CHAPTER I
INTRODUCTION

1.1 Background

One of the Curriculum 2013 learning patterns is that students actively seek knowledge. In line with this, the curriculum requires students through a scientific process to seek knowledge. Search for and find out by theyself the meaning of everything what they learned. But looking at the current reality, the implementation of curriculum 2013 learning is still not optimal because teachers still use inappropriate learning models that influence student's learning outcomes.

Physics is one of subjects that is required for the application of the 2013 curriculum. Learning physics is an active process, so in it's learning the students should be given the opportunity to explore the understanding, developing thinking skills and science process skills including scientific investigation. This understanding illustrates that concepts, principles and theories in physics do not have to be memorized, but are understood by students (Yulianti, 2015). This is contrary to the reality in the field that students only memorize concepts and are less able to use the concept.

This can be seen through the experience of researcher when doing Teaching Experience in SMA N 1 Berastagi in 2018 for 3 months, found at the beginning of observation that many students are sleepy, chatting with their peers, working on other subjects during the learning process of Physics. The observation illustrated that the level of student's activity in learning also low, which could be clearly seen when discussion were taking place, whereby only few students asked question or indicated his/her mind.

Based on that experience, the researcher want to do observation again in SMA N 1 Berastagi by giving a questionnaire to 34 correspondent students in class XI Science 1 which contained questions about the activities, interests and laboratory facilities towards Physics subject. The result of the questionnaire shows that 64,70% students interestless in learning physics, 42,64% teacher do

experiment in laboratory, 67% not active in studying physics because the teacher take role more dominant. Not only giving the questionnaire to student but also the researcher conducted an interview with the physics teacher, through the interview obtained information that the Physics teacher especially XI Science generally apply lecturing method,the teachers are not fully apply the appropriate methods for each material and rarely use a physics laboratory to conduct physics experiments. The material presented by the teacher is more likely to lecturing method,students should take an active role in the learning, like to experimenting and create an interesting learning media for students that enables students to remember the lessons taught in the long-term memory and able to improve the science process skills of student.

Students' low science process skills are caused by several factors including: low background in science, lack of laboratory infrastructure (Jack, 2013), books are the only guide in learning, school administration has not initiated contextual learning, only emphasizes mastery of concepts, and learning activities that have not explored students' science process skills (Sukarno, 2013). Broadly speaking, the factors that influence students' low science process skills occur because of a lack of optimization of learning involving the role of students. Learning that takes place shows students are less skilled and actively follow the learning process, students tend to be more silent and just pay attention to the material presented. Based on the analysis of observations, it was concluded that the root of the problem of science process skills is low because the learning model that is applied is not optimal in training science process skills, so a learning model is needed that is able to empower students' science process skills (Rahmasiwi, 2015).

One model of learning that can be applied to improve the student' science process skill is Inquiry Training Learning Model . According to Joyce (2011), on Inquiry Training Models, learners will be required to process scientific directly through exercises that can condense the scientific process into a short time. Inquiry Training Model uses an inductive approach to discovering knowledge and is centered on the activeness of learners. In this learning model,

the content and process of inquiry are taught together at the same time. Learners through the investigation process finally arrive at the knowledge itself. So the general purpose of the Inquiry Training Model is to help students develop intellectual skills and other skills, such as asking questions and finding answers to their own curiosity (Ridwan Sani,2010).

The results of research conducted by several researchers including Rajshree S. Vaishnav (2013) that the model of Inquiry Training is significantly effective in improving cognitive and affective learning outcomes as well as contribute to the aptitude of learners than conventional approaches. In addition, Pandey, et al (2011) based on the results of research concludes that using Inquiry Training Learning Model is more effective than using conventional method is seen from the students' academic learning. Anil Kumar,et al (2015) based on the result of research concludes that using Inquiry Training Learning Model is more effective in developing the scientific aptitude than using conventional. Ruchi Pandya (2018) based on the result of the research concludes that using Inquiry Training Learning Model is more effective in developing the thinking process in students' mind than using conventional method. Pratima Kumari (2016) based on the result of research concludes that using Inquiry TrainingLearning Model is more effective for development of motivation and achievement than using conventional.

