CHAPTER 1
INTRODUCTION

1.1 Background

Education is one important factor in life, either in one's life, family, and nation. The progress of a nation will be largely determined by the quality of its human resources. In the opening of the Basic Law (Constitution) of the Republic of Indonesia in 1945 had mentioned that one of the goals of the Republic of Indonesia is the nation's intellectual life and therefore every Indonesian citizen has the right to quality education in accordance with the interests and talents regardless of their status social, racial, ethnic, religious and gender. Equity and quality of education will give someone life skills so that one is able to resolve the problem themselves and their surroundings, encouraging the establishment of civil society, and imbued modern Pancasila values, as mandated in the law No. 20 of 2003 on the national education system.

In law No. 20 of 2003 on the national education system mentioned that the purpose of national education is to develop the potential of students in order to become a man of faith and piety to God Almighty, precious, healthy, have learned, accomplished, creative, independent, and become citizens of a democratic and accountable. An attempt can be made to realize the goal of national education as mentioned in the preamble of the Constitution of 1945 and law No. 20 of 2003 on the national education system is to improve the quality of national education.

One of the quality of national education that can be seen from the results of student learning at every level of education, both from student learning outcomes in the realm of cognitive, affective, and psychomotor. Indicators of cognitive learning outcomes commonly referred to as student achievement in school. Therefore, efforts to improve the quality of national education, one of which is increasing student learning achievement at every level of education (Purwanto, 2009:36)

In the effort of national education quality improvement by enhancing the learning achievements of students at every level of education is not separated

from the role of a teacher. Each media, approaches and learning methods are used in teaching teachers are extremely influential on student learning outcomes, both from student learning outcomes in the realm of cognitive, affective, and psychomotor. Despite advances in technology nowadays is very rapidly and the technological advances is likely to be supporting the advancement of education in this country. However, the role of the teacher is still very necessary.

Teachers have four strategic roles in the educational activity as an educator, facilitator, motivator, and evaluator. Teachers as educators mean that there are two things that must be done by a teacher, which teaches students the values of kindness and familiarize students doing good. As a facilitator means that teachers should be able to manage the class well, as a motivator means teachers always give positive inputs to the students, so that students are excited and enthusiastic in learning, as an evaluator means teachers must be able to evaluate student learning outcomes. Besides the teacher should act as an educator, facilitator, motivator, teacher and evaluator should act professionally.

Mathematics is the subjects taught from primary education level up to secondary education. In addition to having the abstract nature, a good understanding of mathematical concepts is important because to understand the new concept is required the prerequisite to understand the concept before. In the process of teaching and learning the teacher has a duty to select the models of learning media appropriate to the material submitted for the achievement of learning objectives. Until today there are still many difficulties encountered students to learn and low achievements of learning math.

Many factors led to the low learning achievement of students, one of which is the lack of interest of students receiving lessons given by teachers. In particular the study of mathematics is considered to be the most difficult. According to the statement of Grouws (2000: 8), said that teaching and learning mathematics are complex tasks. Mathematics is a subject of study that is considered the most difficult by the students, both to students who are not difficult to learn and more for students who have trouble in learning.

One of the reasons is mathematics still learning over conventional and monotonous that centered on the teacher. Teachers still conveys the material with a traditional approach that emphasizes on practice work problems, procedural, as well as the use of formulas. Students only receive knowledge from the teacher without treatment potential in them. Consequently in understanding math concepts, students covered it in a way to memorize. This can lead to a perception in students, that mathematics is simply a collection of formulas to be memorized without having to hone their mindset and know first stage of discovery and the benefits of the formula. That is the way many of the students who have difficulties in applying the formula to solve problems and low learning achievement in mathematics. And to show that students master math is characterized by the learning process and learning math achievement is good. One that causes a good learning achievement is the teacher should have the proper learning strategy.

Application of the method or approach to learning that varied according to the characteristics of these students will avoid student boredom, and create a comfortable and fun atmosphere for learning. Application of learning approach can serve as a means communication is important. The use of a particular approach allows teachers to achieve the expected learning goals and improving student learning outcomes. One alternative approach to learning that can be applied to improve student achievement is Somatic, Auditory, Visual, and Intellectual (SAVI).

