

CHAPTER I

INTRODUCTION

1.1. Background

Education is one form of manifestation of the dynamic of human culture and full of development. Therefore, the change or the development of education is the thing that should happen in line with the changing culture of life. Changes in the meaning of education improvement at all levels need to be continuously done in anticipation of future interests. Education is a process of changing attitudes and behavior of a person in an effort to mature humans through the learning process (Trianto, 2009).

Learning requires a conscious process that tends to be permanent and changing behavior. In the process occurs recall information is then stored in memory and cognitive organization. Furthermore, these skills practically embodied in the activity of students in responding and reacting to events that happen to students and the environment (Rusman, 2014).

So that teaching and learning can change for the better then it will not be separated from efforts to improve the quality of teaching in schools. Applicability of the curriculum in 2013 to be implemented to achieve quality learning activities, using student-centered principle, expected to develop competence and quality of each individual, both in attitude, knowledge and skills. Starting from this 2013 curriculum implementation objectives, the skills of the students, one of them in critical thinking, also need to be developed in learning physics.

Education System in North Sumatra province still needs to be improved according to the times. Education is always evolving all time according to the progress of the world. Education in North Sumatra is still far short of expectations as the result of research conducted by UNDIP in 1995 and 2002 that education in Indonesia is still far from the expectations of the quality of education. Problems in the national education including North Sumatra Province are still much talked about is the quality of educational outcomes. Based on BB UNDP note that out of 174 countries in the world, including North Sumatra Indonesia ranked 107.

Based on the results of interviews conducted by investigators with the subject teachers of physics in SMA Budi Murni 2 Medan obtained information that the physics teacher has actually been taught to apply the learning model centered on the students but by teachers of physics that in its application in the classroom having some problems such as interest students are lacking, mathematical ability of students is still low, the number of students that many in a class that is approximately 36 people and the allocation of insufficient time to implement the model. The use of the model lesson indeed influence on student learning outcomes but not in general. Therefore the conventional learning model is still used in physics learning in the classroom.

From the results of these interviews also showed that physics exam scores obtained by students is still low and far from the value of completeness. Data supplied by the physics teacher also stated that the average - average value obtained physics students are 48-58 and are completely out of the KKM specified school is less than 50% where KKM set by the school is 70. The use of the conventional model making students be passive because students only listen and accept what is presented by the teacher. As a result, students become saturated and tend to be difficult to accept the lesson that negatively impact student learning outcomes.

The difficulty can be seen from the observation data conducted by researchers by distributing a questionnaire to one of the classes in Private Senior High Pure Budi 2 Terrain. Obtained 23% of the students said that physics is a very difficult subject, 62% of students said that physics is a difficult subject, while the remaining 15% of students said that physics is an easy lesson. From the results of questionnaire also obtained 90% of students said that teachers have been using simple props, whether made by the teachers themselves as well as laboratory equipment. This is consistent with the information given by the teacher of physics is concerned, that in teaching the physics teacher never used the media but depending on the material to be taught.

Based on these facts, it is necessary to apply a suitable learning model and can improve student learning outcomes physics. One model that allows the applied learning is learning model inquiry. Inquiry learning model is a perfect

complement to a child's natural curiosity about the world and how it works. Whether it is the elementary student's wonder that is prompted by a story about hibernating animals, the middle school student's predictions about the relationship between circumference and diameter that arise from an exploration of different-sized spheres, or the high school student's questions that are provoked by a local environmental issue, students become actively engaged in the learning process when given the opportunity to hypothesize and investigate (Jarret, 1997).

The results of the study researchers in journal had previously stated that the inquiry learning model has an influence on student learning outcomes. Like this: Purwanti (2015), Simatupang and Tiarmaida (2015), Derek and Caroline (2017), Sirait M and Silaen(2016), Setiawan (2016), Sari and Siagian H (2015, Brickman et al. Harahap and Sinuraya (2014) ,Gumilar and Setiawan (2016), Wahyuni and Samosir (2015). (Purwanti, 2015) the result of the research shows that (1) the inquiry learning models affects toward the result of students' s learning (2) the models of inquiry learning Increased student learning outcomes significantly. It could be concluded that the inquiry learning with models could be increased the students' result in MTs Darussalam Iron City.

