

CHAPTER I INTRODUCTION

1.1 Background

There are two factors that affect learning; internal factors which come from within the student and external factors which come from outside him/herself (Slameto, 2003). One of the internal factors affecting student learning is memory or retention. Retention is the ability to remember material at some later time in much the same way it was presented during instruction (Mayer, 2002). Retention are relative, where each student has a memory capacity varies, which can affect the learning outcomes differently.

Learning approach and learning strategies including factors that also determine the success rate of the learning process. Learning strategies refers to the behaviors and thought processes used by students that influence what is learned, including memory and metacognitive processes (Arends, 1998). It is said to be successful if the result reach the learning objectives of the material.

According to DePorter (2006), there are three basic types of learning style, they are visual, auditory, and kinesthetic. Visual learning means that learn through what they see, auditory learning by listening and kinesthetic learning by motion, work and touching. Learning styles research has indicated that different people learn in different ways (Meier, 2000). Moreover, based on Dale's Cone Experience (Dale, 1969), people generally remember 10% of what they read, 20% of what they hear, 30% of what they see, 50% of what they see and hear, 70% of what they say and write, 90% of what they do as they perform a task. Students with well-trained senses will accelerate comprehension and enable long-term memory.

Biology is part of science that studies living things and their environment. In fact, learning biology is not in accordance with the characteristics of biology as a science. Most teachers advanced aspects of the product rather than the process and attitude. It makes the students were oriented to the achievement of cognitive learning outcomes, as result students are not directly involved in the discussions,

presentations, observation, and experiment. This creates a situation where the learning activity is teacher-centered while the students act as passive learners.

Based on Hannah and Syaichudin (2011), there are the imbalance between the roles of teachers and students during the learning process in MTs. Nurul Amanah Madura. Teachers focus more in lecturing in delivering teaching materials while students are listening and taking notes. The biology learning in SMA Negeri 1 Gombong also shows the teacher-centered in the process. There is no variation of learning strategy so that students become bored and less excited. Discussion group is an effective way to improve the active learning, as in group students are required to actively solve the given problem and exchange ideas (Asani, 2012). Furthermore, Sabatini (2012) revealed that most of teachers use traditional method where the teacher acts as the only source of information in SMA Negeri 1 Tebing Tinggi. This method tends to create a monotonous atmosphere and boring circumstance in the classroom. The observation has shown that some students cannot focus and pay attention to the teacher. When teacher asks some review questions, most of students did not give any response. This may relate to the condition that biology contains lots of explanations and memorizations, so that the students may not remember the preview material. It can be seen through their achievement, some students have difficulties to reach the minimum requirements to pass in the biology exams. It was to use that the cognitive learning outcome for grade XI students in this school was still low, 62 in mean score. Meanwhile, the minimum completeness criterion is 75 in mean.

This problem is not only a regional problem, but also a global problem. Lujan and Stephen (2005) in Michigan show that students' attention in class wanes dramatically after 10–15 min. These studies suggest that students do not learn by simply sitting in a classroom, listening to the teacher, and memorizing assignments. Students must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. Students who are actively involved in learning retain information longer than when they are passive recipients of instructions. In Japan, the result of the study of Ohshika (2005) revealed that there is a problem that many students have less experienced in

performing experiment and observation in school. Moreover, the study of biology in school is excessively dependent on rote memorization (Umeno, 2005).

A lot of things that are abstract learned in biology, one of which is human regulatory system topic. Abstract material is often difficult for students to understand, so it needs an appropriate learning strategy for students easily understand the material and can remember in a long time. According to the research of Supini (2010) in SMAN 1 Lubuk Pakam, student learning outcomes in the human regulatory system material has not been satisfactory over the past three years, with mean value of 63 (year 2007/2008), 65 (year 2008/2009) and 65 (year 2009/2010).

These problems must be overcome in order to achieve the learning objectives with optimal results. One attempt to overcome this problem is by implementing appropriate learning approach, which is student-centered and can accommodate all types of learning style is SAVI approach.

