

CHAPTER I

Introduction

1.1 Background

Based on UU No. 20 of 2003 about National Education System says that “*Pendidikan adalah usaha sadar dan terencana untuk mewujudkan suasana belajar dan proses pembelajaran agar peserta didik secara aktif mengembangkan potensi dirinya untuk memiliki kekuatan spiritual keagamaan, pengendalian diri, kepribadian, kecerdasan, akhlak mulia, serta keterampilan yang diperlukan dirinya, masyarakat, bangsa dan negara*”. The importance of education as the capital of the younger generation, to achieve a successful and capable citizens.

Government always pay attention to the education of Indonesia. All government’s effort is characterized by an increase in Revenue and Expenditure National Budget of education, curriculum changing, foster educators, cooperating with other countries to better the quality of education etc. But, The government can not fend for themselves, which is required for the participation of all education stakeholders include: the Department of Education, superintendent, principal, teacher, parent, school committee, school board, community, business and industries world, as well as all parents agency concerned directly or indirectly to the educational activities in schools (Wau : 2013). The cooperation is performed to achieve national education goals are written in UU RI No. 20 Chapter II Subsection 3 Of 2003 is to develop the potential of student to become a man of faith and fear of God Almighty, noble, healthy, knowledgeable, skilled, creative, indep endent, and become citizens of a democratic and responsible.

School as an institution which is learning activities take place. An excellent school is able to act as an educational process (educational process that emphasizes on educating and teaching activities), the process of socialization (social processes, especially for student), and the place of transformation process (the process of behavioral changing towards a better). In the school, teacher is the most influential stakeholder toward the quality and abilities of learner, because teacher interact and communicate directly and very close to the learner. Learner is

educated by teacher at school every day. The ability of teacher to educate is very influential to success or failure the learning activities at school. For the teacher must be able to present learning activities more active, creative, and fun to produce better in the future. So, it can be conclude the education is very important and key to the success of nation.

One of the subject that is taught in school, especially in high school is physics. Physics is the science that studies about natural phenomenon. Therefore, physics is one of the lessons is quite interesting because it relates directly to natural phenomena and knowledge can be applied in daily life.

But in fact physics is one lesson that has the lowest score. This is caused by the large number of student who doesn't like physics because they think physics is a difficult subject to understand, especially when faced with a complicated formulas and calculations. This fact is in accordance with the results of observations conducted by researchers at SMA Santo Thomas 3 Medan. Researcher use questioner instrument to observe student interest in physics subject. From the observation result, At the class there was $\pm 73\%$ student said rare learn physics in group, $\pm 16\%$ student said always and just $\pm 11\%$ said never learn physics in group discussion. Before learn physics, just $\pm 16\%$ student prepare them self before learn physics, then $\pm 79\%$ student sometimes do the preparation, and there was $\pm 5\%$ student don't do anything. And then there was $\pm 24\%$ student interest to solve physics problem by them self, then $\pm 76\%$ student interest to solve physics problem with discussion. From the observation result above, researcher conclude that the student in SMA Santo Thomas 3 Medan wasn't interest to learn physics and rarely learn physics. And this will be influenced the student outcome in learning physics.

Researcher also interviewed physics teachers class X SMA Santo Thomas 3 Medan, Mrs. M. Naibaho. She said because she teaches at science class, student interest with physics but the problem is time. She said that she need more time to teach, because it just 3 meeting in weeks. Then she said that not all students a

good mark, some student have not good enough mark in physics. She said that student didn't want to review the lesson at home.

Researchers also observe three physics teacher when they teach at SMA Santo Thomas 3 Medan. From the observation, researcher finds that most of physics teacher, use conventional learning to explain physics phenomenon in front of the class. And this will be influenced the student outcome in learning physics.

There are many things that cause low result of this study, one of which is the use of learning methods that teacher is less variable and the model is still used conventional teaching models. Djamarah (2009:26) states "When teacher teach when only using one of the methods it will be boring, uninterested student attention on the lesson " . The use of model made by teacher in the teaching of physics, still using conventional learning model and method used approach is the method of lecture and discussion. Meanwhile, in the subject of physics, which requires not only how student solves problem by memorized formula, but students must be able to understand the concepts of physics. And understanding of concepts by student, can't be done with the lecture method and the conventional learning, because the model and the method will only create an atmosphere of teacher-centered learning . And learning environment like this, it will only make student passive but also makes the student doesn't have the opportunity to develop their understanding of physics concepts.

