

CHAPTER I INTRODUCTION

1.1 Background

The National Education aims to develop students' potential to become quality human resources and to adapt to the development of science and technology. Improving the ability of the development of science and technology can be done through increasing the ability of students to learn physics. Basically the 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 emphasizes providing direct experience and student-centered. One of the goals of learning physics is to master the concept of physics. Mastery of concepts can help students to define the concept. The involvement of students in the 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 concepts. High-low average value of the physics exam results is a picture of how the level of the student's ability to master the material forms of the concepts of the subject matter.

In fact in the field, learning physics is not as expected where learning physics is still focused on memorizing and formulas. This fact is obtained when the researchers conducted observations in SMA N 1 Tebing Tinggi. Based on the results of a questionnaire distributed to 35 students of SMAN 1 High Cliff Class XI highest percentage at 51% of students felt that physics is boring lesson, because learning physics is still fixated on the notes and work on the problems. Students also feel physics is a difficult subject, evidenced by the results of questionnaire analysis of 66% of students feel physics is a difficult subject because students do not understand physics, physics learning in class is centered on teachers so that students become less active, inactivity students demonstrated from the results of questionnaires that only 6% of students answered questions teachers during the learning process takes place, its less active students in learning

cause of student learning outcomes are less satisfactory or not yet reached KKM, which amounted to 60% of students obtain test results are less than satisfactory.

One way that can be used to overcome the above problems is to use a model of learning that guides students to be more active in finding concepts and facts through guided inquiry models. With the use of guided inquiry learning model can improve student understanding by involving students in the process of active learning activities, so as to achieve a better concept. With the guided inquiry learning model student will have a better understanding of the mastery of subject matter concepts and demonstrate a positive attitude. Guided inquiry learning model allows students to engage actively using physical processes in finding its own concepts and principles of the material being studied under the guidance of teachers, so that the subject matter not only as matter alone, but also to build morale students. This learning model is an alternative learning models that can be selected in the process of teaching and learning activities, due to the learning process students can find a concept through the creativity directly. From the use of guided inquiry learning model is expected to build their direct active communication between teachers and students, so that students can progress toward the expected direction.

Results of previous study show the influence of learning model inquiry guided toward student learning outcomes, where research (Wijayanti et al, 2010) Learning guided inquiry in this study led to increased cognitive achievement of students as indicated by the increase in the average value of which is accompanied by the meeting of mastery learning classical, from before and after the learning. The average value increased from 51.84 into 75.85 and classical learning completeness students increased from 28.57% to 85.71%. Those values are higher than the increase in the control class. The increase of average value of the control group increased from 56.31 into 70.66 and classical learning completeness of 29.26% to 80.48%. (Khotimah & Partono, 2015) Comparison of the average student learning outcomes based (experimental group and control group) was $84.36 > 77.70$. This suggests that the learning outcome of students in the experimental class is better than the control class. This is also evident from the

average indicator of student success in solving the experimental class was 86.33% and the control group was 76.67%. That is guided inquiry learning model affects the physics student learning outcomes. Because the experimental group using guided inquiry learning model in which students are directly involved in learning so motivated to learn. In addition, students are given the opportunity to participate in learning and teachers only guide students. (Deta et al, 2013) there are differences in cognitive learning achievement when students do learning with guided inquiry methods and projects, while for psychomotor and affective learning achievement is not; there are differences in affective learning achievement between students with high and low creativity, while for cognitive and psychomotor learning achievement does not exist; there are differences in cognitive, psychomotor, and affective learning achievements between students with high and low science process skills; there is interaction between learning method with student creativity to affective learning achievement, while for cognitive and psychomotor learning achievement does not exist; there is interaction between learning method with student creativity to psychomotor and affective learning achievement, while for cognitive learning achievement is not; there is an interaction between creativity with students' science process skills toward affective learning achievement, whereas for cognitive and psychomotor learning achievement does not exist; and there is interaction between learning method, creativity, and students' science process skills to cognitive and affective learning achievement, while for psychomotor learning achievement does not exist. (Jannah et al, 2016) performance test results of the trial I showed all students (100%) had complete learned with the highest post-test score of 100 and the lowest was 66. The results of performance tests on a process of trial II shows that 22 of the 27 students (81.5 %) completed and five students have not been completed. If the assigned classical completeness 85%, it can be expressed in classical performances of students have not completed the process. (Sirait & Rosalina) after being given different treatment, where the experimental class using guided inquiry learning model and control class using conventional learning model, the result of experimental class of mean posttest is 72,63 while control

class average posttest value is 63,16. This shows that the result of the research shows that there is a significant influence of the use of guided inquiry learning model to the students' learning outcomes.

Seeing the change in student learning outcomes using guided inquiry learning model, this research will apply the guided inquiry learning model on the sound waves topic.

1.2 Problem Identification

Based on the background described above, then the identification of Problems in this research are:

1. Lack of student interest in physics because they think physics is boring lesson.
2. Students assume physics is a difficult learning.
3. Students are less active of learning physics.
4. The process learning physics that took place was still glued to the recording and do the problems.
5. The learning model used is still a teacher center.
6. The results of student learning less than the maximum and have not yet reached KKM.

1.3 Problem Limitation

Based on the identification problem, so that limit the problem in this research are:

1. The learning model used is a Guided Inquiry learning model in experiment class and conventional learning model in control class.
2. The subject studied is student class XI SMA N 1 Tebing Tinggi A.Y 2017/2018.
3. The topic instructed is sound wave topic.

1.4 Problem Formulation

Based on the above problem definition, then that becomes the problem in this research are:

1. How is the student learning outcomes using guided inquiry learning model on sound wave material in class XI SMA N 1 Tebing Tinggi 2017/2018?
2. Is there an effect of guided inquiry learning model on student learning outcomes on sound wave topic

1.5 Objectives

The objectives of this study are:

1. To know the student learning outcomes used guided inquiry learning model on sound wave topic in class XI SMA N 1 Tebing Tinggi 2017/2018.
2. To know the effect of guided inquiry learning model on student learning outcomes on sound wave topic in class XI SMA N 1 Tebing Tinggi 2017/2018.

1.6 Benefits 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 models can improve the student learning outcomes in physics and help students to be more active in the learning process.

1.7 Operational Definition

1. The learning result is the realization or the expansion of the skills potential or capacity of a person. Mastery learning outcomes by someone can be seen from his behavior, good behavior in the form of acquisition of knowledge, skills of thinking or motor skills. Most of the activities or behavior of a person is shown learning outcomes.
2. The learning model is a plan or pattern that can be used to shape the curriculum (long-term learning plan). Designing learning materials, and guiding learning in class or another. The learning model can be an option, which means that teachers can choose an appropriate learning model and efficient way to achieve educational goals.
3. Guided inquiry offers integrated unit of inquiry, planned and guided by an instructional team of school librarian and teachers, allowing students to gain deeper understandings of the subject are a curriculum content and information literacy concept. It combines often overlooked resources outside with materials in the school library.

