities have succeeded or have

reached the established criteria of 75% because in this cycle II the average percentage of indicators of students' critical thinking skills has reached 77%. For more details can be seen in the following diagram:



Graph 2 Diagram of the ability to think critically Cycle II

Based on the average results of the percentage of critical thinking skills of students in the second cycle, using the problem-solving lecture method has increased and has reached predetermined success criteria. In this second cycle students are increasingly enthusiastic in attending Education Quality Management Information System lectures using the problem-solving lecture method

a. Reflection

Based on the observation sheet that has been done in Cycle II, the critical thinking ability of students has increased significantly. The increase shows that the act of lecturing using the problem-solving lecture method has succeeded in improving students 'critical thinking skills with an average presentation of students' critical thinking skills is 77% while the criterion for the success of students' critical thinking skills is 75%. Increasing students' critical thinking skills through the application of the problem-solving lecture method in the Education Quality Management Information System course in the first cycle is quite excellent. This can be seen from the average percentage of indicators of critical thinking skills of new students, reaching 67%. While the criteria set are 75%.

Based on the constraints in cycle I that resulted in the unsuccessful classroom action research lecturer, including the following, First, Students do not understand the steps of the problem-solving lecture method. Second, the enthusiasm of students taking lectures using problem-solving lectures is still lacking. Third, the average percentage of indicators of critical thinking of students has not yet reached the criteria of success because it has only reached 67%.

Efforts to improve students' critical thinking skills by applying the problem-solving lecture method, in the second cycle have shown a significant increase. The increase has also shown success in the actions of using the problem-solving lecture method because the average percentage of indicators of critical thinking ability of students has exceeded the established success criteria of 75%. In cycle II, the average percentage of students' critical thinking skills increased by 10% from cycle I to 77%. Furthermore, it can be seen from the following tables and diagrams:

D. Conclusions

From the results of research and discussion that has been described, it can be concluded that: The application of the problem-solving lecture method can improve students' critical thinking skills in the education quality management information system lecture. This can be proven by an increase in students' critical thinking skills in each cycle. Cycle I of the critical thinking ability of students is 67%. In cycle II it increased by 10% from cycle I to 77%. This means that the critical thinking ability of students has exceeded the success criteria that have been set at 75%.

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