The difference this research and the research before, in this research science process skills mesured by taking a sample of two classes namely the experimental class and the control class. Where is the experimental class, the researcher use Inquiry Training Model and the control class use the Conventional Model. When presenting puzzle events researcher use video for shorten the learning time. Not only that, the students' instruments and worksheets that made by researcher.

Based on description above, will be conducted research with the title **"The Effect of Inquiry Training Learning Model Towards Student' Science Process Skills on Momentum and Impulse Topic in Class X SMA N 1 BERASTAGI A.Y 2018/2019".**

1.1 Problem Identification

Based on the background that have been metioned above can be identified some problems that arise , as follows :

1. Students interestless in learning physics.
2. Students activity in learning process is passive.
3. Physics learning process is still centered on teacher.
4. Students Science Process Skill is still low.
5. The model that used by teacher is lecturing.
6. Students rarely do experiment.

1.2 Problem Limitation

In according to problem identification, problem limitation in this research as follows :

1. The learning model using Inquiry Training Learning Model in class experiment and Conventional Learning Model in class control.
2. This research only observe science process skills on student.
3. The topic will be learned is Momentum and Impulse.
4. The subject in this research are the sudents class X science in SMA Negeri 1 Berastagi second semester A.Y. 2018/2019.

1.3 Problem Formulation

Based on Problem Limitation above, so the problem formulation in this research are :

1. How is the student' Sciences Process Skill using Inquiry Training Learning Model on Momentum and Impulse topic in class X Science SMA N 1 Berastagi A.Y. 2018/2019?
2. How is the student' Sciences Process Skill using Conventional Model on Momentum and Impulse topic in class X Science SMA N 1 Berastagi A.Y. 2018/2019 ?
3. Which one is better for improving student' Sciences Process Skill by using Inquiry Training Learning Model or Conventional Model on

Momentum and Impulse topic in class X Science SMA N 1 Berastagi A.Y. 2018/2019?

1.4 Research Objectives

The research objectives are :

1. To know the students' Science Process Skills using Inquiry Training Learning Model on Momentum and Impulse topic in class X Science SMA N 1 Berastagi A.Y. 2018/2019.
2. To know the students' Science Process Skills using Conventional Model on Momentum and Impulse topic in class X Science SMA N 1 Berastagi A.Y. 2018/2019.
3. To analyze the improvement Science Process Skills of student by using Inquiry Training Learning Model and Conventional Model on Momentum and Impulse topic in class X Science SMA N 1 Berastagi A.Y. 2018/2019.

1.5 Reasearch Benefits

The expected benefits of this research are :

1. For School

   Giving good contribution to the quality of school as students learning outcomes and teacher's proffesionalism.
2. For Teacher

   The result of this research are expected to be input in expanding knowledge and concept about Inquiry Training Learning Model that become one of alternatives teaching models as effort to improve the quality of education.
3. For Student

   The result of this research are expected to increase students Science Process Skills in Physics especially on Impuls and Momentum topic.
4. For Research

   With this research the researcher can get experience in applying the learning model and able to provide quality learning.

1.6 Operational Definition

1. Inquiry training is a series of learning that maximally involves all students' abilities to search and investigate systematically, critically, logically, analytically, so that they can formulate their own findings confidently (Trianto, 2011).

2. Conventional Learning is the learning that is held in the school's learning atmosphere of the classroom tend teacher centered so that students become passive. According to Djamarah (1996), conventional learning methods are traditional learning methods or also called the lecture method, because this method has always been used as an oral communication tool between teachers and students in the process of learning and learning.

3. Science Process Skills is the complex skills used by scientists to conduct scientific investigation into the series of the learning process.According to Dahar (1996), Science Process Skills is the student ability to apply the scientific method in understanding, developing and finding science. Science Process Skill is very important for every student in preparation to use scientific methods in developing science and are expected to gain new knowledge or develop the knowledge you already have.