

CHAPTER I INTRODUCTION

1.1. Research Background

Education is a basic part of human life. It is the base for essential instrument to accelerating the well being and success of all in every direction (Brady, 2014) . Learning as an enduring change in behavior, or in the capacity to behave in a given fashion, which results from practice or other forms of experience (Schunk, 2012). Actually there is no one definition of learning that is universally accepted by theorist, researchers, and practitioners. Best point of learning is changing from do not know become know about something. The process to reach it should be faced the problem. Every time in life must faced problem, as in our environment and also in school. Especially in learning process student should be able to solve every problem that they faced like some question of some subject matter.

Problem solving is a part of thinking. Problem solving is one of the primary tools for college and university science instruction (Seyhan, 2015). Problem solving also holds great importance in being the final objective and outcome of the teaching and learning process, it is seen as the correct approach to thinking in general for there is no biology without thinking, and no thinking without problems (Aljaberi, 2015). The first thing which is necessary for solving personal and organizational problems is the knowledge of problem solving process.

Individual skill of problem solving is related to their concentrating on the problem and self evaluation (Aljaberi, 2015). Problem solving skill will help us to resolve problems in not only academic life but in all parts of the life. It is a common belief that the Problem Solving has an important place in childrens learning in school. Developing a problem solving ability is gradually becoming the primary goal of education at school. One of the most important goals for teaching is teaching students to use basic fact and concepts flexible so that they can deal with new situations, predict various consequences and solve problems.

In classroom situations, problem solving can be viewed from two angles, a way of thinking and a way of teaching.

(Gholami, 2013) in the process of learning, each person has specific learning characteristics. The characteristics of each person are different. One of the distinct characteristics is learning style. Learning styles are associated with the ability to absorb and process the results of learning acquired by a student. Learning style is an important factor for determining the outcome of student learning. Learning style is the way the nature of the individual is involved in them acquiring and absorbing information in their environment. Learning styles affect the students' learning process so that it can be used as a consideration in designing learning.

Brady (2014) learning styles are cognitive characteristics, affective and psychological behaviors that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment. Several learning styles models were proposed with the objective of classifying and characterizing how students receive and process information.

According to Bhat (2016) as cited in Learning style is the way that he or she concentrates on, processes, internalizes, and remembers new and difficult academic information or skills varying with age, achievement, culture, global versus analytical processing preference and gender. The individuals familiar of their learning styles can do extremely well in their academic field by using various sources of information to optimize their quality of learning.

From the research of Brady (2017) about relationship between learning styles and learning achievement. He test the 34 students in a school and from his results it can be seen that from the 34 students who did the test, ten students (29.41%) have a visual learning style, seven students (20.59%) have an auditory learning style, and 17 students (50%) have a kinaesthetic learning style, students gift the instrument and some questions to test their ability to solve problem and found the achievement and ability to solve the problem in the question of kinaesthetic's student higher than Visual and Auditory.

Problem solving is a process of finding solution to difficulty or complex problems or issues, which is a kind of thinking ability (Dostal 2013). In learning Biology, problem solving is an essential ability for students, especially, in biology task where most curriculums and examinations focus on systematic answers. The development of such abilities requires systematic and clear process, and need to be easy to identify students' abilities in solving problems.

Students learn best by seeing the value and importance of the information presented in the classroom. If the students are not interested in the material presented, they will not learn it (Gilakjani, 2011). There are many reason why student have difficulties in so many topics in Biology like skeletal system. Mostly student have a problem to understanding the processs and mechanism that happen in there. Base on observation at SMA N.1 SILAEN researcher faced some student have their way to teach. Some of them only focus to teacher and another else always writing and some student have another focus durung learning process. Because of student's difficulties in many topics in biology have stimulated researcher to observe why student experience such difficulties.

Base on the obeservation at SMA N 1 SILAEN, researcher founded every students have their own way to study or to get the information. There are some student that study by see, some student by hearing teacher, another student not interest to attend the teacher when he was teaching but can answer or solve case that gived. So researcher interest to observe deeply about the different way of human especially student to get information in school.

Students learn in many different ways to learn and to solve the problem that found as learning. Some students are visual learners, whileothers are auditory or kinaesthetic learners. Visual learners learn visually by means of charts,graphs, and pictures. Auditory learners learn by listening to lectures and reading. Kinaestheticlearners learn by doing. Students can prefer one, two, or three learning styles. Because ofthese different way of student to learn and solve problem or task in Biology learning styles researcher interest to do research about "*Effect of Student's Learning Style Toward Problem Solving Ability in*

Human Skeletal System Problem at SMANegeri 1 Silaen Academic Year 2018/2019”.

1.2. Problem Identification

Based on research background description, the research problem identification as follows:

1. The student still didn't recognize of learning styles that suits with themselves in learning process.
2. The effect of student's learning style to problem solving ability in Human Skeletal System.
3. The students have difficulties study in biology subject with particular topic about Human Skeletal System.

1.3. Problem Scope

In order to obtain an appropriate discussion, this research has some scopes:

1. The are three categories of learning styles that will be identify namely visual, auditory, and kinesthetic.
2. Measure the learning outcomes of student in Problem Solving Ability about Skeletal System problem.
3. The scope of sampel only science class grade XI at SMA N.1 SILAEN.

1.4. Research Question

This research about effect of learning style for problem solving ability, so the question of this research are:

1. Is there any effect of visual student learning style toward problem solving ability in human skeletal system problem at SMAN 1 SILAEN academic year 2018/2019?
2. Is there any effect of auditory student learning style toward problem solving ability in human skeletal system problem at SMAN 1 SILAEN academic year 2018/2019?
3. Is there any effect of kinesthetic student learning style toward problem solving ability in human skeletal system problem at SMAN 1 SILAEN academic year 2018/2019?

1.5. Research Objectives

This research has objectives:

1. To know the effect of visual student learning style toward solving ability in human skeletal problem at SMAN 1 SILAEN academic year 2018/2019.
2. To know the effect of auditory student learning style toward solving ability in human skeletal problem at SMAN 1 SILAEN academic year 2018/2019.
3. To know the effect of kinesthetic student learning style toward solving ability in human skeletal problem at SMAN 1 SILAEN academic year 2018/2019.

1.6. Research Benefits

The benefits of this research that can be obtained both theoretically and practically that as follows:

1. Theoretically

- a. The results of this research are expected to contribute for developments in education.
- b. Can be used as a reference and consideration for further research.

2. Practically

- a. For students, as an input so that students can optimize their potential after learning their respective learning styles.
- b. For teachers, as suggestions and feedbacks in providing information on different learning styles and also providing information to be able to create methods and models of learning are varied.

1.7. Operational Definition

1. Students' scientific activities will be measured using questionnaire which score range from 0 – 100.
2. Students' understanding will be measured based on post – test result (students' learning outcomes) with 5 questions and the score range