

## THE ENHANCEMENT OF STUDENTS' CRITICAL THINKING SKILLS IN SOCIAL SCIENCE USING A PROBLEM-BASED LEARNING METHOD

Dian Nurawaliah Sonjaya\* and Srie Mulyani\*

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**Abstract:** This research is based on the fact that Social Science learning activities in schools are still far from achieving the learning objectives. The low flexibility and understanding of Social Science subject in primary school is a result of the implementation of monotonous learning model. The lack of variation in social science learning causes this subject to be considered uninteresting to learn for students. This research uses Kemmis and Taggart's Classroom Action Research model. This model focuses on four stages of research: the planning, implementation and observation, reflection, and revision stages. The findings of this research indicate that primary school teacher needs to use suitable learning model to deliver social science lessons, so that the learning becomes effective, hence better results.

**Keywords:** Critical thinking, Problem Based Learning, Social Science.

### INTRODUCTION

Critical thinking skill is important in life. Human is a creature of reason; which means that to solve their problems, human needs to think critically. Everyone needs to possess critical thinking skill, because this skill is the foundation to make every life decision. The ability to think critically allows one to make sound decisions based on reflection and contemplation. A decision made without thinking will only cause further problems. To solve their daily problems and to make sound decisions, people need to reason comprehensively and critically.

Critical thinking skill needs to be developed and improved as the world progress towards modernization. Problem-Based Learning model can aid teachers in developing and improving students' critical thinking skill, because this model is based on problem solving in systematic stages. The implementation of this model requires students to think critically in every stage of learning. Considering that every skill will only improve through hard work, the researcher believes that Problem-Based Learning is able to improve students' critical thinking skill, so that they will be fully-prepared to live in a society.

This research focuses on the learning activities in Social Science subject of Class IVA SDN 1 Plered, Purwakarta Regency. The implementation of the model in this research is expected to improve the quality of students' critical thinking skill. Social Science subject is considered suitable to improve students' critical thinking skill because the topics in Social Science are the issues existing in society; including the simple economic system, social relationship, natural phenomena,

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\* Universitas Pendidikan Indonesia, Kampus Purwakarta

history, etcetera. This subject is appropriate to develop critical thinking process in students. Thinking critically does not always involve complex issues or objects. Simple and common topics found in real life can be the foundation for students to build and practice their critical thinking skill. In this research, the researcher attempts to relate the students' critical thinking skill with Social Science subject through Problem-Based Learning model. This model is expected to improve students' critical thinking skill, to improve students' qualitative and quantitative achievement, and to facilitate students in receiving lesson; particularly in the Social Science subject of the fourth grade of primary school.

The Problem-Based Learning model is considered appropriate to develop students' critical thinking skill because this model presents a stimulus to encourage students to think critically. This model is implemented in a primary school in Purwakarta Regency because the learning in Purwakarta primary schools is generally unable to develop students' critical thinking skill. In these primary schools, teacher generally implements lecture and question-and-answer methods to deliver the lessons. Teacher frequently finds it difficult to stimulate students' critical thinking skill because the great number of students in one class.

This research aims to discover the students' critical thinking skill and learning activities in Social Science subject's topic of Cooperatives and Social Welfare, in Class IVA SDN 1 Plered, Purwakarta Regency, using the Problem-Based Learning method.

## **THEORETICAL REVIEW**

The Problem Based Learning (PBL) model is a learning model that is based on problem solving. It involves the teacher providing problems as stimulus for students to optimize their learning process.

Sani (2014, p. 127) states that "Problem Based Learning (PBL) is a learning delivered by providing problems, asking questions, facilitating investigation, and opening dialogues." Sani further notes that the problems discussed in this learning should be contextual problems the students find in their daily life, so that the students can solve them and understand the concept of problem solving.

The PBL model is a learning model designed to facilitate students in acquiring learning comprehension through solving contextual problems. Barrow (in Huda, 2014, p. 271) defines Problem-Based Learning model as "a learning model based on problems. It is a learning acquired through the process of comprehending the revolution and solution of a problem; which is first discovered in the learning process."

