CHAPTER I
PRELIMINARY

1.1 Background

Physics is a branch of science whose application can develop children's analytical thinking skills. This analytical thinking ability can be developed by using various natural phenomena events as a form of implementation of Physics. In addition, physics lessons are lessons that provide knowledge about the universe to practice thinking and reasoning, through someone's reasoning abilities that are continuously trained so that they develop, then that person will increase his thinking power and knowledge (Fimatu Rizka, 2016). However, the facts on the ground state that physics is one of the subjects that are still considered difficult by some students. This is reinforced by the results of a student questionnaire that was carried out on several students of SMA N 7 Medan on October 29, 2019, data obtained that, 21 out of 27 students were less interested in physics subjects and considered physics lessons difficult, not only difficult to learn. , physics has even become one of the subjects hated by students. This general opinion/view of students and the community is supported by the results of research (Fimatu Rizka 2016) which found that Physics is a difficult subject and most hated by students, especially high school students.

In practice, the physics learning process does not escape the problems encountered when carrying out the process. These problems are encountered especially when the learner has difficulty in learning. Learning difficulties are one of the symptoms in the learning process which is characterized by various behaviours that have a background within and outside the learner's self (in this case students) (Zakir, 2007). Some of these behaviours include: showing low learning outcomes; the results achieved are not balanced with the efforts that have been made; slow in doing the tasks of learning activities; showing inappropriate attitudes; showing abnormal behaviour, such as truancy, arriving late, not doing homework (PR), disturbing inside or outside the classroom, and so on; and show

emotional symptoms that are less reasonable. Several studies have found that various factors related to internal and external factors affect student learning. Maas (2004) found that learning difficulties were caused by inadequate facilities, especially literature books or textbooks; students' perception of the subject; and lack of motivation or do not know how to study methods or methods that are efficient. Riaz, et al. (2008) found the clarity of speech from the teacher; the best quality of teachers; teacher consultation outside the classroom influences learning. Carbone, et al. (2009) found that motivation and technical skills affected learning. Kirmani (2008) found that academic, personal, media, facilities, guidance services, and organizational climate factors influence learning. Huang (2005) found that interest motivation had the most direct effect on the subject's learning attitude, as well as school environment, work, and trend variables (Bendem Gede 2014).

The home environment does not directly affect the subject's learning attitude. Motivation also has an indirect influence on learning attitudes. According to researchers, the relationship between theory and practice alternately and gradually complements each other, seeks mutual bases, and examines each other, but in general, what is applied in Indonesia is still teacher center, and has not yet moved towards the aspect of life skills (life skill-oriented), so that the results of education are only It can be seen from the students' ability to memorize facts in the short term.

Based on the problems above, it is necessary to overcome the problem with a model that can attract students' interest in studying physics. The model used must be following the learning objectives and the type of material being taught. Less precise use of learning models, can cause boredom, watching or even students have difficulty understanding the concepts being taught.

Currently, many learning models have emerged. These models require a change in the learning environment. A variation in which students study, work and interact in small groups so that students can cooperate, help each other discuss and understand the subject matter and work on group assignments. One of them is learning with the inquiry model. The inquiry training model is a learning method

that teaches students to be critical, argumentative analysis in finding answers to various problems in nature, through experiences and other sources.

One of the learning methods that need to be improved and developed is the Inquiry Training learning method. The inquiry learning method places students as learning subjects no longer as learning objects who can only listen and take notes without being directly involved in the learning process. This method is a form of student-oriented learning approach that plays a very dominant role in the learning process. Inquiry learning emphasizes the process of seeking and finding. The subject matter is not given directly. The role of students in this strategy is to find and find the subject matter for themselves. Meanwhile, the teacher acts as a facilitator and guide for students in the learning process. The inquiry learning method is a series of learning activities that emphasize critical and analytical thinking processes to seek and find answers to the problems in question. The thinking process itself is usually done through question and answer between teachers and students.

