Increasing Learning Outcomes and Ability Critical Thinking of Students Through Application Problem Based Learning Strategies

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ABSTRACT

Classroom action research aims to determine the improvement of critical thinking skills and student learning outcomes in the Faraidh material fiqh lessons. The research location is MTS. Medan PAI in class IX. This research was conducted in 3 cycles. Each cycle consists of Planning, Implementation, Observation, and Reflection. The results showed an increase in student learning from Cycle I, II, III. Research results show that in Cycle I: Scores of 90-100 (30%), 80-89 (50%), 70-79 (10%), 60-69 (10%), <59 (0%), At Cycle II, Score Range 90-100 (40%), 80-89 (40%), 70-79 (15%), 60-69 (5%), <59 (0%), In Cycle III. Scores of 90-100 (60%), 80-89 (40%), 70-79 (0%), 60-69 (0%), <59 (0%). The results of the study also showed that there was an increase in students' thinking skills which was characterized by several indicators namely Find and formulate problems, Analyzing problems, Expressing criticism and ideas, Presentation of solutions.

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1. INTRODUCTION

Creating students who are active in learning is not an easy matter. It takes maximum effort and seriousness. So this is where the role of the teacher is the most important, which is responsible for choosing and managing what learning activities are appropriate to be carried out in the classroom. (Michael Prince, 2004). So it is not excessive if it is said that the teacher is the key to the success of learning activities (Hasan, 2008).

Related to the learning process, lately more and more managers of educational institutions are aware of the need for a student-centered learning approach. The teacher centered approach is considered traditional and needs to be changed. This is because the teacher centered approach emphasizes coverage and dissemination of material, while students are less active; even many opinions say that this approach is inadequate for the demands of the current era of knowledge. (Amir, 2010 & Schweisfurth, 2011, Margo O'Sullivan. 2004).

In this case, educators now need to discuss suspicion and attention to the content currently discussed, may change and become obsolete, and reduce its relevance. In the era of the rapid flow of information that we are facing today, learners need to be more than what we usually give, they must be involved in learning, being scattered and motivated to learn more (Auster & Wylie, 2006). In addition, educators must also be able to provide competence, knowledge and skills to answer the questions they are experiencing (Lubis, 2018).

By allowing passive learners, the learning will not be possible to develop the ability to think and interpersonal skills. In other words, knowledge is only transferred from the "head" of the educator, so that his understanding will never be in and of course by itself this will affect student learning outcomes. (Suherman, 2008).

According to Amir, it is not like that we should give the learning process to our students. The educator should not only deliver material. He must stimulate students' thinking, with full inquiry, provoke reasoning, and provide clues that stimulate them to conclude the subject matter. But in learning like this, teachers should also not discourage students with low thinking skills. (Amir, 2010: 6).

In this regard, many examples of learning strategies are put forward by experts, especially learning strategies

with a learner-centered approach. One of the various strategies is a problem-based learning strategy. Problem-based learning is a learning approach in which students work in teams to find solutions or solutions to authentic or complex problems. (Chambers, 2007). Problem-based learning strategies start from cognitive psychology which was popularized by Jean Piaget. Piaget believed that the development of a child occurs through a continuous transformation of thought processes. A developmental stage consists of a period of months or years when certain development takes place. Although students are usually grouped by chronological age, their development levels may differ significantly (Weinert & Helmke, 1998).

This strategy can be applied almost to every lesson, but depends on the material being discussed. One of them is a Fikih lesson on Faraidh material. In MTS PAI this material is often considered difficult by students because learning tends to use expository methods, so students tend to be passive, even though students are not only required to master theories but also are required to be able to solve inheritance calculations that are sometimes incomplete, such as problems Aul and Radd. Of course if this method is applied it will make students become critical and increase their learning outcomes.

