

THE STUDY OF SOCIAL LEARNING OUTCOMES HAVING HIGH CRITICAL THINKING SKILLS AT INQUIRY LEARNING MODELS

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ABSTRACT: *Primary school (SD) is the first formal education unit that is passed by a student to complete his formal education. At the elementary school level which is in the age range between 7-11 years. The inquiry learning strategy is a series of learning activities that emphasize the process of thinking critically and analytically to find out the answers to a question in question. Inquiry learning students in primary school No 040457, Berastagi, are given the opportunity to develop their abilities optimally and students will be more challenged in following the inquiry learning process that is in accordance with students who have high critical thinking skills.*

KEYWORDS: Social Learning Outcomes; Primary School; Inquiry Learning Model

INTRODUCTION

Education plays an important role in human life, because in the educational process each individual will experience a change towards a better one. Therefore the educational process that takes place in schools is expected to provide experience that can change students towards a better one. But the problem in the world of education at this time is the weakness of the learning process that impacts changes for students as expected. In the learning process students are not encouraged to develop thinking skills. The learning process in the classroom is directed to the students' ability to memorize information, students are accustomed to remembering and hoarding various information without understanding the benefits of the knowledge in daily life because the teacher fails to connect learning material with daily life, besides the learning process is still centered to teachers with the use of teacher-centered learning models, as a result students are only smart theoretically but poorly application.

Primary school (SD) is the first formal education unit that is passed by a student to complete his formal education. At the elementary school level which is in the age range between 7 - 11 years, where according to the theory put forward by Piaget about cognitive development, the children in that age range are the age ranges that are in the operational operational phase. At this age children can think logically about concrete events and classify objects into different forms (Baharuddin, wahyuni, 2015: 174). Therefore to provide optimal learning for elementary school students, a learning model is needed that can eliminate abstract concepts in learning and provide direct experience in digging information or acquiring knowledge that will provide better changes not only in terms of knowledge, skills and abilities. think critically. As stated by Corebima in the study.

Muhfahroyin (2009) "learning for students should develop and empower critical thinking skills. Empowerment of critical thinking skills can be done by teachers with learning using constructive learning strategies that have the potential to empower

critical thinking skills, such as inquiry based learning, problem based learning, Thinking Empowerment by Questioning (TEQ), cooperative learning ".

Friedrichsen in his research (2001) stated that critical thinking skills should be developed from an early age. The ability to think critically is needed by students to face challenges in everyday life. Without the ability to think critically, students will find it difficult to apply the new information they get through learning in dealing with problems in real life. This statement is reinforced by the opinion expressed by Muhfahroyin:

Muhfahroyin (2009) "with critical thinking, people understand understanding based on differences in values, understand inference and are able to interpret, are able to recognize mistakes, are able to use language in arguments, realize and control egocentric and emotional, and are responsive to different views".

For this reason teachers are expected to be able to train students to think critically through learning. One of the subjects applied in elementary school (SD) is an IPS subject (Social Sciences). Social studies subjects are subjects that examine how humans interact or socialize with others and their environment so that students in social studies learning should not be burdened with memorization. In accordance with the statement put forward by Djahiri in Saputra's (2016) study that "Social studies teaching in Elementary Schools is not knowledgeable. This means that what is taught is not social science theories, but practical things that are useful for him and his life now and later in various environments and various aspects of his life ". Therefore, social studies learning is not only related to memorizing material but more about learning through direct experience. But the majority of students' views on social studies learning is boring learning because learning is the most memorizing. This is assumed because in social studies learning teachers are accustomed to delivering material with conventional methods or lectures so that students only act as listeners and never know how to apply the theories they have heard in everyday life.

