

CHAPTER I INTRODUCTION

1.1 Background

The National Education aims develop students' potential to become quality human resources and adapt the development of science and technology. Improving the ability development of science and technology can be done through increasing the ability of students to learn physics. Basically to study of physics needs to be adjusted by means of the previous physicists in acquiring knowledge. In teaching physics should be directed to seek out and doing so can help students to acquire a deeper mastery. Therefore, in learning physics emphasize providing direct experience and student-centered. One of the goals of learning physics is to master the concept of physics. Mastery of concept can help students to define the concept. The involvement of students in learning activities will have a positive impact on the achievement of mastery of concepts being studied. Thus, the need to develop a mastery level of students in learning physics concept. High-low average value of the physics exam result is a picture of how the level of students' ability to master the material forms of the concepts of the subject matter.

The reality that occurs in the field of physics learning is not as expected where physics learning is still focused on memorizing formulas. This fact was obtained by a compilation of researchers making observations in Berastagi 1 High School. Based on the results of distributing questionnaires to 34 students of SMA N 1 Berastagi Class XI the highest percentage was the highest percentage was 70,58% students didn't listen to the teacher's explanation, 64,70% students do not like physics because the material is unpleasant, 72,61% students never repeat physics lessons at home if there is no homework, 46,32% students do not study when there will be a physics exam, 58,08% students assume that the teacher provides a way of learning that does not vary so students are not very enthusiastic in learning, 67,64% students assume that among all the material, physics is a boring and uninteresting lesson, 67,64% students' physical values are worse than the others, 65,44% students prefer other subject matter compared to physics material, 70,58% students do not want to ask the teacher if something is not

understood, 69,85% when discussing students do not dare to respond and ask questions about physics material to the teacher and friends, 67,64% when there was a group discussion about physics material, students did not pay attention because they did not like physics.

One way that can be used to overcome this problem is to use a learning model that guides students to be more active in finding concepts and facts through a guided inquiry model. Guided inquiry learning models provide opportunities for students to build their own knowledge using concepts that have been created to solve problems faced, and students have the opportunity to connect new information with existing cognitive structures to produce meaningful learning. One thing that must be considered by teachers in teaching science with guided inquiry models is the work of the teacher only as a facilitator and mediator, which helps students to learn and use their process skills to get more knowledge. The activity of students to observe guess, and conclude through group activities and communicate the results of the investigation with more emphasis on learning. In addition to cognitive abilities, psychomotor and affective abilities of students can be developed. Guided inquiry learning is built on the assumption that humans have an innate drive to find their own knowledge. The main objective of guided inquiry learning is to help students develop intellectual thinking and discipline skills (Andrini, 2016). Guided Inquiry is an innovative team approach to teaching and learning where teachers and school librarians, with other experts and specialists, join together to design and implement inquiry learning. It engages children in constructing personal knowledge while using a wide range of sources of information and creatively sharing their learning their fellow students in an inquiry community. Guided Inquiry Design is grounded in the research of the Information Search Process (ISP) that describes students' process of learning from a variety of information sources in extensive research projects. The ISP research goes inside the inquiry process to reveal ways to guide students in deep engaging (Kuhlthau et al, 2015).

Based on the background and results of observations made by the researcher, this research is important by applying a guided inquiry learning model on the topic of sound waves. Therefore in this study the author will apply a guided inquiry learning model to improve student learning outcomes. So the important researcher conducted a study on "The Effect of Guided Inquiry Learning Model on Student Learning Outcomes on Sound Wave Topic in SMA N 1 Berastagi A.Y 2018/2019".

1.2 Problem Identification

Based on the problems that occur in the field, the identification of problems in this research are:

1. Students didn't listen to the teacher's explanation.
2. Students do not like physics because the material is unpleasant.
3. Students never repeat physics lessons at home if there is no homework.
4. Students do not study when there will be a physics exam.
5. The teacher provides a way of learning that does not vary so students are not very enthusiastic in learning.
6. Students assume that among all the material, physics is a boring and uninteresting lesson.
7. Students' physical values are worse than the others.
8. Students prefer other subject matter compared to physics material.
9. Students do not want to ask the teacher if something is not understood.
10. When discussing students do not dare to respond and ask questions about physics material to the teacher and friends.
11. When there was a group discussion about physics material, students did not pay attention because they did not like physics.

1.3 Problem Limitation

Based on identification of problems, so that the problem boundaries in this research are:

1. The learning model used is a guided inquiry learning model in the experimental class and the teacher learning center model in the control class.
2. The subjects studied were class XI students of SMA N 1 Berastagi A.Y 2018/2019.
3. The topic used is sound waves.

1.4 Problem Formulation

Based on the problem constraints, the problems in this research are:

1. How do student learning outcomes use guided inquiry learning models on sound wave topic in class XI of SMA N 1 Berastagi A.Y 2018/2019?
2. How the improvement guided inquiry learning models on sound wave topic in class XI of SMA N 1 Berastagi A.Y 2018/2019?
3. Is there an effect of the guided inquiry learning model on student learning outcomes on the topic of sound waves?

1.5 Objective of Research

The objective in this research are:

1. To find out the student learning outcomes used guided inquiry learning model on the topic of sound waves in class XI SMA N 1 Berastagi A. Y 2018/2019.
2. To find out the improvement students learning outcomes guided inquiry learning models on sound wave topic in class XI of SMA N 1 Berastagi A.Y 2018/2019.
3. To determine the effect of the guided inquiry learning model on student learning outcomes on the topic of sound waves in class XI of SMA N 1 Berastagi A.Y 2018/2019.

1.6 Benefit of Research

The research benefits to be achieved from this research are:

1. To Authors
Enhance knowledge and broaden horizons writer on Guided Inquiry Learning model.
2. To Teachers
As input for a physics teacher in choosing appropriate learning model in order to facilitate the learning of physics.
3. For students
The guided inquiry learning model can improve the student learning outcomes in physics and help students to be more active in the learning process.

1.7 Operational Definition

1. Learning outcomes are measurements of assessment of learning activities or learning processes expressed in symbols, letters and sentences that tell the results that have been achieved by each child in a certain period. Changes that occur in students, both involving cognitive, affective, and psychomotor aspects as a result of learning (Susanto, 2013).
2. Learning model is a plan or pattern used in compiling curriculum, arranging teaching material and giving instructions to instructors in the classroom in teaching settings or other settings. Each model of teaching chosen must reveal various realities that are in accordance with the class situation and kinds of life views, resulting from the collaboration of teachers and students (Dahlan, 2014).
3. Inquiry learning model is a learning model that trains students to learn to find problems, collect, organize, and solve problems. The inquiry learning model can train students to investigate and carry out a problem process in learning in an effort to organize knowledge and make principles in learning (Susilawati, 2015).

4. Guided inquiry learning model is one of the learning models that trains students in finding problems and doing it until they finally get conclusions about the problem. The inquiry learning model has characteristics as: (1) The scope of conducting an investigation is given to students; (2) Students restructure the problem; (3) Students identify identification of problems based on observations; (4) Students do "trial and error" or speculate to solve problems (Kuhlthau et al, 2007).



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