The problems in PBL model are problems designed by the teacher. Teacher designs these problems as stimulus for students. Besides involving problems, other characteristics of PBL model, as proposed by Lloyd-Jones, Margeston, and Bligh (in Huda, 2014, p. 271) are "initiating trigger, investigating issues identified; and utilizing knowledge to further understand the problems."

## RESEARCH METHOD

The method implemented in this research is classroom action research. Classroom action research is used because it is suitable to facilitate the observational needs. Since the researcher is directly involved as an actor in the observation, and since the researcher is able to analyze the observed environment, the observation result and the follow up can be used as the basis for improving the learning process. The research design implemented in this research is the Kemmis and Taggart's Classroom Action Research. This design is chosen because it is relatively easy to do and is consistent in terms of the research process.

The site of the research is at SDN 1 Plered. The public primary school is located at Gg. Sakola RT/RW 09/03, Plered Sub-district, Purwakarta Regency. The population of the research is the students of the fourth grade (Class IV) SDN 1 Plered. The fourth grade in this school consists of two groups of students; the Class IVA and the Class IVB. The subject of this research is the students of Class IVA (23 male students and 16 female students) and the classroom teacher of Class IVA, as an observer or research partner.

The research instruments used in data collection consist of Test and Non-test instruments. The test instrument includes the formative test administered in every end of the lesson and every end of learning cycle. The non-test instrument is observation. The researcher observes students' critical thinking skill, using the characteristics of critical thinking as the indicators.

## FINDINGS AND DISCUSSION

### Cycle 1

The preliminary activities in Learning Action I include praying together before learning, communication about students' attendance (checking students' attendance), motivating students before learning, and explaining the learning objectives to be achieved.

Before the researcher implements the problem-based learning model in Social Science subject, specifically on the topic of Cooperative and Social Welfare, the researcher conducts questions and answers session with the students to discover their preliminary knowledge about Cooperative. Six of the thirty-two students are able to show their knowledge concerning Cooperatives and Social Welfare. The students' responses vary. Most of the students who display their knowledge by providing information about the symbol of Indonesia's Cooperatives; some others show their knowledge by mentioning Drs. Moh. Hatta as the Founder of Cooperatives in Indonesia. Table 1 contains the percentage of students' preliminary knowledge.

**TABLE 1: PERCENTAGE OF STUDENTS' PRELIMINARY KNOWLEDGE IN CLASS IVA SDN 1 PLERED, IN THE ACADEMIC YEAR OF 2014/2015**

<i>Number of Students</i>	<i>Students providing answers</i>		<i>Students not providing responses</i>	
	<i>Number</i>	<i>Percentage</i>	<i>Number</i>	<i>Percentage</i>
32	6	18,75%	26	81,25%

In the Main Learning Activities, the teacher separates the 32 students into 6 groups. Each group is assigned one of the six main symbols of Indonesia's Cooperative; Banyan Tree, Shield and Star, Wheel and Gears, Cotton and Rice, Chain, and a Pair of Scales. Each group is instructed to draw the symbol for their group and to describe the meaning of the symbol. The teacher guides them to organize the questions and answers, to find information from various sources, to solve problems, and to draw conclusion. After that, a representative from each group presents the work or the product of his group's discussion in front of the class.

The concluding activities in Action I are: teacher and students draw a conclusion of the learning activities they have done; and teacher administer the post-test. Teacher provides each student with a post-test question sheet, and the students write their answers on those same sheets. Teacher also gives follow-up in the form of independent task. The students are asked to find information about Cooperatives in their environment. Then, teachers and students pray together before dismissing the class.

## Cycle 2

The opening activities in the process of Learning Action II includes the following: teacher assigns students into 8 groups; teacher prepare cards containing problems or questions pertaining to the types of cooperatives in Indonesia; teacher guides students to organize the questions; teacher guides students to find information; teacher guides students to find the solution for the problems; teacher guides students to draw conclusion and write it in a piece of paper; teacher motivates students to develop their public speaking skill by presenting the result of their group's discussion in front of the class. Out of the eight groups, only six manage to achieve the objectives of the lesson; the other two misunderstood the problems. Thus, teacher instructs the two groups to revise their works.