This problem also occurs in grade V SDN 040457 Berastagi. Where according to social studies learning outcomes data based on the results of interviews with teachers in grade V SDN 040457 Berastagi in the last three semesters are as follows:

Table 1: Social learning values in the last 3 semesters of grade V SD Negeri 040457 Berastagi

No	Academic year	mean	KKM
1	2014/2015	65	70
2	2015/2016	67	70
3	2016/2017	68	70

Source: SD 040457 Berastagi

From the table above it can be seen that the learning outcomes of elementary school students 040457 Berastagi class V for the last three years of the 2014/2015 -2016/2017 school year have not shown satisfactory results even the average results of students are still below the established KKM (Minimum Completion Criteria) by the school, where in 2014/2015 the average score of

students only reached 65, in 2015/2016 obtained an average score of 67, while in 2016/2017 scored 68.

Most of the constraints faced by students in social studies learning is students' difficulties in understanding the concepts in social studies learning because teachers present material using konvensional or lectures and learning to walk with the direction in which the teacher acts as a source of knowledge and students' role as a listener. In addition, the material presented is rarely associated with everyday life, so the learning process seems very abstract which results in students having difficulty understanding the material conveyed by the teacher.

LITERATURE REVIEW

Inquiry Learning Model

In the era of globalization, as currently the formation of attitudes, knowledge and skills through learning models in the learning process is needed to shape students as expected. One learning model that does not only emphasize the knowledge aspect but also on the aspects of attitude and skills is the inquiry learning model. Inquiry learning model is a learning model that emphasizes the student-centered learning process by providing direct experience in learning to be able to understand a concept in learning so that in the learning process simultaneously leads students to have independence and be responsible for the results of their own thinking. In line with the opinion expressed by Hamalik:

Hamalik (2005: 29) which states that "inquiry learning is a student-centered learning strategy, usually students are directed to group learning, students are directed and focused on one subject matter, or students are directed to look for answers and questions that have been set".

The approach to teaching Social Sciences by using inquiry is essentially a learning strategy centered on student experience that emphasizes the process of solving social problems through testing hypotheses based on facts.

Fathurrohman (2015: 105) states "inquiry is art and science about studying and answering questions that require observation and measurement, submitting hypotheses and interpreting, constructing and testing models through experimentation, reflective, and recognition of strengths and weaknesses from the investigation method used".

Hamruni (2012: 88) states "the inquiry learning strategy is a series of learning activities that emphasize the process of thinking critically and analytically to find out the answers to a question in question". Not much different from the opinion expressed by Kuhlthau in the study conducted by Putri (2016) "guided inquiry is an approach that involves students in the discovery and use of various kinds of information sources to improve their understanding".

Based on some of these opinions, it can be concluded that the inquiry learning model is a student-centered learning model that emphasizes critical and analytical thinking processes in solving problems done by students through predetermined stages so that opinions are raised to keep the problem in question beforehand can be justified.

There are three main characteristics of inquiry learning strategies, while the characteristics intended are as follows: First, inquiry strategies emphasize student activity to the maximum to

find and find. Second, all activities carried out by students are directed to find and find their own answers from something that is questionable, so that it is expected to foster an attitude of confidence. And third, the purpose of using inquiry strategies is to develop the ability to think systematically, logically and critically, or develop intellectual abilities as part of mental processes. (Sanjaya (2011: 196-197).

The steps in the inquiry learning model are (1) The orientation step is a step to foster a responsive learning atmosphere or climate. In this step the teacher conditions so that students are ready to carry out the learning process. The orientation step is a very important step; (2) Formulating problems is a step to bring students to a problem that contains puzzles. The problem presented is the problem that challenges students to think about solving the puzzle; (3) The hypothesis is a temporary answer to a problem being studied. As a temporary answer, the hypothesis needs to be tested for truth. (4) Collecting data is the activity of capturing information needed to test the proposed hypothesis. In inquiry learning, collecting data is a mental process that is very important in intellectual development. The process of collecting data not only requires strong motivation in learning, but also requires perseverance and the ability to use his thinking potential; (5) Testing hypotheses is the process of determining answers that are considered acceptable in accordance with data or information obtained based on data collection. The most important thing in testing hypotheses is developing the ability to think rationally; (6) Formulating conclusions is the process of describing findings obtained based on the results of hypothesis testing. Formulating conclusions is key in the inquiry learning process. (Saputro, 2012).

