

CHAPTER I

INTRODUCTION

1.1 Background

Education is the process of changing attitudes and behavior of a person or group people in human mature effort through teaching and training that is full of development. Therefore, changes or developments in education supposed to occur in line with the changing culture of life. Changes in the sense of improving education at all levels need to be constantly carried out in anticipation of future interests.

Education is able to support future development is the education that is able to develop the potential of learners, so they are able to face and solve the problems of life that it faces" (Trianto, 2013:1). Education should touch the inner potential and the potential competence of learners. The educational concept was even more important when they must enter to the life in the community and the world of work, because they should be able to apply what is learned in school to face with problems encountered in daily life today and in the future.

In state constitution No.20 years of 2003 about national education system said that education is a conscious and deliberate effort to create an atmosphere of learning and the 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 needed him, society, nation, and state.

According to Sanjaya (2011:2), there are some things that are very important for our critics from the concept of education according to the law. *First*, education is a planned conscious, that means that the process of education in schools is not a process that implemented at random and speculative, but a process that have aims so everything that teachers done and students are directed to the achievement of objectives.

Second, a planned process of education is directed to create an atmosphere of learning and the learning process, this means that education should not be ruled out from learning process. Education is not merely trying to achieve

Learning achievement, but how to get the results or the process of learning that occurs in students. Thus, in education between process and Learning achievement must have walk in balance. Education is only concerned with one of them will not be able to form a fully developed human.

Third, the learning atmosphere was directed so that learners can develop their potential, this means that the educational process must be oriented to students. Education is an effort to develop the potential of students. Thus, students should be seen as a developing organism and has potential. The task of education is to develop the potential of students, instead of cramming the subject matter or force the student to memorize the data and facts.

Fourth, the end of the educational process is the ability of students to have spiritual power of religion, self-control, personality, intelligence noble character, and skills needed him, society, nation, and state. This means that the educational process leads to the formation of attitudes, intelligence or intellectual development, and the development of student's skills in accordance with their needs. The third aspect of this (attitude, intelligence, and skill) direction and purpose of education should be pursued.

However, the quality of education in Indonesia is not as expected. In (Jejen: 2011:4) Sukmadinata said, "beside of lack of infrastructure and learning facilities, is the teacher factor". Teachers are a major factor in the process of education is still not working in earnest also professional skills are still lacking. According to Sanusi (Jejen: 2011:4), "Teachers can not be relied in standard various performance aspects, because he don't had: expertise in the content of a field of study, pedagogic, didactic, and methodical, social and personal skills, particularly disciplined and motivated, team work among teachers and other education personnel".

According Jejen (2011:4) the low qualifications of teachers caused by various factors. *First*, the teachers' welfare is low. So, teachers cannot allocation of funds for continuing education. *Second*, the quality, qualifications, and competence of teachers are low. Low teacher competence often constrain teachers to obtain a scholarship, so let alone to compete in the selection phase, to fulfill

administrative requirements alone can not. *Third*, the commitment of teachers to achieve higher education is lack. *Fourth*, the motivation of teachers to achieve higher education is low. The motivation to beat all the obstacles inherent in the teacher. The fourth factor before, is the reason for teacher to forget the importance of learning goals.

According to Sanjaya (2011:68) "the purpose of learning can be defined as the ability to be possessed by students after studying the given subject". So that each student must master the material presented. However, there are teachers who think the purpose of learning is the process of delivering course material, no matter whether the material had been understood by the students or not. This is the main factor to low student learning achievement.

Classroom management is another important factor affecting student Learning achievement. According to Bahri (2006:2), "a good class management will be present a good teaching and learning interaction anyway". Learning objectives will be achieved without the constraint if the teacher has the ability to manage classes.

Choice a good strategy learning can affect student Learning achievement and achieved of real learning objectives. Bahri (2006:5) said "learning strategy is a general pattern of teachers and student activities to realization of teaching and learning activities to achieve the objectives". Not only that, have a good technique will present a good Learning achievement either. According to Roestiyah (2008:1), Teaching technique is a knowledge about teacher or instructors using method. Another understanding is as learning techniques that teacher mastered to teaching or presenting a material to students in the classroom, so that lessons can be captured, understood and used by students.