(Simatupang and Tiarmaida, 2015), say that the increase of student learning activity during the learning by using inquiry learning model is 63,36 and by using conventional learning is 56,47 which is included in low value criterion. Based on the results of t test calculation analysis, there is a significant influence of the application of inquiry learning model to student learning outcomes.

(Derek et al, 2017), say that the inquiry learning model has an influence on student learning makes students more active in learning. They also said that the significance of this study's findings is two-fold: 1) in the IBL context, the students took responsibility of Reviews their learning, the which yielded long-term benefits in content retention, and 2) this teacher candidate is determined to integrate inquiry -based learning classroom instruction in his future.

According to Scruggs and Mastropieri (in Derek et al, 2017) when using the IBL as a substitute for a textbook approach in two units of science, special needs high school students, the achievements are much higher than their counterparts who use textbooks. Ninety-six percent enjoy the use of IBL

approach, while 80% of students consider IBL activities more help in the learning process and are more motivated. Pre-test and post-tests showed that when students Caroline Johnson Caswell and Derek LaBrie 177 teaching with IBL, they learn more and more remembered than their peers who were taught through traditional teaching. This finding is consistent with its own experience on the IBL Derek

From the results of previous research studies showed that inquiry learning model can improve student learning outcomes.

Based on the above problems, the author wishes conducted a study to determine differences in learning outcomes of students using inquiry learning model with conventional learning models.

1.2. Problem Identification

Based on the description of the background of the above problems, the problems can be identified as follows:

1. Physics student learning outcomes are still low.
2. Lack of student interest in learning physics.
3. Learning that is used tends to be centered on the teacher.
4. Never use inquiry learning model.
5. Teachers rarely use instructional media in teaching and learning.
6. Activities of students in the class are still lacking.

1.3. Problem Limitation

To give a clear scope in the discussion, it is necessary to limit the problem in research on SMA Budi Murni 2 Medan as follows:

1. The learning model used is inquiry learning model.
2. The material will be is a matter of harmonic motion.
3. The subjects were students of class X in the second half SMA Budi Murni 2 Medan learning year 2017/2018.
4. Learning outcomes that will be examined only on the cognitive aspects that accompanied the observation activity.

1.4. Problem Formulation

Based on boundary issues that have been raised, then becomes the problem in this research are:

1. How the student learning outcomes using inquiry learning model on harmonic vibration topic in class X the second semester SMA Budi Murni 2 Medan A.Y. 2017/2018?
2. How does the activity of students in the class using inquiry learning model?
3. Is there any effect to the student learning outcomes using inquiry learning model on harmonic vibration topic in class X the second semester SMA Budi Murni 2 Medan A.Y. 2017/2018?

1.5. Research Objectives

The objectives derived from this research are:

1. To determine the learning outcomes of students using inquiry learning model on harmonic vibration topic in class X the second semester SMA Budi Murni 2 Medan A.Y. 2017/2018.
2. To determine the learning activities of students in class using inquiry learning model.
3. To determine the effect of inquiry learning model to the student learning outcomes on harmonic vibration topic in class X the second semester SMA Budi Murni 2 Medan A.Y. 2017/2018.

1.6. Benefits Research

1. For each unit of education and teachers in particular for high-school level, as additional suggestions in choosing appropriate learning models to enhance the learning of actual, active mainly in learning physics.
2. For Private SMA Budi Murni 2 Medan as additional information about how to improve learning achievement both knowledge and skills as well as attitudes.

3. For researchers, to gain knowledge and experience in writing scientific papers, how to prepare to be a good teacher and professional, and especially to improve the knowledge of learning inquiry.

1.7. Operational definitions

1. Inquiry learning is a learning activity that involves optimally throughout the student's ability to seek and investigate things (objects, people, or events) in a systematic, critical, logical, analytical so that they can formulate their own findings with aplomb.
2. Learning activity is an individual physical or non-physical activity process carried out by the teacher to get a change in a better direction (acquiring knowledge and experience).
3. Learning outcomes are a number of students gained experience which includes cognitive, affective, and psychomotor.
4. Learning outcomes of inquiry model is gain knowledge about inquiry focus, develop thinking and reasoning skills, develop metacognitive skills and develop positive attitudes toward inquiry and appreciation for the tentativeness of knowledge.

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