Critical Thinking Ability

Thinking is an activity that involves all mental processes that exist in an individual to produce a solution to the problem at hand. Thinking is one of the bases in the discovery of concepts in learning to gain knowledge for a student, without going through the process of thinking it is impossible for a concept or meaning in learning to be well understood by each individual.

Muhfahroyin states (2009) "with critical thinking, people understand understanding based on differences in values, understand inference and are able to interpret, are able to recognize errors, are able to use language in argument, realize and control egocentric and emotional, and are responsive to different views". Krulik and Rudnick and Liliyasi in Muhfahroyin's (2009) study state that "critical thinking skills are high-level thinking activities. According to NC DPI mathematician (without years) in a study conducted by Wahyuni (2017) "thinking skills are knowledge, organizing, and applying are considered low order thinking (LOT) or low-level thinking while analyzing, producing, integrating, and evaluating considered higher thinking or HOT thinking. The HOTS referred to in this study is the ability to think critically. This is reinforced by the opinion of some characteristics of HOTS according to Conklin in Arifin's (2017) research, namely "characteristics of higher-order thinking skills: higher-order thinking skills encompass both critical thinking and creative thinking". This statement is supported by King, Goodson, and Rohani in Shidiq, et al. (2015) "Higher Order Thinking Skills (HOTS) or high-level thinking skills include critical, logical, reflective, metacognitive, and creative thinking. From these three views, it can be seen that one of the characteristics of students who have high-order thinking skills is the ability to think critically.

Grouping students based on their level of high and low thinking skills can be done by referring to Bloom's taxonomy. Forehan stated in the research of Saido, et al. (2015) "The concept of higher order thinking (HOT) is derived from Bloom's taxonomy of cognitive domains was

introduced in 1956". According to Bloom in Wahyuni (2017) "that the level of thinking of students in thinking there are six levels, namely remembering (C1), understanding (C2), applying (C3), analyzing (C4), evaluating (C5), and creating (C6)". The level of thinking at levels C1, C2, and C3 is a low level of thinking, while the level thinks the levels of C4, C5, and C6 are classified into the level of high-level thinking.

In accordance with the opinions expressed by Widodo in Sari's research and Nurchasanah (2012), the new version of Bloom's taxonomy consists of six levels or parts namely remember (understand), understand (understand), apply (apply), analyze (analyze), evaluate (evaluate), and create (create / create). The purpose of critical thinking is to create a situation where students have the skills to question what they hear and examine their own thoughts to ensure that logic does not occur that there are no mistakes.

Critical thinking ability is a matter that is needed for each individual, especially for students in processing and analyzing information received by each student both the information conveyed by the teacher and information obtained from other sources such as print and electronic media. Harvest, et al in the study of Muspita (2013) suggested "critical thinking is a directed and clear process used in mental activities such as problem solving, decision making, persuading, analyzing assumptions and conducting scientific research". Critical thinking is the ability to hold in an organized way. Ennis in Yanuarta's research, et al (2016) suggested that "critical thinking is a process with the aim that each individual can make reasonable decisions, so that what is considered the best about a truth can be done correctly". Students who are accustomed to critical thinking means being able to make careful consideration in making decisions and overcoming problems in everyday life. According to Johnson in a study conducted by Saputro (2012) "critical thinking is a directed and clear process used in mental activities such as solving problems, making decisions, persuading, analyzing, assuming and conducting scientific research".

From some of the opinions above, it can be concluded that critical thinking ability is the ability of individuals to process analysis to be able to decide on a problem with the best choice.

Another opinion about critical thinking skills was also expressed by Yuliani in her research (2015) where "critical thinking ability is one of the highest-level thinking skills. Someone who is able to think critically, not only solves the problem, but also can give reasonable reasons to the solution given, because basically thinking is an activity carried out to reach a conclusion".

