

CHAPTER I INTRODUCTION

1.1. Background

Learning process occurs through many ways and takes place all the time toward a behaviour changing in learners. The changing are in the form of knowledge, understanding, skills, and habits that acquired by the lerners. The main activities in teaching and learning are the emphasis on engaging students in learning,

One of the subjects 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 that 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 students who do not like physics and 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 in SMA Cerdas Murni. Researcher use questioner instrument to observe student interest in physics subject. From the observation result, there is 10 % student say that they don't like physics, 58 % student say that physics isn't interest to learn and 32 % says that they like physics, just 5 % student say that they really like physics. Before learn physics, just 13 % student prepare themselves before learn physics, 25 % student sometimes do the preparation, 57 % student just see the title without do the preparation, and there is 9 % student don't do anything and there is 18 % student interest to solve physics problem by themselves, 41 % student interest to solve physics problem with discussion, 58 % student solve physics problem when the problem is easy and there is 8 % student don't want to solve physics problem. From the observation result above, researcher conclude that student in SMA Cerdas Murni isn't interest to learn physics and this will be influenced the student outcome in learning physics.

Researchers also interviewed three physics teachers in SMA Cerdas Murni. The teachers have the same answer when researcher asking about the student learning outcomes. They say that student learning outcomes that are generally still low at an average of 60, so it can be said score the average student does not achieve the expected criteria. The researchers observed that the physics teachers, especially in class XI SMA generally apply lecturing method more than the other methods in learning activities, in fact the method is not accordance with the purpose of learning. This is due to the teachers are not fully apply the appropriate methods for each materials. The teacher's role is more dominant, material presented by the teacher is more likely to lecturing method, the student learn or repeat the lesson only in exam time so the students do not understand the material overall, when the teacher gives the test higher than the material that has been written, the student can not answer it. This is caused by to students are not beeing regularly to solve a problem. This learning activities becomes a problem for students because some of them are not able to understand the material.

To improve student's learning outcomes, teachers can perform a variety method, for example using a method of effective teaching and learning in accordance with the objectives set in the curriculum. Inquiry is a model used in learning process, the main purpose of inquiry is to develop skill, intellectual, critical thinking and able to solve problems scientifically. Students are expected to investigate why an event took place then collect and process the scientific data to solve a problem. The advantages of inquiry learning model is make the students able to understand the ideas and basic concepts better than before, encourage them to think and work initiatively, objectively and formulate their own hypothesis, which makes the situation of the learning process become more interesting.

From previous research, Rumahorbo, (2014) in the research journal about the learning quality improvement in class entitled "*Effect of Inquiry-Based Learning Model on Student's learning Outcomes in Topic of Dinamic Electricity in Grade X SMAN 2 Balige academic year 2013/2014*" obtained that the pretest average value in experimental class was 49.062 and posttest average value was

83.57 while the pretest average value in control class was 48.8 and posttest average value was 75.67.

Research by Ariska, (2012), entitled "*Implementation of Guided Inquiry to Improve Student's Learning Motivation and Learning Outcomes of Human Respiratory System for 2nd Grade Student SMA Negeri 1 Tebing Tinggi*", it was found that the cycle IV of learning outcome increased by 32.3% to 94.94%. The activity of students reached of 97.06%. Other research conducted by Zebua, (2012), entitled "*Strategi Pembelajaran Inquiry pada materi pokok Hukum Newton di kelas X SMA Gajah Mada Medan T.P. 2010/2011*", obtained the pretest average value in experimental class is 47.71 and the posttest average value in experimental class is 73.29. While the pretest average value in control class is 43.29 and the the posttest average value in control class is 66.86. Based on these data, there are some improvement in student's learning outcome using inquiry learning model in subject matter of Newton's Law. Research conducted by Yunus, et al, (2013) obtained that the implementation of physics inquiry based learning can improve student learning outcomes auditory.

Learning outcomes of students taught with inquiry learning model significantly different from taught with conventional learning, with the average value of the test in the experimental class is 70.68 while the control class with an average value of 66.46. The analysis results the standard deviation between inquiry and conventional significance level of 1% (0.01) is $t_{\text{tabel}} = 2.64$ while $t_{\text{count}} = 3.80$, so that H_0 is rejected and H_a accepted. The students who learn in the inquiry learning model is able to learn well, where students can express their own opinion according to their experience with a percentage of 12.1%, whereas in the conventional learning students can not express their opinion better, this can be proven when the students are asked how to overcome the land, water, air and sound pollution with a percentage of 12% (Kamal, et al, 2011). Based on some of these research, it can be concluded that the use of guided inquiry learning model can assist students in learning the scientific method and foster research skills such as working in groups, writing, and verbal expression, experience in solving problem and the other abilities.

Based on that problems, the author interested in applying guided inquiry learning model to improve student's learning achievement, especially in the static fluids topic. Thus this study is formulated by the title "The Implementation of Guided Inquiry Learning Model to Improve Student's Learning Outcomes on Static Fluids Topic at Class XI SMA Cerdas Murni Academic Year 2013/2014".

1.2. Problem Identification

Based on the background above, the problems identification of this research are as follows:

1. Students have difficulty to understand the physics concept.
2. Students are not active in physics learning activities.
3. Teachers often use conventional method in learning activities.
4. Teachers use few model in learning physics
5. Teachers still dominate the class in teaching and learning activities.

1.3. Problem Limitation

Based on the problem identification, the authors limit the issues in this research so that the study can be focused and achieve the goals. The limitation of these problems are as follow:

1. Learning model used in this research are guided inquiry learning model for the experimental class and conventional learning for the control class.
2. The material taught is static fluids.
3. Subject of this research is the students at class XI SMA Cerdas Murni academic year 2013/2014.

1.4. Problem Formulation

In accordance with the limitation problem, the problem formulation of this research are:

1. How is the student's learning result on static fluids topic using guided inquiry learning model and conventional learning at class XI SMA Cerdas Murni academic year 2013/2014?
2. Is the student's learning result on static fluids topic using guided inquiry learning model is greater than conventional learning at class XI SMA Cerdas Murni academic year 2013/2014?

1.5. Research Objectives

The research objectives are as follows:

1. To know the student learning result on static fluids topic using guided inquiry learning model and conventional learning at class XI SMA Cerdas Murni academic year 2013/2014.
2. To know whether the student's learning result on static fluids topic using guided inquiry learning model greater than conventional learning at class XI SMA Cerdas Murni academic year 2013/2014.

1.6. Research Benefits

After doing this research, the significant benefits expected are:

1. For school : Gives good contribution in order to improve the learning process and the quality of school by increasing student achievement and teacher professionalism.
2. For teacher : As a consideration in selecting learning model in teaching physics.
3. For student : The guided inquiry learning model can improve the student learning outcomes in physics and help students to be more active in the learning process.
4. For researcher : Adds the author's knowledge in using guided inquiry learning model.