2. METHODS

The location of this study was conducted in class IX MTS PAI Medan, located on Jl. Pendidikan Gg. Tertib No. 8 Medan. As for the subject of this study were students of class IX MTS PAI Medan consisting of 20 people (10 men and 10 women).

The method used in this study is the class action research method (CAR). Class action research is an examination of learning activities in the form of an action that is deliberately raised and occurs in a class together. The action is given by the teacher or by the direction of the teacher conducted by the student. (Arikunto, 2008, McKernan. 2009). Action research is actually suitable for any person who wishes to improve his or her performance; or any group or organization who hopes for doing the same. (Hien. 2009).

This classroom action research was conducted in 3 cycles, where each cycle consisted of planning, implementation, observation, and reflection. (Sumarni, S, et al 2016) Data collection techniques used are observation, tests, questionnaires. each test and questionnaire before being used first tested, this is what is called an instrument trial. The test in this study was tested in terms of validity, reliability, level of difficulty, power of difference questions.

In terms of data analysis, there are two types of data, namely quantitative data and qualitative data. Quantitative data can be obtained from test results and assignment values. While qualitative data is taken from students' critical thinking skills, students' interest in the PBM strategy, student interaction with programmatically

taught material, and students' ability to describe learning outcomes.

The results of the observation (essaytest) of students' critical thinking skills at one meeting were determined by frequency, then determined also the frequency average of the activity categories of each group member each meeting in one cycle.

Look for the percentage of the average frequency of each activity category by dividing the frequency average for each activity category with many frequency observations for each meeting. Then the dividing results are multiplied by 100%, then look for the average percent (%) time in each meeting in the cycle and put in the available average percent column.

In this study, the quantitative data are learning outcomes, by analyzing the average test scores, then categorized in the classification of high, medium and low. while the qualitative data of students' critical thinking skills in the learning process are described and then analyzed the level of critical thinking skills and are categorized in the classification of medium and low height.

3. RESULTS AND DISCUSSION

Results

Based on the results of the analysis compared with the

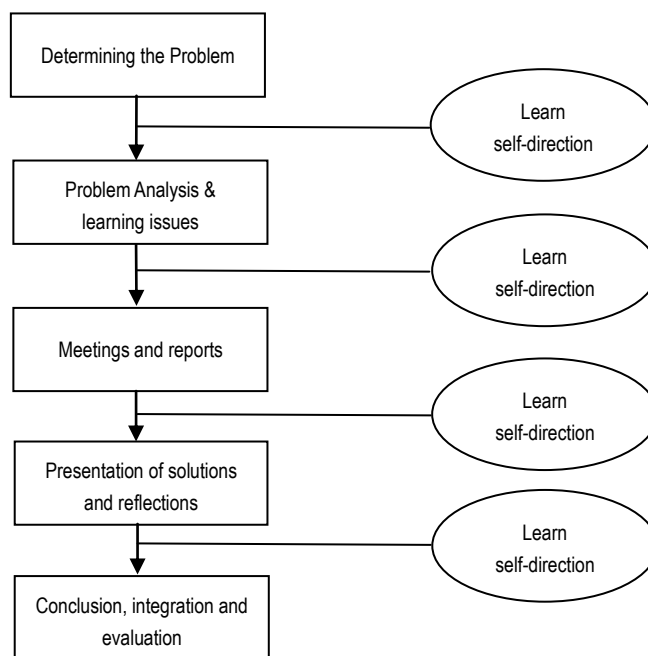Problem-based learning strategies in this study are carried out by the steps below :

Figure 1. Flowchart of Problem Based Learning Process (Rusman, 2012)

The learning begins playing the video about the problems surrounding the aul and radd in the Faraidh. Students are instructed to observe the video, and determine the problem, then instruct them to analyze more in the

matter, and provide a detailed report on the problem. Then with the teacher the student presents a solution in the form of problem solving regarding calculation of aul and rad and giving conclusions.

The results of the study indicate that the application of problem-based learning strategies (PBL) can improve learning outcomes and students' critical thinking skills. This can be seen from the improvements achieved in each cycle carried out. See the table 1.