SAVI is a learning approach that emphasizes that learning should make use of all the senses the student. SAVI is a short term Somatic meaningful learning by moving and doing (hands-on, physical activity). Auditory meaningful learning by listening, speaking, presentation, argumentation, express opinions, and respond. Visualization meaningful learning must use eye senses through observation, drawing, demonstrating, reading, using the media and props. Intellectual meaningful learning by solving problems that free and brooding (minds-on). Learning can be optimal if the four elements of SAVI is in a learning situation. Learning by combining these four modalities of learning in a learning situation is the essence of a multi sensory learning. Through the application of

SAVI is expected capable to accommodate students with different characteristics to take advantage of all of the senses which belonged to students.

Dave Meier as owner SAVI concept suggested to the teacher to manage the class using this model. SAVI model is a form of learning created by Dave Meier in his book "The accelerated learning handbook" which is a guide book in designing creative and effective educational programs. The basic concept of learning is that learning takes place in a fast, fun, and satisfying.

Meier (2000: 9) states that:

"Some major assumptions of accelerated learning are a positive learning environment, total learner involvement, collaboration among learners, variety that appeals to all learning styles, and contextual learning."

Thus, through the SAVI method, students can learn math with an optimal intellectual activity and all the senses are combined in a learning process. So it can create a fun learning, student-centered, and actively involve students in order for them to develop their potential well by ability, interests, learning styles, experience has, and can improve academic achievement. This statement is based on the statement Meier (2000:10) states that "People learn best when they have a rich variety of learning options that allows them to use all their senses and exercise their preferred learning style."

The conventional approach is an approach that is more teacher-centered learning; learning is one-way from the teacher to the student. This approach is considered a classical approach, because this approach has been around since then and still exists to this day and is still quite widely used in the present study. This approach is able to survive to this day as it is quite effective in the use of instructional time and also to increase one's willingness to learn the material in more depth. Learning by using this approach is faster in delivering course material, too fast in terms of delivering new information on a subject matter.

Good learning approach should pay attention to children's learning basic modalities. But unfortunately, in the learning of mathematics is still often overlooked aspect so that learning becomes less effective. In a study using a conventional approach itself, attention to children's learning basic modalities are

still less attention despite the implementation modalities of learning includes learning basic child but no optimization. SAVI approach pursued in the optimization of empowerment so that children learn the basic modalities with this approach is expected to be a more effective learning.

Optimization of empowering children to learn the basic modalities SAVI approach enables this approach to be more effective than the conventional approach when the review of student achievement, but did not rule out the conventional approach is more effective, because the optimization empowering children to learn basic modalities have drawbacks that can provide results which is contrary to expectations. This is possible because if there are several children in the class who have a tendency to learn certain tendencies such strong auditory learning are weak in somatic, visual, intellectual and then the child will have difficulty in learning to use the SAVI approach so that their achievement will decrease from the prior be treated with SAVI approach.

From interviews with mathematics teachers of SMAN 1 Perbaungan, especially for grade 10 there is a material that is difficult to teach the subject of three dimensions. Many of the students cannot achieve the basic competencies of the material. The difficulty in teaching these subjects due to the unavailability of a good means to help the process of teaching such as the unavailability of visual aids that are needed to realize the three-dimensional subjects, the high criteria and indicators to be achieved by students and monotonous process of learning because teachers usually teach the material conventionally. This is not in accordance with the material that requires an active process of learning from teachers and students, as well as the need for effective learning models that achieve learning objectives.

Based on the background described above, the writer feels interest to perform a research "THE COMPARISON OF STUDENT ACHIEVEMNET THROUGH SAVI (SOMATIC, AUDITORY, VISUAL, AND INTELLECTUAL) MODEL AND CONVENTIONAL MODEL ON SUB TOPIC OF VOLUME AND DISTANCE IN GRADE X OF SMAN 1 PERBAUNGAN"
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1.2   Identification of Problems

Based on the background above, some problems can be identified as follows:

1. The student achievement in math still low.
2. The monotony of learning or teacher-centered learning makes students less interested in learning mathematics.
3. The uses of learning strategies, still less appropriate to the material being taught.
4. Three dimensions materials are considered difficult to teach because of the unavailability of visual aids that are needed to realize the subject and high criteria that must be achieved by students.
5. The understanding of students and the students' achievement in three dimensions are still low.