However, it should be understood that every type of learning technique is only suitable or appropriate to achieve a specific goal. So for different purposes teachers should use different learning techniques, or when teachers set up some goals, he should be able to also use multiple learning techniques to achieve these objectives. Therefore, a teacher must know, learned and mastered a lot of learning

techniques, that can use with its variations, so teachers are able to make a successful learning process and empowering.

With the learning strategies and techniques that have been conducted teacher presentation. It is expected that student achievement will be better more. However, the unavoidable absence of the selection strategy and learning techniques lead to low student learning achievement, particularly in mathematics.

Math is a subject that is taught from elementary level up to secondary education. Besides having abstract nature, Apart from having abstract nature, a good understanding of mathematical concepts is important because it is necessary to understand the new concept prerequisite for understanding previous concepts. In the learning process, teachers have the task of choosing select appropriate learning model with the material presented to achieve learning objectives. Until today there are many difficulties faced by the students to learn and achieve high results in the learning of mathematics.

Many factors that caused the low students learning achievement, one of which is the lack of students interest to receive the lesson by the teacher. In particular the study of mathematics is considered the most difficult. According to a statement from Grouws (2000:8), said that the teaching and learning of mathematics are complex tasks. Mathematics is a subject of study is considered the most difficult to be understood by students and especially for students who have difficulty in learning.

One reason why student learning achievement still low is mathematics taught with the conventional model of learning and teacher-centered model. Teachers still present the material by traditional approach that emphasizes on technical issues, procedures, and the use of formulas. Students only receive knowledge from the teacher without the potential in it. Consequently in understanding mathematical concepts, students just remain the material. This can lead to the students perception, that mathematics is a set of formulas to be memorized without having to hone their mindset and known the first step to find that formulas. That is the way the students who have difficulty in applying the formula to solve the problem so learning achievement in mathematics is still low.

And to show that students had master in mathematics signed by a good learning process and learning achievement in mathematics.

Application of the method or approach to learning which varies according to the characteristics of these students will avoid the boredom of students, and create an atmosphere that is comfortable and fun to learn. Application of learning approach can serve as an important means of communication. Using a particular learning approach allows teachers to achieve the expected learning objectives and improve student learning achievement. An alternative approach to learning that can be applied to improve student Learning achievement is Somatic, Auditory, Visual, and Intellectual (SAVI) learning model.

SAVI learning models is a student learning process by combining physical movement with intellectual activity and the use of all the senses. SAVI learning model embrace of modern cognitive that learning is most well involve the whole body , all senses , and all the depth and breadth of personal , individual learning styles respecting others by realizing that people learn in different ways. Somatic learning is learning that utilizes and involves the body (tactile, kinesthetic, involves moving the body during physical and learning activities take place). Auditory means learning the sense of hearing. Learning to talk and listen. Visual means, learning must use the sense of sight. The visual learning means learning to observe and describe. Intellectual means learning to solve problems and brooding. Action learners do things with their minds internally when using intelligence to reflect on an experience and create relationships, meaning, plan, and the value of the experience.

According to Dave Meier as the inventor of SAVI learning model, learning does not automatically rise up and tell people to move to and fro, but connecting with the physical movement of intellectual activity and the use of all the senses can have a big impact on learning. SAVI Learning is learning which emphasizes that learning should take advantage of all the senses of the students. In SAVI learning, learning it has to do with the activity, ie physically moving when

learning, and utilizing the senses as much as possible and make the whole body or mind are involved in the learning process.

Dave Meier advised the teacher to manage the class by using this model. SAVI is a form of learning models created by Dave Meier in his book "The Accelerated Learning Handbook" which is a guide book in designing educational programs that are creative and effective. The basic concept of the learning takes place in a fast, fun, and satisfying. Such as Meier (2000:9) states "some major assumptions learning is a positive learning environment, the total involvement of students, collaboration among learners, variety that appeals to all learning styles, and contextual learning".

