CHAPTER I
INTRODUCTION

1.1. Background

Education has a very important role in generating fully human resource both as individuals and as the general public. Improve education in Indonesia in learning activities in schools is an activity that must be improved in order to reach a goal in the form of changes in behavior, knowledge, and skills in self-learners.

In RI law No.20 year 2003 defines education as a conscious and planned to create an condition of learning and learning process so that learners are actively developing the potential for him to have the spiritual strength of religious, self-control, personality, intelligence, noble character, and skills necessary, community, nation, and state. So in the teaching and learning activities need to develop a good learning process so as to create a charming condition and makes students more actively in learning activities.

In improving the quality of education, the educators have a major role to improve the quality of student learning. In conducting learning activities, teachers as a educator besides knowing materials, certainly need to understand the learning model and selecting appropriate learning model to give course material and how the characteristics of the students who received the course material. Failure educators in providing not only because the subject matter did not master the material, but because of the use of models of learning and teaching methods are less appropriate. Therefore, any attempt to do the teacher to improve student learning outcomes is through the use of models of learning and teaching methods appropriate to the subject matter being taught, so that students can learn with a pleasant condition.

To educate is to help learners with full consciousness, either with tools or not, in their obligation to develop and grow themselves to improve the capacity and role of himself as an individual, community members, and the God's creation. Educate is an attempt to create a situation that makes students want to and can

learn for encouraging yourself to develop talents, personal and other potentials optimally in a positive direction. (Made, 2007:11).

In the teaching and learning process in the classroom most teachers as a center of learning and not involve students so that students are less active. Learning often takes place in one direction without involving students. Due to the lack of an active role of students then students are less engaged in the lesson, not creative, and not interested in following the lessons taught by the teacher. Basically, the teacher acts as a motivator, facilitator, mediator and mentor students in learning. Teachers should be able to increase curiosity and makes the students more active in participating in the lessons.

Physics sciences as part of the Natural Sciences (IPA) is an interesting subject that studied natural phenomena around that often we experience in daily life. However, the physical science learning is often seen as an abstract science theories presented in the form of a less appealing and seem tough, assume that physics is so difficult to be understood and mastered. Subjects are always taught physics with formulas without explaining the physics concept itself so impressed physics lessons to be difficult and tedious. Whereas physics requires more understanding than memorization and not just formulas learned in this lesson but also natural events that occur in the environment.

Learning physics has the objective to solve the problems faced by students in order to have a broader view and to have respect for the usefulness of physics as part of the natural sciences and technology (science and technology). However, reports from the bright print and electronic media showed unsatisfactory results on students' learning outcomes physics.

The quality of learning outcomes in Indonesia is still considered inadequate, from interviews with researcher's physics teacher at SMAN 1 Perbaungan known that the average value of final exams on the subjects of physics still unsatisfactory. The low of learning outcomes is due to students learning physics by learning difficulties experienced by students on any subject matter that result in decreased desire to learn the physics. Physics teacher also added that the different ability levels of students in the class is so far because

there are some students who have a great interest and there are also students who are not interested in the slightest to learn particular lessons Natural Sciences.

The interview and experience researcher in SMA N 1 Perbaungan seen that many students who are interested less in learn physics because of the formulas that we get in physics and assume that physics is hard because in both physics many things abstract and so students lost understanding of the physics behold often be found in daily life because physics not just learning about formulas but the natural phenomena happened.

Some teachers use only conventional learning models in physics lessons taught in class. The teacher does not use the learning model that correspond to the competencies to be achieved by students in a physics lesson, so that teaching and learning are not giving good results to the students. Many students are not learning competence achieved in the classroom because it does not appropriate model used by teachers.

From the problems discussed above, educators need to do varied learning model to foster interest in learning and students must comply with the competence to be achieved from these lessons. One can use the model of learning in the cooperative. Cooperative learning is a learning approach that focuses on the use of small groups of students to work together in maximizing learning conditions to achieve learning objectives. This Learning Model can be helping students acquire the academic content and skills to address important social and human relations goals and objectives (Arends: 2009).

Cooperative learning has been one of the most researched teaching models. In Arends, Cooperative learning lessons can be characterized by the following features:

- Students work in teams to master learning goals.
- Teams are made up of high-, average -, and low-Achieving students.
- Whenever possible, teams include a racial, cultural, and gender mix.
- Reward systems are oriented to the group as well as the individual.

The model of cooperative learning was developed to Achieve at least three important instructional goals: academic achievement, tolerance and acceptance to

diversity, and social skill development. In Arends, (Slavin: 1996) believed that the focus of cooperative learning group changes the norms of youth culture and makes it more acceptable to excel in academic learning tasks. In addition to changing norms associated with achievement, cooperative learning can benefit both low-and high-Achieving students who work together on academic tasks.

In this study various models of learning known one is cooperative learning. Majority of teachers think that they are already implementing cooperative learning each time having students work in small groups. But teachers have not noticed a structured classroom activity so that the role of each member of the group has not seen. In various types of cooperative learning recognized one of them is the type of cooperative learning Student Teams Achievement Divisions (STAD).