1.3   Problem Limitation

Problems identified above is a problem that is quite extensive and complex, that research is more focused and achieve goals, then the scopes research are:

1. Given the mathematical study materials is very broad, the study was limited only to the subject matter volume and distance in three dimensions.
2. The subjects of this study were high school students from SMAN 1 Perbaungan Grade X in odd semester of academic year 2012/2013.
3. Application of learning models SAVI (Somatic, Auditory, Visual, and Intellectual) and Conventional model as a learning strategy that is considered in accordance with the material.
4. The data studied are student achievement data obtained from the pretest and posttest in learning math.

1.4 Problem Formulated

Based on the background of the issues that have been mentioned before, the problem of this study is:

1. Whether there is an improvement in student achievement using SAVI (Somatic, Auditory, Visual, and Intellectual) model?
2. Is the improvement of student achievement that using model SAVI (Somatic, Auditory, Visual, and Intellectual) in learning is higher than students in conventional learning using direct instruction model?
3. How do students' attitudes towards learning mathematics using model SAVI (Somatic, Auditory, Visual, and Intellectual) model?

1.5 Research Objectives

Based on the formulation of the problem which has been described, the purpose of this study was to:

1. To know there is an improvement in student's achievement using SAVI (Somatic, Auditory, Visual, and Intellectual) model.
2. To know whether the improvement of student's achievement that using model SAVI (Somatic, Auditory, Visual, and Intellectual) in learning higher than students' achievement in Direct Instruction learning model (conventional)
3. To obtain information about the students' attitudes toward mathematics learning model SAVI (Somatic, Auditory, Visual, and Intellectual).

1.6 Benefits of Research

Results from this study are expected to provide inputs and contributions to the several parties, including:

1. For teachers of mathematics, the results of this study may provide additional knowledge about mathematics learning and serve as one of the

inputs to select and develop appropriate alternative learning model for improving student achievement.

2. For observers of education, the results of this study are expected to add insight about mathematical learning model.

3. For students:

   a. SAVI models in learning math can be used as a new experience to improve student achievement.

   b. Trained to be actively involved in the learning of mathematics.

1.7   Operational Definition

To avoid differences or lack of clarity of meaning, the following are some important terms in this study.

1. Learning achievement is the acquisition of knowledge or skills developed by the subjects as indicated by the tests or numerical value is assigned teacher.

2. SAVI is a learning model which emphasizes that learning should make use of all the senses that the student, by combining physical movement with intellectual activity and the use of all senses in the learning process. Model is intended to increase the activity of students in learning activities that can improve student achievement.

   SAVI is short term:

   a. Somatic, body movements, which means learning by experiencing, doing, move, and act. Somatic Learning is learning by involving physical, especially the sense of touch, and move your body uses during the learning progress.

   b. Auditory, auditory meaning that learns by listening, listening, speaking, presentation, argumentation, express opinions, and responding (learning by talking and hearing). Auditory learning is learning that emphasizes skills speaking, listening and listening.

c. Visually, the vision which means that learning by observing, drawing, painting, demonstrating learning media and props (learning by observing and picturing). Visual is learn by using eye senses.

d. Intellectual, think that means that the ability to think through the reasoning needs to be trained, creative, solve problems, constructing, and applying (learning by problem and reflecting). Intellectual is the creation of meaning in mind, the means used by humans to think, bringing together experience and intellectual learning also means using thinking ability to link all of the meaning derived from the learning..

Learning can take place optimally when the fourth of SAVI elements present in a learning process.

3. Conventional Learning is learning classical / regular lectures and training methods, assuming students do not have different abilities so that each student was given the same instruction. Learning begins with the delivery of materials, giving example problems by teachers, and continued with the construction practice questions by students.