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INQUIRY BASED LEARNING IN IMPROVING RESULTS STUDENT LEARNING

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ABSTRACT

Human life only contains the learning process, learning that begins with a breath and ends with a sigh, meaning that as long as a human is alive, he will continue to learn. At the elementary school education level, there are still many who make teachers as subjects of study so that they do not train children's thinking skills. Not a few teachers still use conventional methods even though the material and learning objectives to be achieved are different. Especially in learning mathematics which is usually the teacher using the lecture method. In this article, it can be used as a reference material in using the mathematics learning model, namely the inquiry learning model or inquiry-based learning. The strategy in the subject approach to student activities is maximally to seek and find, meaning that the inquiry approach places students as learning. All activities carried out are directed at finding and finding out for themselves from something in question, so that it is expected to foster an attitude of confidence which means that in the inquiry approach the teacher is placed not as a learning resource, but as a facilitator and motivator of student learning. The purpose of using inquiry learning strategies is to develop intellectual abilities as part of the mental process.

Keywords: *Inquiry Based Learning, mathematics*

INTRODUCTION

Education is a conscious effort to humanize humans, through education human quality will become better. Human potential can develop more optimally. However, to make this better quality requires cooperation from all parties, in this case policy makers or the government, campus or school organizing institutions, parents or the community environment as well as students or students themselves who must have an awareness within themselves of the importance of educational science. The current curriculum only emphasizes short-term knowledge, while life in the future demands new solutions that are innovative and developed in the face of more complex life, or have long-term knowledge that is able to adapt to the rapid developments of the times.

Current education, especially mathematics, is still largely dominated by teachers, teachers have an important role in learning, so the methods used are more oriented towards teacher activity than students. Students only take notes, listen and pay attention to what the teacher says, so students are not used to developing ideas or developing concepts that are in their heads. There are still teachers who use learning methods that do not vary or are even the same in all teaching materials, which clearly have different goals. Based on this discussion, in learning activities teachers should choose or use learning methods where students are active in the learning process at school, both physically and mentally. Physical, mental and social. One alternative learning model that can be applied is the inquiry learning method. This inquiry learning learning model requires students to be more active in learning and directs students to think critically and creatively to discover a concept. In the opinion of (Mulyasa 2003:234) that “The inquiry method is a method that is able to lead students to realize what they have obtained while studying. The teacher does not focus on what material will be delivered but rather plans learning where students will discover the material or concepts to be studied, students are assisted by the teacher to find generalizations from the material being taught. The IBL approach is an approach used and refers to a way to question, seek knowledge (information), or study a phenomenon. Inquiry means conducting an investigation, asking for information, carrying out an examination (Echols and Shadily, 2003, p. 323).

RESEARCH METHODS

A method is an effort that a researcher can make in disclosing data and finding the truth of the problem under study, which is the problem of methods that can be used in research, according to Winarno Surahman, who stated that: "The way to find the truth which is considered scientific is through investigative methods". This research uses a qualitative approach, namely starting with data

and ending with conclusions, targets or research objects are limited so that the data taken can be extracted as much as possible and so that this research does not allow for widening of the research object. Therefore, the credibility of the research determines the quality of the research. The use of investigative methods is intended to find data that is valid, accurate and significant to the problem, so that it can be used to uncover the problem being studied. According to Sutrisno Hadi: "Research, especially in empirical science, generally aims to discover, develop or test the truth of knowledge.

RESULTS AND DISCUSSION

In Indonesian, inquiry means investigation. More specifically, inquiry is a continuous process or a continuous cycle, starting from asking questions, researching answers, translating information, presenting findings and reflecting. Where students are required to think critically and at a high level or HOts. In terms of understanding, the inquiry learning model is a systematic activity in learning that requires students to think analytically, critically and creatively so that they are able to find solutions to the problems given, independently by the students. Inquiry-based learning is an approach that focuses on student activity in carrying out learning process activities. The teacher's role in this inquiry learning model is only as a facilitator, while students are the learning subjects or have the main role to ask questions or explore their ideas from various students' perspectives regarding the subject matter.

In this inquiry learning model, various approaches can be used, ranging from discussion activities by creating small groups to integrated learning. It would be better if students were only told to memorize material and facts. This system allows students to build their knowledge by exploring their ideas, discussing with their friends, and/or experiencing direct experience. And also this inquiry learning model is designed so that students can carry out all experiments independently so that their experience of science can be more open, which encourages them to always be curious to ask questions and look for their own answers.

The following are several other opinions according to experts regarding the meaning of inquiry learning or inquiry based learning model.W. Gulo: Inquiry learning means a series of learning activities that maximally involve all students' abilities to search and investigate systematically, critically, logically, analytically, so that they can formulate their own discoveries with full confidence (Gulo in Anam, Khoirul, 2017, p. 11). Coffman: Inquiry learning is a learning model that directly involves students to think, ask questions, carry out exploration and experimental activities so that students are able to present logical and scientific solutions or ideas (Coffman in Abidin, 2018, p. 151).