Teacher then explains the functions and benefits of Indonesia's Cooperatives in a lecture. Teacher evaluates students' knowledge about the topic of Cooperatives and Social Welfare by assigning them a group project; the students are asked to compose a short writing about the topic. The activity involves these steps: teacher guides the students to organize their task; teacher guides students to find information; teacher guides students in composing their writing; and teacher motivates students to present the product of their discussion in front of the class.

The closing activities of Action II include: teacher and students draw conclusion of the learning activities; and teacher administers post-test. Students write their answers for the post-test in the question sheets. Then, teacher gives a follow up by assigning independent task for the students; in which the students are required to find more information to strengthen their knowledge. Finally, teacher and students pray together before dismissing the class.

The implementation of problem-based learning model in Class IVA SDN 1 Plered, Purwakarta Regency, confirms that the model is appropriate for learning Social Science subject; specifically the topic of Cooperatives and Social Welfare. The implementation of the model in Class IVA SDN 1 Plered develops students' critical thinking skills; i.e. by encouraging the students to identify the problems, analyze the problems, differentiating factual information and opinion, differentiating the logical and illogical information, and differentiating the constructive and the destructive critiques. The process leads to students' ability to draw conclusion and to draw a solution for the problems.

The implementation of problem-based learning model in Social Science subject, on the topic of Cooperatives and Social Welfare, encourages the students of Class IVA SDN 1 Plered to be more active and communicative in the learning process. They are urged to work with their peers in small group discussion and to confidently present the result of their discussion.

Students' academic achievement on Social Science subject improves when they learn using Problem-Based Learning model, as indicated by the steady improvement of students' knowledge and achievement (in percentage) prior to the first cycle, after the first cycle, and after the second cycle. The implementation of Problem-Based Learning in Social Science subject, on the topic of Cooperatives and Social Welfare, is proven to be effective to promote students' academic success.

The success of the learning process can be seen from the comparison of students' critical thinking skills, students' learning activities, and students' achievement (in percentage) prior to Cycle I, after Cycle I, and after Cycle II, as displayed in the following table:

**TABLE 2: COMPARISON OF STUDENTS' PERCENTAGES OF SUCCESS PRIOR TO CYCLE I, AFTER CYCLE I, AND AFTER CYCLE II ACADEMIC YEAR 2014/2015**

<i>Learning Activities</i>	<i>Percentage of Success</i>		
	<i>Students' Critical Thinking Skill</i>	<i>Students' Learning Activities</i>	<i>Students' Achievement</i>
Prior to Cycle I	18,75%	18,75%	18,75%
Cycle I	45,625%	56,875%	40,62%
Cycle II	73,807%	82,5%	71,875%

The data in Table 2 indicates the improvement of students' percentage of success, in terms of critical thinking skill, learning activities, and achievement prior to Cycle I, and after Cycle I and II. The improvement of these percentages is an indication of the success of learning using Problem-Based Learning model to develop students' critical thinking skill in the Social Science subject in Sekolah Dasar Negeri 1 Plered, Plered Sub-district, Purwakarta Regency.

## CONCLUSION

Based on the findings of the research on the implementation of problem-based learning model in Social Science subject; on the topic of Cooperation and Social Welfare, in Class IVA SDN 1 Plered, the following conclusions are drawn:

During the First Learning Action (Action I), the critical thinking skill of the students in Class IVA SDN 1 Plered improved 26.875% from their preliminary skill to become 45.625%. In Action I, most of the students are unable to differentiate between the Factual information and Opinion; between the Logical and the Illogical information; and between the Constructive and the Destructive critiques. This skill is considered low because its success percentage is below 50%.

During the Second Learning Action (Action II), the critical thinking skill of the students in Class IVA SDN 1 Plered improved 28.182% from the skill in Action I to become 73.807%. This result is considered high because it passes the success percentage requirement of 50%.

Prior to Action I, the learning activities of the students in Class IVA SDN 1 Plered is very low, as indicated by their passive learning activities. In Action II, the students' learning activities improve 25.625% to become 82.5%. This result is considered high and passes the success percentage requirement of 50%.

Students' knowledge prior to Action I indicates a very low score. After Action I, their knowledge improves 21.87% to become 40.62%. This number improves further during Action II, increasing 31.255% from the Action I result, to become 71,875%.

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