Inquiry is an extension of discovery (discovery) in a more mature way, in addition to the discovery process, inquiry contains higher-level mental processes. In its implementation, the inquiry method exposes students to a questioning situation. The learning model with the inquiry model is suitable to be applied in physics learning, especially during the Covid-19 pandemic. This is because the inquiry model emphasizes student activity in learning, students first hold activities in the laboratory, namely the process of observing, recording observations, analyzing, and concluding practicum activities that have been designed by the teacher. This will make learning physics more fun and more memorable because students are directly involved in the learning process. Physics is a generalization of natural phenomena that does not need to be memorized but needs to be understood, understood, and applied.

From the explanation above, the researcher realized that the learning process has components, one of which is the model and learning media (Totiana, et al, 2012). The media has a clear function, namely making it easier and interesting for the material to be delivered by the teacher to students so that they can motivate

their learning and streamline the learning process (Mawarni, et al, 2015). Learning motivation is one of the internal factors that can affect student learning achievement (Widyawati, et al, 2012). Low student motivation is a factor inhibiting learning achievement (Lugman, et al, 2016).

1.2 Scope

Based on the background, the problems that become the scope of this research are:

1. The learning outcomes of SMA N 7 Medan students are less than the minimum completeness criteria.
2. During this pandemic, students find it difficult to understand, communicate and relate physics concepts to everyday life.
3. teachers are still lacking in varying models and effective media to support learning.
4. Lack of interaction and activeness of students in the learning process in the online learning process

1.3 Formulation Of The Problem

Based on the background of the problem stated above, the authors can take the formulation of the problem in this study are:

1. How are the learning outcomes of students who are taught using the Inquiry training learning model on the subject matter Momentum impulse in class X semester 2 at SMAN 7 Medan A.Y 2020/2021?Bagaimana hasil belajar siswa yang diajar dengan menggunakan model konvensional pada materi pokok Momentum Impiulse kelas X semester 2 SMA 7 Medan A.Y 2020/2021?
1. Is there any effect of the Inquiry training learning model for students' conceptual understanding on the Momentum impulse material for class X semester 2 at SMAN 7 Medan A.Y 2020/2021?

1.4 Problem Limitation

Seeing the breadth of problems that can arise from this research, and considering the limited time and other supporting facilities, this research is limited to:

1. The object of this research is the students of class X IPA even semester of SMA N 7 Medan T.P 2020/2021.
2. Physics learning is limited to impulse and momentum material.
3. Students' learning outcomes in physics in this study are cognitive domains based on Bloom's taxonomy, namely.
4. Experimental class 1 is taught by learning using an online Inquiry Training model, and experimental class 2 is taught by learning using a conventional online model.
5. The curriculum used is k13

1.5 Research Objectives

The objectives of this research are:

1. To find out the effect Inqury training model to student learning outcomes taught using the online on the subject matter of impulse and momentum during the Covid-19 era.
2. To find out the differences in student learning outcomes who are taught using the online Inqury Training model against conventional online learning models.

1.6 Benefits of research

The results of this study are expected to be useful for students, teachers and universities and further researchers to improve the quality of learning, especially during the Covid-19 pandemic. The benefits are as follows:

1. For students

To increase motivation and learning outcomes as well as students' understanding of the material presented by the Physics study teacher during the Covid-19 pandemic.

2. For Teacher

As input and consideration for teachers in choosing effective online learning models and media used in the Physics learning process during the Covid-19 pandemic.

3. For Further Researchers

As a contribution of ideas and thoughts, especially in the field of Physics studies on materials to be used as guidelines for online learning materials for the next generation of students.

4. For School

As a contribution to revealing of the many problems to improve student physics learning outcomes in high school, especially for educational problems in the future.

1.7 Operational Definition

1 Learning is a process of effort carried out by a person to obtain a new behavior change as a whole, as a result of his own experience in interaction with his environment" (Slameto, 2003).

2 Learning outcomes is the goal of the learning Two of the most important educational goals are to promote retention and to promote transfer (which, when it occurs, indicates meaningful learning). (Anderson and Chartwoll, 2001).

3 Learning model is a plan or a pattern that is used as a guide in planning learning in the classroom or in learning tutorials and to determine learning tools including books, films, computers, curriculum, and others (Trianto, 2011)

4 inquiry Training model is an extension of discovery (discovery) in a more mature way, in addition to the discovery process, inquiry contains higher level mental processes. In the implementation of the method The inquiry exposes students to a questioning situation.