Hanafiah and Sudjana: The inquiry learning model is a learning method that requires students to be able to discover their own knowledge, attitudes and skills as a form of behavior change (Hanafiah and Sudjana, 2010 in Wardoyo 2015, p. 66). Abidin: According to Abidin (2018, p. 149): The inquiry learning model is a learning model developed so that students find and use various sources of information and ideas to increase their understanding of certain problems, topics and issues.

Targets for implementing the inquiry learning model. The main targets for implementing the Inquiry Learning Model in teaching and learning activities are as follows:

1. Maximum student involvement in learning, both intellectually and socially emotionally
2. The activities are directed and conceptualized logically and systematically towards the teaching objectives.
3. Develop students' attitudes or mental self-confidence regarding what they find from the inquiry process activities

In order to be able to develop a structured and systematic strategy, it is important to pay attention to conditions that enable students to inquire optimally. Joyce stated the general conditions that are conditions for the emergence of inquiry activities for students, namely:

1. Social aspects in the classroom and an open atmosphere that invites students to discuss. This requires a free (permissive) atmosphere in the classroom where each student does not feel pressure or obstacles to express their opinions. The presence of fear or low self-esteem or shame and so on, both towards classmates and the teacher are factors that hinder the creation of a free atmosphere in the classroom. Freedom of speech and respect for different opinions, even if they are irrelevant, need to always be maintained within the boundaries of existing discipline.
2. Inquiry focuses on hypotheses. Students need to realize that basically all knowledge is tentative, there is no absolute truth, the truth is always temporary. Such an attitude towards knowledge needs to be developed. Thus, completing the hypothesis is the focus of the inquiry strategy. If knowledge is seen as hypo

Sintak Inquiry Learning

Stage 1 Orientation	The teacher conditions students so that they are ready to carry out the learning process, explains the topics, objectives and learning outcomes that students are expected to achieve, explains the main activities that must be carried out by students to achieve the goals, explains the importance of topics and learning activities, this can be done in order to provide student learning motivation
Stage 2 Formulate the problem	Teachers guide and facilitate students to formulate and understand real problems that have been presented
Stage 3 Formulate the hypothesis	Teachers guide students to develop the ability to hypothesize by asking various questions that can encourage students to be able to formulate temporary answers or to formulate various estimates of possible answers to a problem being studied
Stage 4 Collecting Data	The teacher guides students by asking questions that can encourage to think and find the information needed
Stage 5 Test the hypothesis	The teacher guides students in the process of determining answers that are considered acceptable according to the data and information obtained based on data collection. The most important thing in testing a hypothesis is to find the level of confidence of students in the answers given
Stage 6 Formulate conclusions	The teacher guides students in the process of describing the findings obtained based on the results of hypothesis testing. To reach accurate conclusions, teachers should be able to show students which data is relevant

1. Inquiry Learning Type

It should be noted that inquiry learning has different types or derivatives based on the teacher's role in the investigation activity. According to Kindsvatter (Wisudawati, Asih W and Eka Sulistyowati, 2017, pp. 84-85) based on the teacher's role in investigation, inquiry learning is divided into two types, namely as follows.

a. Guided Inquiry (guided Inquiry). In this type, the role of the teacher in carrying out the learning process in the investigation is very large. The teacher's role is to determine the research topic that will be carried out, develop questions related to the topic that will be investigated, determine the procedures or steps that must be carried out by students, and guide students in analyzing data, providing worksheets in the form of columns. so that students can complete and help draw conclusions.
b. Open Inquiry (Open Inquiry) In this type the teacher only acts as a facilitator in the learning process, to the extent requested by the students. Students are then given freedom and initiative in thinking about how to solve the problems they face.

2. Advantages and Disadvantages of Inquiry Learning

Of course, as a learning model that is an alternative to other models, inquiry learning has its own advantages and disadvantages. The advantages of inquiry learning strategies according to Roestiyah (2012, p. 76) are stated as follows.

a. Can form and develop (self-concept) in students, so that students can understand basic concepts and main ideas better.
b. Helps in using memory and transferring to new learning process situations.
c. Encourage students to think and work on their own initiative, be objective, honest and open.
d. Encourage students to think initiatively and formulate their own hypotheses.
e. Provides intrinsic satisfaction.
f. The learning process situation becomes more stimulating.
g. Can develop individual talents or skills.
h. Give students freedom to study on their own.

CONCLUSION

Inquiry Based Learning is an alternative in the mathematics learning model. because of this inquiry learning model. Emphasizes maximum student activity to search and find, which means placing students as learning subjects. All activities carried out by students are directed at seeking and finding their own answers to questions, so that it is hoped that this can foster an attitude of self-confidence and place teachers as facilitators and motivators of student learning. Develop the ability to think systematically, logically and critically, or develop intellectual abilities as part of the mental development process. Thus,

students are not only required to master the subject matter, but rather how they can use their potential to further develop their understanding of certain subject matter.

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