SAVI stands for Somatic, Auditory, Visual, and Intellectual. It is an approach that combines physical movement with intellectual creativity and use all the senses in the learning process. Somatic is learning by moving and doing, auditory is learning by talking and hearing, visual is learning by observing and picturing, and intellectual is learning by problem solving and reflecting. Meier (2000) asserts that learning can be optimized if the four elements of SAVI can be present in a learning process. For example, students will learn a little bit to watch the presentation (V), but they can learn more if they can do something when a presentation is in progress (S), to talk or discuss what they learned (A), and think of ways to apply the information in the presentation to resolve the problems that exist (I). All four of these learning modes have to be present for optimal learning to occur. Since these elements are all integrated, the best kind of learning occurs when they are all used simultaneously.

Learning not automatically improve by having people stand up and move around but combining physical movement with intellectual activity and the use of all the senses can have a profound effect on learning (Meier, 2000). By stimulating the senses, especially the visual sense, learning can be enhanced.

Laird's theory suggests that if multi-senses are stimulated, greater learning takes place (Dunn, 2002). It is also can increase students' retention by creating vivid and memorable learning experiences. Moreover, Suyatno (2008) says that combines physical movement with intellectual activity and the use of all senses to fully engage students in learning so that it will give a positive effect on student learning outcomes. The late, Dewi (2012) concluded that the application of SAVI approach has taken good effect toward students' achievement cognitive, psychomotor, and affective domain in learning biology of SMA Negeri 1 Boyolali.

1.2 Problem Identification

According to the background above, the identified problems are:

1. The lecturing-method is commonly used in learning process.
2. Activeness of student in learning process is still low.
3. There is no variation of learning strategy so that students become bored and less excited.
4. Students cannot focus and pay attention to the teacher.
5. Students did not remember the material for a long time.
6. Students have less experienced in performing experiment and observation in school.
7. Human regulatory system as one of abstract material in biology is often difficult for students to understand.

1.3 Problem Scope

This research focuses on the using of SAVI (Somatic, Auditory, Visual and Intellectual) approach in learning process, which is student-centered and can accommodate all types of learning style of students to obtain an optimal learning.

Aspects measured include students' activity, learning outcome and retention of human regulatory system topic in biology that was done for grade XI IPA SMAN 1 Tebing Tinggi academic year 2012/2013.

1.4 Research Questions

In accordance with the issues that have been stated, then the problem can be formulated:

1. Is there any effect of SAVI approach on students' activity in human regulatory system topic for grade XI IPA SMAN 1 Tebing Tinggi academic year 2012/2013?
2. Is there any effect of SAVI approach on students' learning outcome in human regulatory system topic for grade XI IPA SMAN 1 Tebing Tinggi academic year 2012/2013?
3. Is there any effect of SAVI approach on students' retention in human regulatory system topic for grade XI IPA SMAN 1 Tebing Tinggi academic year 2012/2013?

