CHAPTER I
INTRODUCTION

1.1 Background

Education is a conscious and structural effort to create an atmosphere of learning and the learning process so that learners are actively developing the potential for them to have the spiritual strength of religious, self-control, personality, character, skill needed for themselves, society, nation and state. In other words, education is an important requirement for every human being. Without education will be difficult to adjust to the environment and will not function optimally in public life. According to sanjaya 2007, one of the problems that Indonesia education world facing is the weakness of learning process, students are less encouraged to develop their thinking skills, and learning in classroom only directed to memorize information without being required to understand what they remembered (Zaini, 2016).

Based on the Regulation of Ministry of National Education of Indonesia No. 22 Years 2006 about the content standards for units of primary and secondary education, science learning should be taken in scientific inquiry method to foster the ability to think, work and scientific attitude and communicate it as an important aspect of life skills. Physics is one branch of science has the essence of physics as a product (a body of knowledge), physics as a attitude (a way of thinking) and physics as a process. Science is expected to be a vehicle for learners to learn themselves and the nature around and apply it in everyday life. Therefore, science learning should use learning models that can bring students into real situations, where students can see and prove their own knowledge based on existing facts and gain concrete experience (Wahyuni *et al.*, 2016).

Based on the experience of the authors during the Field Experience Program (PPL) as long as 3 months it is clear that in teaching and learning activities students are only given theories and how to solve the problems of physics without directing students to bring the concept of physics in everyday life. It causes students to become in active and creative so that lessons are difficult to learn and dislike by students. As a result students are less able to understand and apply the concept of physics in everyday life.

Learning physics emphasizes providing direct experience and student-centered. The involvement of students in the learning activities will have a positive impact on the achievement of mastery of concepts being studied Arends, 2008; Muijs and Renolds, 2008. Thus, the need to develop a mastery level of students in learning physics concepts (Kurniawati *et al*., 2014)

That data confirmed also by the observation results obtained by researcher while were implementing the PPLT (teaching training) program in school SMA N 1 Tebing Tinggi as long as 3 months. For physics lesson, student's outcome is still low. The fact shows students are less able to link the information that has been obtained from the teacher with the information to be learned and experience with daily life. The average value of physics student's is 50-60. Whereas the Minimal Standard (KKM) in school for physics subject is 75. This can be seen from the daily examination and the results of the semester students. The result of this low student learning is accompanied by several factors, namely: the sense of student understanding and mastery of the subject matter, the mistake of conception on the subject matter so that students are difficult to solve the problem, lessons in physics lessons and learning approaches. It could be said that students are less.

From the description above is clear model or learning model change the atmosphere and student learning outcomes. Teachers who teach with less interesting learning can cause students to become bored, passive, and not creative. Therefore, teachers are required to use learning models and methods tailored to the conditions and learning situations in order. One of the learning models that can be used is guided inquiry learning model. Guided inquiry activities help students to develop their individual responsibility, cognitive methods, report making, problem solving and understanding skills (Fatmaryanti *et al*., 2015).

According to Amilasari and sutiadi 2008, Inquiry learning can develop a scientific way of thinking that puts students as learners to solve problems and acquire the knowledge that is the investigation so as to understand the concepts of scienc.. In other words, guided inquiry learning is able to develop the desire and motivation of students to learn the principles and concepts of physics. According to Lee 2007, guided inquiry learning provides the opportunity and learning experience of students. Thus, this inquiry learning can help students to construct

physics concepts learned through the process of thinking (Kurniawati *et al.*, 2014).

According to Kuhlthau *et al.* (2007), guided inquiry creates an environment that motivate students to learn by providing opportunities for them to construct heir own meaning and develop deep understanding. Through guided inquiry students gain ability to use tools and resources for learning as they are learning the content of the curriculum. In guided inquiry, the activities concentrate on what students are thinking, feeling and doing as the students are learning throughout the inquiry process. The end product becomes a natural way of sharing their learning with the rest of the students in their learning communit.

Curriculum under development in Indonesia is currently being implemented in 2013 curriculum basic view can not be from teacher to learners. Learners function as subjects who have the ability to actively seek, process and use knowledge. Therefore, the learning of the heart is concerned with the opportunity given to the learner to construct knowledge in his cognitive process. In order to truly understand and apply the knowledge, learners need to equip themselves to work to solve problems, find everything for themselves, stand hard to realize his ideas (Ardani and Suprapto, 2014).

The experimental method is one of the teacher solution alternatives to solve the problems it faces. Experimental activities aim to train students 'thinking skills, develop students' scientific attitudes, and can train students to solve problems critically. The activities are conducted with teacher directions that engage students into a problem by directing them into an area of inquiry, helping students identify the problem conceptually and methodologically.

Previous research on guided inquiry learning model conducted by Wahyuni *et al* (2016) concluded that learning by using guided inquiry model with experiment method can improve learning outcomes. The disadvantage is the lack of time efficiency in applying the number of classes in class. The same was also obtained in the study. Ardani and Suprapto (2014), concluded that there is influence of guided inquiry learning model toward student learning outcomes. The weakness of the lack of time efficiency in doing class lessons. (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 in the average value of the control group increased from 56.31 into 70.66 and classical learning completeness of 29.26% to 80.48%. (Khotimah and 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 outcomes of students in the experimental class is better than the control class. That is guided inquiry learning model affects the physics student learning outcomes.

Based on explanations above, researcher was interested to do research about: "**The Effect of Guided Inquiry Learning Model on Student's Learning Outcomes on Harmonic Vibration Topic in Class X SMA N 1 Tebing Tinggi A.Y 2017/2018**".

1.2 Problem Identification

Based on the explanation about background of problems above, the relevant problems which identified are:

a. Learning process was still teacher-centered (student is not active).
b. Low student's learning outcomes for physic.
c. Learning model still not variated that used by teacher.
d. Student was rarely to do experiment.
e. Learning process less involved creativity and innovation of students.

1.3 Problem Limitation

To give scope clearly in discussion, then researcher limited the problems as following as:

a. Learning model used guided inquiry model in experiment class and conventional learning model on the control class.
b. Conducted to determine the influence of guided inquiry model on student's learning outcomes.
c. The material taught is vibration harmonic
d. Learning outcomes that will be examined only on cognitive aspect.

1.4 Problem Formulation

Based on the problem identification above, so the problem formulations in this research are:

a. Is there the influence of Guided Inquiry models to student's learning outcomes in Vibration Harmonic in SMA N 1 Tebing Tinggi Class X Academic Years 2017/2018?
b. Does the student's learning outcomes in Vibration Harmonic using Guided Inquiry Model higher than Conventional Learning Model?

1.5 Research Objective

Based on problem formulations above, so the objectives of this research are:

a. To know the influence of Guided Inquiry models on student's learning outcomes in the subject matter harmonic vibration subject in SMA N 1 Tebing Tinggi academic year 2017/2018?
b. To know the student's learning outcomes by using Guided Inquiry model and Conventional Learning Model on harmonic vibration in Class X SMA N 1 Tebing Tinggi academic year 2017/2018?

1.6 Research Benefit

The benefits of this research are:

a. As a ground for research in conducting research
b. Adding the experience of researchers in improving student's learning achievement based guided inquiry learning model
c. Opening think conception of teachers in developing and learning model on uses guide inquiry learning model
d. As consideration for other researchers to examine the same issue in a different location and as an alternative information materials for physics teachers in selecting models or learning method
e. As a solution for the same case in society.