Sneyder and Mark in their study (2008) stated "critical thinking is not an innate ability. Although some students may be naturally inquisitive, they need training to become systematically analytical, fair, and open-minded in their pursuit of knowledge. With these skills, students can become confident in their reasoning and apply their content area or discipline to critical thinking abilities".

From the statement it can be concluded that critical thinking skills are not innate abilities of students, although some students naturally have curiosity, but they need training to be able to think analytically, fairly, and openly in pursuit of knowledge to be applied. Ider and Paul in the study of Duron, et al (2006) suggested that "critical thinking is best understood as the ability to take charge of their own thinking". From this statement it is understood that critical thinking ability is the best understanding of an individual to be responsible for his own thoughts. From some of these opinions it can be concluded that critical thinking ability is a high-level thinking

ability of an individual who can be accounted for and requires continuous training to achieve these capabilities so that they can be applied in solving a problem at hand.

According to Adeyemi in his research (2012) critical thinking skills can be seen through two components, namely "1) the skills to produce and process information and trust, 2) the habit of using these skills to guide behavior, based on intellectual commitment". Jacob in Firdaus's research, et al (2015) stated "critical thinking skills will encourage students to think independently and solve problems in school or in the context of everyday life". From the statement it is known that critical thinking skills will encourage students to think independently and solve problems in school or in the context of everyday life. Encarta in Adeyemi's (2012) study states that critical thinking ability is "doing an objective and reflective assessment of what must be trusted or what should be done in response to observation, experience, oral or written expressions or arguments".

RESEARCH METHODOLOGY

Place and Time of Research

This research was conducted on SDN 040457 in Berastagi sub-district, Karo Regency. This research was conducted in the even semester of the 2017/2018 academic year which began in March until May 2018 with an allocation of 7 x 35 minutes and at the end of the meeting a test will be given.

Population and Samples

The population in this study were all fifth grade students of SDN 040457 Berastagi which consisted of two classes, namely: class V-a and class V-b which amounted to 82 students. The sampling technique used in this study is total sampling because the entire population is sampled. Distribution of population members can be seen in the following table:

Table 2: Distribution of Population Members

No	Class	Total
1	V-a	48 students
2	V-b	34 students

Source: SDN 040457 Berastagi

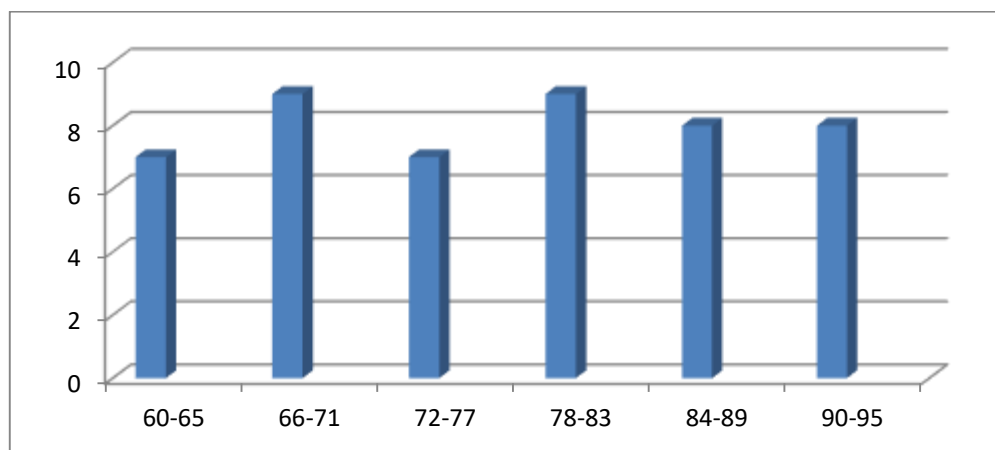
DISCUSSION

Based on the social studies learning outcomes of students for the experimental class taught by the inquiry learning model, the lowest value was 60, the highest score was 95, the average was 77.75, mode 75 and the standard deviation was 9.35. based on the results of the average value it can be stated the tendency of student test results, namely 16 people or 33.33% who scored below average, 7 people or 14.58% were on the average score and 25 people or 52.08% were on the score in above average. For more details, the data list of frequency distribution of students' social studies learning outcomes for inquiry learning models is presented in the following table 3:

Table 3: Frequency Distribution of Social Sciences Learning Outcomes Using Inquiry Learning Models

No	Interval Class	$f_{absolute}$	$F_{relative}$
1	60-65	7	14.58
2	66-71	9	18.75
3	72-77	7	14.58
4	78-83	9	18.75
5	84-89	8	16.67
6	90-95	8	16.67
Total		48	100

Based on table 3 above, the frequency distribution of students' social studies learning outcomes using the inquiry learning model can be described as follows:

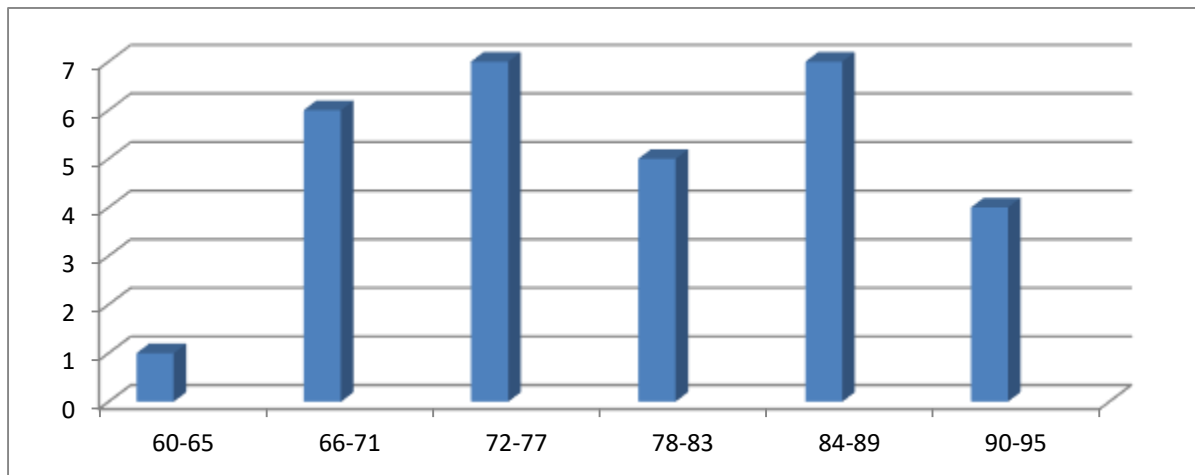
**Figure 1: Outcomes of Social Studies Learning Using Inquiry Learning Models**

Based on social studies learning outcomes data, students who have high critical thinking skills have the lowest score of 60, the highest score is 95, the average value is 79, median 80, mode 80 and standard deviation is 8.20. based on the acquisition of the average score of Social Sciences learning outcomes of students who have high critical thinking skills, it can be stated the tendency to obtain scores, namely students who score below the average of 13 people, students who obtain an average score of 5 people and students who score above the average of 11 people. For clearer distribution of the frequency of social studies learning outcomes students who have high critical thinking skills are presented in the following table:

Table 4: Frequency Distribution of Social Studies Learning Outcomes of Students Who Have High Critical Ability

No	Interval Class	$f_{absolute}$	$F_{relative}$ (%)
1	60-65	1	20.00
2	66-71	6	23.33
3	72-77	7	16.67
4	78-83	5	23.33
5	84-89	7	13.33
6	90-95	4	3.33
Total		30	100

Based on table 4 social studies learning outcomes data students who have high critical thinking skills can be described as follows diagram:

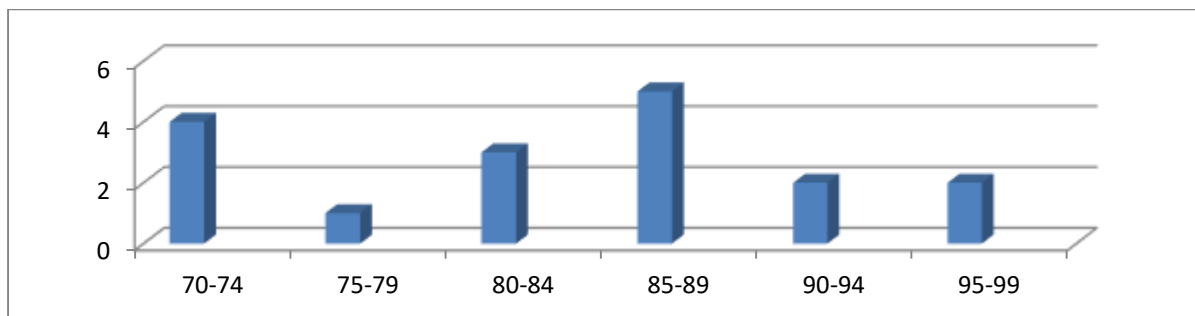
**Figure 2: Social `Studies Learning Diagram of Students Who Have High Critical Engraving Ability**

Based on social studies learning outcomes data students who have high critical thinking skills using the inquiry learning model obtained the lowest score of 70, the highest score is 95, the average value is 81.75, median 85, mode 85, and the standard deviation is 8.45. Based on the acquisition of the average Social Sciences learning outcomes of students who have high critical thinking skills taught with inquiry learning models, it can be stated that the learning outcomes tendencies of students who obtain grades on average 5 people, students who score an average of 3 people, and students who have scored above an average of 9 people. For clearer distribution of the frequency of social studies learning outcomes students who have high critical thinking skills using inquiry learning models are presented in the following table:

Table 5: Frequency Distribution of Social Studies Learning Outcomes of Students Who Have High Critical Engraving Ability by Using Inquiry Learning Models

No	Interval Class	$f_{absolute}$	$F_{relative}$ (%)
1	70-74	4	23.53
2	75-79	1	5.88
3	80-84	3	17.65
4	85-89	5	29.41
5	90-94	2	11.76
6	95-99	2	11.76
Total		17	100

Based on table 5 about social studies learning outcomes students who have high critical thinking skills taught by inquiry learning models can be described as follows

**Figure 3: Social Sciences Learning Outcomes Diagram of Students Who Have High Critical Engraving Ability by Using Inquiry Learning Models**

Testing the statistical hypothesis for high critical thinking skills and low critical thinking abilities are as follows:

$$H_o : \mu B_1 = \mu B_2$$

$$H_a : \mu B_1 > \mu B_2$$

H_o : There are no differences in social studies learning outcomes of students who have high critical thinking skills and students who have low critical thinking skills.

H_a : Learning outcomes of students who have high critical thinking skills are higher than the learning outcomes of students who have low critical thinking skills.

Based on the calculation of ANAVA with the SPSS application for critical thinking skills shows a significance level of 0.00 or a significance level of <0.05 so that based on these calculations H_o is rejected and H_a is accepted. Based on the acquisition, it can be concluded that social studies learning outcomes of students who have high critical thinking skills are higher than the learning outcomes of students who have low critical thinking skills.

CONCLUSION

Learning outcomes of students in SDN 040457 in Berastagi sub-district, Karo Regency. who have high critical thinking skills taught with inquiry learning models are higher than students taught with expository learning models. This is because in inquiry learning students are given the opportunity to develop their abilities optimally and students will be more challenged in following the inquiry learning process that is in accordance with students who have high critical thinking skills because they have stages of learning that involve students optimally in learning so students will be more interested in learning.

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