Based on the existence of these problems the author tries to do research in an effort to improve student learning outcomes by applying the model type Cooperative Learning Student Teams Achievement Divisions (STAD) using mind mapping. Teachers using STAD present new academic information to students each week or on a regular basis, either through verbal presentation or text (Arends: 2009). In this study the researchers apply the type STAD cooperative model with the method of mind mapping. With these students can be more active in learning and understanding the concepts of physics itself is not just a physics formula and they can understand the purpose and concept of the formula. With this model STAD students can share their knowledge to friends who do not understand the study. Students can share their knowledge with friends and do not hesitate to ask your friends who already understand about the lesson. With mind mapping also students can be more innovative and creative in learning the full creation. Students are also able to express their understanding of physics with mind mapping.

Writer realizes fully that learning cooperative had reviewed by student. The research results that review before is done by Novita (2009) that uses kind of classroom cooperative obtained that study result of the student with average

4

73,33. Novita (2009) declaring that the influence significant between use kind of classroom cooperative type STAD against study result of the students.

The difference in general previous research with this study is that previous research, the type of cooperative learning Student Teams Achievement Divisions (STAD) the student is unable to provide the required media while learning so that the learning process less attractive. In this study, in addition to determine the effect of cooperative learning model type Student Teams Achievement Divisions (STAD) as well as to make the learning process interesting, so students do not easily get bored in learning physics.

Based on the above, the authors conducted a study using cooperative learning model type of Student Teams Achievement Divisions (STAD) on learning outcomes of students in the Dynamic Electrics subject matter in class X which will be held in SMA Negeri 1 Perbaungan. The title is taken the author are: " The Effect of Cooperative Learning Model Type of Student Teams Achievement Divisions (STAD) Based on Mind Mapping on Learning Outcomes of Students in The Dynamic Electrics Subject Matter in Class X Even Semester SMA Negeri 1 Perbaungan Academic Year 2012/2013".

1.2. Problem Identification

Based on the background of the above problems, the main points of the problem taken as follows:

1. The results obtained by students studying physics is still low.
2. Lack of interest and motivation student against learning physics.
3. Teacher learning methods those are less varied and less precise.
4. Less involvement of students in learning.

1.3. Problem Limitation

Because of the breadth of the problems of research and lack of expertise and time, the researchers need do extent of the problem. The extent of the problem being investigated include:

1. Implementation of cooperative learning model type Student Teams Achievement Divisions (STAD) with mind mapping method in the class.
2. Student learning outcomes in the subject matter of the Dynamic Electrics.
3. Subjects of research conducted at the Senior High School class X even semester of the Academic year 2012/2013.

1.4. Problem Formulation

Based on the background of the above problems, the formulation of the problem in this research is:

1. How the learning outcomes of students using cooperative learning model type Student Teams Achievement Divisions (STAD) Mind Mapping based on learning outcomes of students in the Dynamic Electrics subject matter in class X even semester SMA Negeri 1 Perbaungan academic year 2012/2013?
2. How physics student learning outcomes using conventional learning model law on the Dynamic Electric subject matter in class X Senior High School SMA Negeri 1 Perbaungan even semester academic year 2012/2013?
3. Is there any effect of using cooperative learning model type Student Teams Achievement Divisions (STAD) on learning outcomes of students in the Dynamic Electrics subject matter in class X even semester SMA Negeri 1 Perbaungan academic year 2012/2013?

1.5. Goal Research

As for the objectives of this study were:

1. For know learning outcomes student with use cooperative learning model type Student Teams Achievement Divisions (STAD) on the subject matter in class X Dynamic Electrics semester SMA Negeri 1 Perbaungan academic year 2012/2013.
2. For know learning outcomes student with using a model of learning Conventional on material principal Dynamic Electrics in the even semester of class X SMA Negeri 1 Perbaungan academic year 2012/2013.

3. For know large influence cooperative learning model type Student Teams Achievement Divisions (STAD) on learning outcomes of students in the Dynamic Electrics subject matter in class X even semester SMA Negeri 1 Perbaungan academic year 2012/2013.

1.6. Benefits of Research

The expected benefits of the research in this study are:

1. For provide opportunity to student for expand insight knowledge in the learning process.
2. For material input for physics teachers in selecting appropriate learning model.
3. For provide experience on reader in embed concept - the concept physics.
4. For reference for researcher in do more research further.

1.7. Operational Definition

Operational definition presented in this study as follows:

1. Teaching is a process that works guiding and developing self appropriate with task development should run by students it.
2. Learning type cooperative Student Teams Achievement Divisions (STAD) based on mind mapping is one of type or model of learning cooperatively designed for affect pattern interaction student and as an alternative to structure class traditional for grow comprehension concept.
3. Learning Conventional is teaching usually teachers do in classroom use method expository, question and answer and discussion.
4. Learning outcomes is mastery relationships that have been obtainable so that he can produce experience and mastery material lessons learned.