To solve the above problems, researcher changes conventional learning model toward cooperative learning model. Cooperative learning model consists of several kinds, one of which cooperative learning model type Group Investigation (GI) is a model that doesn't require student to memorize facts and formulas, but a model that guide student to identify the topic, planning investigations in group, carrying out investigation, reported, and presented research result. Group investigation is a cooperative learning method and has as hallmark student working in small group, actively constructing their knowledge, with the enhancement of student learning and student satisfaction (Marlowe and Page : 2005). Group Investigation includes for important components ("the four I's") : investigation, interaction, interpretation, and intrinsic motivation (Daniel Zigaro :

2008). All component, help student to understand physics clearly, because the student will learn by them self and find the answer with their team. And it will make student have a good teamwork and can memorize the lesson for a long time.

Cooperative learning model group investigation had been examined by previous student by (Adolf: 2012) the result of research conducted by Adolf at SMAN 1 Kec. Binjai, states that there is difference in physics learning outcomes using cooperative learning model group investigation of the average pretest score 30.88 after learning the type of cooperative group investigation model of the average value increased to 71.50. (Mery:2010) result of research conducted by Mery at SMAN 1 Percut Sei Tuan, stating that during the student learning outcomes using the model of cooperative group investigation the learning outcome get increased. At the first meeting of the average value of 33.55, and at the second meeting of the average value of 70.84.

From the research that has been done, the researcher argued that there are some weaknesses, namely, (Adolf:2012) failed to give more attention and guidance to student who is less active and in the use of instructional media is still less, (Mery:2010) is less efficient in the use of time, and student need more motivation to explore their statement. The advantages of the current research, will motivate students who less active and more attention to the details of the allocation and the use of instructional media, researchers use lab tools that are already available in the laboratory of SMA Santo Thomas 3 Medan, to raise the interest of student in participating teaching and learning activities .

Based on explanation above the writer wants to do the research with title **“The Effect of Cooperative Learning Model Type Group Investigation (GI) To Students’ Learning Outcome On Linear Motion in 10th Grade SMA Santo Thomas 3 Medan A.Y. 2014/2015”**.

1.2 Problem Identification

Based on the background that already consider, so the problem identification in this research are:

1. Student learn in group rarely
2. Students' learning outcome of physics is low
3. Student don't do a preparation before physics class
4. The physics teacher still use the conventional learning

1.3 Problem Limitation

Based on the problem identification, writer limits this problem, namely:

1. Learning model is cooperative learning model type group investigation
2. Subject matter that will be learn is linear motion
3. Subject of this research is 10th grade student in SMA Santo Thomas 3 Medan

1.4 Problem Formulation

Based on the limitation problem, so the problem formulation are:

1. How is students' learning outcome (cognitive, affective and psychomotor) using cooperative learning model type group investigation in the subject matter linear motion in class X SMA Santo Thomas 3 Medan A.Y. 2014/2015?
2. How is students' learning outcome (cognitive, affective and psychomotor) using and conventional learning in the subject matter linear motion in class X SMA Santo Thomas 3 Medan A.Y. 2014/2015?
3. Is students' learning outcome by using cooperative learning model type group investigation better than conventional learning in the subject matter linear motion in class X SMA Santo Thomas 3 Medan A.Y. 2014/2015?

1.5 Research Objectives

There are some research objective, namely:

1. To know students' learning outcome by using conventional learning in the subject matter linear motion in class X SMA Santo Thomas 3 Medan A.Y. 2014/2015
2. To know students' learning outcome by using cooperative learning model type group investigation in the subject matter linear motion in class X SMA Santo Thomas 3 Medan A.Y. 2014/2015
3. To know whether students' learning outcome by using cooperative learning model type group investigation is better than conventional learning in the subject matter linear motion in class X SMA Santo Thomas 3 Medan A.Y. 2014/2015

1.6 Research Benefit

Once this study is completed then the expected benefits of this research are:

1. For physics teacher: As input to improve students' learning outcome by using better learning model like cooperative learning model type group investigation
2. For research development: As source for another researcher to develop research about cooperative learning model type group investigation