Table 1. Pre and post learning outcomes for implementing problem-based learning strategies in MTS PAI

No	score range	pre-action		I		II		III	
		F	%	F	%	F	%	F	%
1.	90-100	3	15 %	6	30 %	8	40 %	12	60 %
2.	80-89	5	25 %	10	50 %	8	40 %	8	40 %
3.	70-79	8	32 %	2	10 %	3	15 %	-	-
4.	60-69	4	16 %	2	10 %	1	5 %	-	-
5.	< 59	-	-	-	-	-	-	-	-
	Total	20	100	20	100	20	100	20	100

These results indicate a gradual increase in each learning cycle. Although in each cycle there is still a reflection of the shortcomings and constraints faced by the teacher during the implementation of the learning strategy. Such as constraints in the implementation of steps, lack of students' ability in presentation, and lack of teacher control, making the class noisy. Therefore, it should be noted that not all educators agree that problem-based learning strategies are always effective (Norman & Schmidt, 2000).

Regarding the increase in critical thinking skills, overall students cannot be categorized as critical abilities, but observations show that there is an increase in students' critical thinking skills. See the table 2.

Table 2. The level of thinking ability of students after using PBL Strategies

No	Indicator of critical thinking skills	Frequency				
		Very good	Good	Ok	poor	very poor
1	Find and formulate problems	8	8	2	2	-
2	Analyze problems	7	7	3	3	-
3	Expressing criticism and ideas	9	9	1	1	-
4	Presentation of solution	8	9	2	3	-

The table above shows that the highest level of critical thinking ability is when it is able to present the solution to a problem. Having basic knowledge and skills cannot be called critical thinking, but the ability to ask questions and reflect on answers and solutions can be called critical thinking. This is as explained by Weissinger (2004):
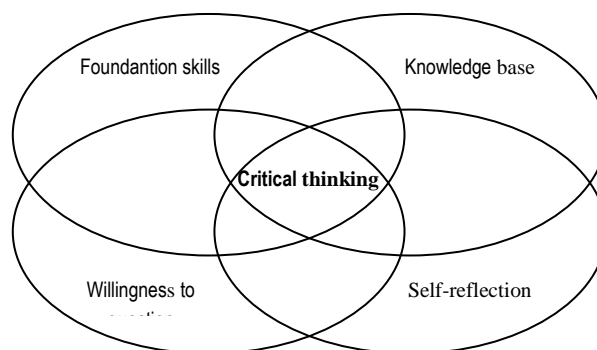

Figure 2. Critical Thinking Component

The results of classroom action research conducted at MTS PAI are very confident that Problem Based Learning is a Learning Strategy that gives students knowledge about a problem solving. In order to test this assertion the process of problem-based learning is described and measured against three principles of learning: activation of prior knowledge, elaboration and encoding specificity (H. G. Schmidt, 1983).

However, it should also be added that the problem-based learning strategy cannot only rely on cognitive but there must be synergy among cognitive, affective, and behavioral learning. Although management education privileges cognitive learning, affective learning is equally important. By focusing on real-world problems, PBL helps students appreciate multiple perspectives, recognize nonrational elements of decision making, and confront ethical quandaries. Together, underpin cognitive and affective learning the essential third element: behavioral learning about how to implement plans, lead teams, resolve conflicts, meet others, and communicate with multiple constituencies (Brownell & Jameson, 2004).

4. CONCLUSION

Problem-based learning strategies are indeed very effective for improving student learning outcomes and critical thinking skills. Not only that, learning activities also become active. There is synergy between cognitive, affective and psychomotor students. Of course this is realized when this strategy is carried out not only once, over and over again.

Behind the success of this method, researchers also found a number of obstacles including the inability of students to express opinions, the lack of attention of teachers for problem-based learning strategies, lack of facilities to support engineering problems as desired.

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