1.5 Research Objectives

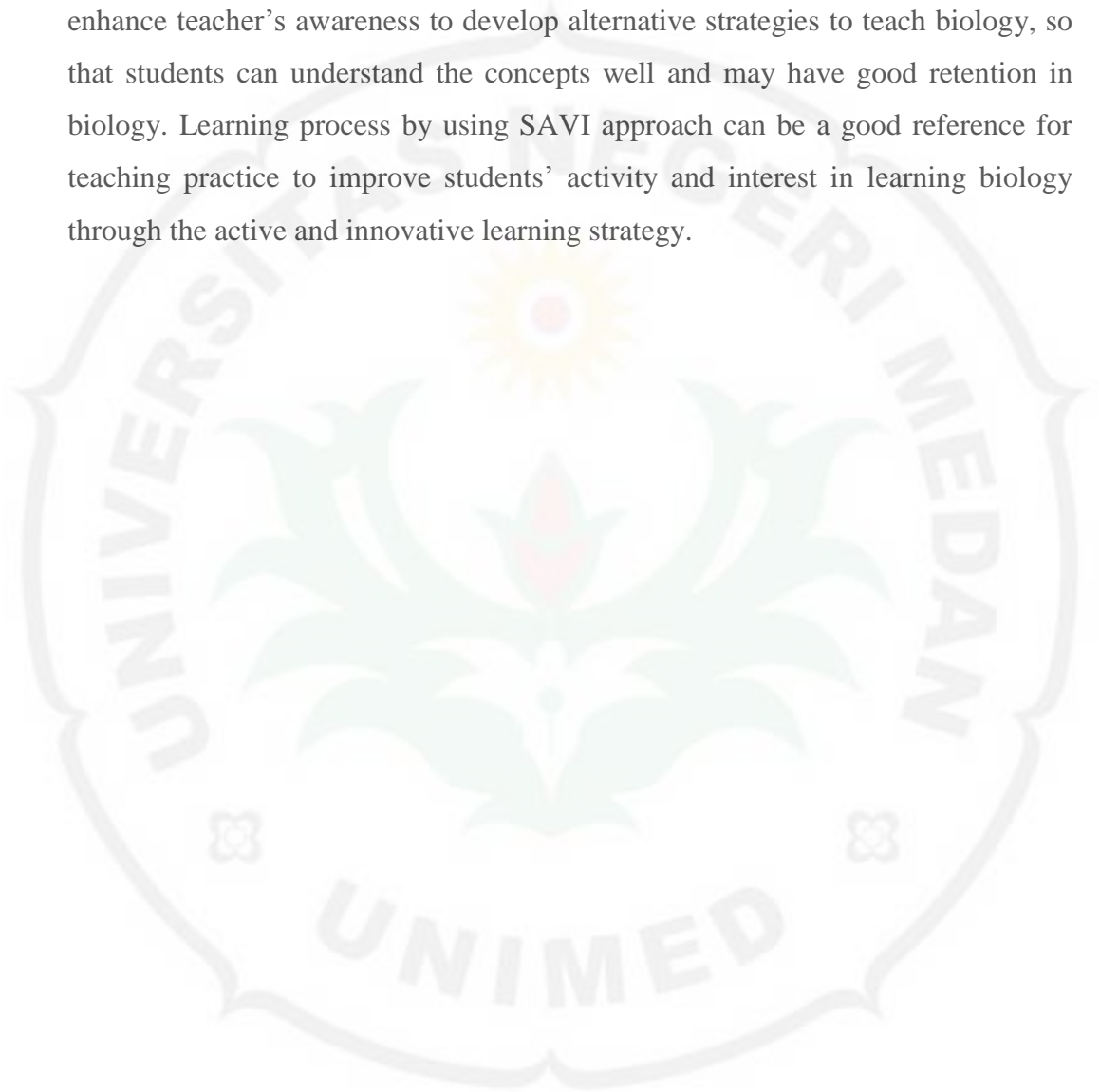
1. To know the effect of SAVI approach on students' activity in human regulatory system topic for grade XI IPA SMAN 1 Tebing Tinggi academic year 2012/2013.
2. To know the effect of SAVI approach on students' learning outcome in human regulatory system topic for grade XI IPA SMAN 1 Tebing Tinggi academic year 2012/2013.
3. To know the effect of SAVI approach on students' retention in human regulatory system topic for grade XI IPA SMAN 1 Tebing Tinggi academic year 2012/2013.

1.6 Significances of Research

Theoretical significance of the research results could be used as study material and references on similar research on SAVI approach and learning outcome of biology.

The research practical significance could be helping the teachers about the appropriate learning strategy for the effective learning process. Teachers can use SAVI approach to improve students' learning outcome in biology and also

enhance teacher's awareness to develop alternative strategies to teach biology, so that students can understand the concepts well and may have good retention in biology. Learning process by using SAVI approach can be a good reference for teaching practice to improve students' activity and interest in learning biology through the active and innovative learning strategy.



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