With the SAVI learning model, students can learn mathematics with optimal intellectual activity and the senses are combined in the learning process. So that could be created fun learning, students as learning centers, actively engage students so that they are able to develop their potential with good abilities, interests, learning styles, experience of, and can improve student learning achievement. In accordance with the words Meier (2000:10) "People learn best when they have a variety of learning options that allow them to use all of flavor and exercise their preferred learning style".

In the learning process, by using SAVI (Somatic, Auditory, Visual, and Intellectual) learning model, it can improve student learning achievement. SAVI learning model is accordance with the curriculum that is being done in schools. SAVI learning models supports the K-13 where students as learning centers where student perform each step in the learning model SAVI.

Conventional learning model is a traditional learning model or also called by student learning centered, because this method has been used as a communication tool between teachers and students in the learning process. In mathematics learning process, the conventional learning model marked by a lot of formulas note and the explanation, and giving the tasks. In accordance with the opinion Arends (2007:289) "direct instruction learning model focuses to academic taskö.

In this model teacher as learning centered in the classroom. Teachers only gave the material and tasks. So that students are not active in the classroom, students also feel attracted to the subject matter presented. So no wonder, the above model can affect student learning achievement in mathematics.

From interviews conducted with teachers of mathematics in SMP Negeri 1 Binjai, especially in VII grade teacher that students have difficulty in learning the set, especially to find the set concept from story problems. Many students can not find the member of the operation from story problems and some students difficult to draw venn diagrams. This material is taught in a conventional learning model, where teacher as learning centered. It is thought to affect the student learning achievement are low.

Based on the background, the authors are interested in doing research with the title "THE DIFFERENCES OF STUDENTS' LEARNING ACHIEVEMENT TAUGHT SOMATIC, AUDIOTORYTORY, VISUAL, AND INTELLECTUAL (SAVI) LEARNING MODEL AND DIRECTT INSTRUCTION (DI) LEARNING MODEL ON SETS TOPICS IN VII GRADE AT SMP N 1 BINJAI ACADEMIC YEAR 2014/2015 "

1.2 Problem Identification

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

1. The student Learning Achievement in mathematics still low.
2. The monotony of learning or teacher-centered learning makes students less interested in learning mathematics.
3. The uses of learning strategy, still less appropriate to the material being taught.
4. Set materials are taught without visual aid.
5. The understanding of students and students Learning Achievement in set topic are still low.

1.3 Problem Limitation

Problem 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. The subjects of this study were student from class VII-4 and VII-5 of SMP Negeri 1 Binjai academic years 2014/2015.
2. Application of learning models SAVI and DI as a learning strategy that is considered in accordance with the material.
3. The ability of students in the learning of mathematics is limited to mastery of the material with a pattern of interactive exercises.
4. The successful indicators of student is the students Learning Achievement

1.4 Problem Formulated

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

1. Is there a difference in students' learning achievement taught SAVI (Somatic, Auditory, Visual, and Intellectual) model between DI (Direct Instruction) learning models?
2. Is the improving of learning achievement in SAVI (Somatic, Auditory, Visual, and Intellectual) class is higher than students' in DI (Direct Instruction) class?

1.5 Research Objectives

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

1. To know there is a difference in student's learning achievement using SAVI (Somatic, Auditory, Visual, and Intellectual) model.
2. To know the student learning achievement of student's that using model SAVI (Somatic, Auditory, Visual, and Intellectual) is better

than students' learning achievements in DI (Direct Instruction) learning model.

1.6 Research Benefits

1. For the teacher, the result 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 students learning achievement.
2. For observers, the results of this study are expected to add insight about mathematical learning model.
3. For student:
 - a. SAVI models in learning mathematics can be used as a new experience to improve student Learning Achievement
 - b. Trained to be actively involved in the learning

1.7 Operational Definition

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

1. Learning achievements is the object to measure the knowledge skill development by the subjects as indicated by test 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 students, 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 students Achievements. 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 senses 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, 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 add 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 problem by teachers, and continued with the construction practice question by students.
4. Set is the topics that will be teach in this research. In this research, researcher will teach specifically on Venn diagrams, Sets operation, and find the sets concept from story problems.