CHAPTER I
INTRODUCTION

1.1. Background of Problem

Learning is acquiring or getting knowledge, skill, or attitude. Learning is also relatively permanent change in a behavioural tendency and it is the result of reinforced practice by study and experience (Brown, 2000). Therefore, the learning process can be happened every time and everywhere.

To achieve a succesful learning process teachers are required to be able to choose and use correctly instructional media in accordance with the teaching materials. The selection of instructional media should stimulate the senses of sight, hearing or smell, or suitability with the hierarchy level of learning. Approximately 90% information obtained through eyes (sight) and only about 5% is obtained through ears (hearing), while 5% again with other senses (Arsyad, 2007). Succes or failure depends on the learning process of how teacher organize learning system that refers to the techniques, methods, and media appropriate to the subject material presented to students.

Based on the observation in SMP Negeri 3 Medan, researcher find the serious fact on student's learning outcome inecosystem. Based on data from biology teacher in academic year 2012/2013, result could be seen from the daily test of students VII-B which had Number of students that didn't reach minimum criteria of completeness for daily test of ecosystem is about 54%, in addition to Semester-test which had average score 62 on a scale of 100. It indicates that the learning outcomes are still below of minimum completion (KKM) which is 70. Teachers serve as the only one source of information so that learning activities take place in one direction only. Based on the interview with the Biology teacher stated that this topic is very wide, so the students cannot understand all of the materials thoroughly especially in interactions in ecosystem lesson. (R.Sinaga,personal communication).

Out of several is the lack of instructional media used by biology teacher. The teachers rarely tomakean interactive media, and because of that the students

feel bored and the learning process is monoton and less attractive.Students do not understood the concept due to ineffective teaching in the classroom. In fact, if viewed from the definition of the learning process is in essence a process of communication, namely the process of delivering a message from the message source to the receiver of the message through the media. Teachers also never utilize multimedia room as a place for learning activity.

This problem is not only a regional problem, but also a global problem. Pfundt & Duit (2002) in Germany shown that students display difficulty in understanding essential ecological concept such as food chain and food web because they contain complex and interrelated concept even concerning the basic scientific content related to biological environment. The availability of Computer-based learning media in the market especially in interactions in ecosystem also limited. Media that already existing are often less relevant and less communicative so that students still had not fully to understand the subject matter. For there is need for design of interactive media that makes students participated in learning biology. Most of the instructional media in the market only in the form of games/exercise and not pay attention to compliance with the competency standards used. Some learning media in the market didn't include indicator as a benchmark of students learning outcome. Learning media were developed by teacher may optimize mastery of the material by the student. Moreover, it can also enhance the creativity and innovation capabilities to produce professional teachers of teachers.

Based on a need analysis, it needs alternative media that can attract students in studying biology especially in interaction in ecosystem topic. In order to provide optimal contribution of media to the students learning outcome, the media and technology should be integrated into students' learning outcome. One of the alternative media that will be developed is CAI-based learning media.CAI-based learning media of Biology subject on ecosystem are built to provide facilities in the delivery of course material by providing a medium of learning more interesting, attractive and easy to understand (Windi, 2011).Teachers would play a significant role in the teaching and learning process.

Teacher's ability, expertise,experience, attitude and delivery pedagogy will definitely help in designing the useful content for their respective courses. Learning media is considered to be an important area and will continue as important learning platform in near future especially in skill based learning programs (Nazir, 2012). Moreover, Chaudari (2013) says that Computer assisted Instruction (CAI) is a supplementary instructional strategy in effective teaching,This may help teachers in organizing meaningful teaching learning experiences and adopt innovative methods and approaches in teaching.In the context of education, one could suggest that Macromedia Flash is an open canvas where teachers create the contentthat contain animations, graphics, text and sound. This means producing interactive, engaging and pedagogical resources for students. Therefore, the media development using Macromedia Flash animation will be made with the narrative. It aims to achieve the expected learning objectives. The Development of CAI-based learning media using macromedia flash software with expecting can be improving student learning outcome, in accordance with the context around the lives of student. In SMP Negeri 3 Medan, Learning by CAI-based learning media using macromedia flash software was never implemented yet. CAI-based learning media expected to help students to understand interaction in ecosystem topic and improving students' learning outcome.

From the background above, so the research about "The development of Computer-based learning media and its effect on learning outcome in interaction in ecosystem topic for grade VII SMP Negeri 3 Medan Acedemic Year 2013/2014".

1.2. Problem Identification

Based on the backgorund above, then the problem identifications of this proposal as follows :

1. Number of students that didn't reach minimum criteria of completeness for daily test of ecosystem topic is about 54%.

2. The using of Macromedia flash as Computer-based learning media had never been implemented yet.
3. There is no variation of learning strategy so that students become bored and less excited.
4. Teachers always have difficulties to prepare interactive media in teaching and learning process.

1.3. Problem Scope

1. The developing and implementation CAI-based learning media using macromedia flash on interactions in ecosystem topic grade VII SMP Negeri 3 Medan Academic year 2013/2014.
2. Effect of student's learning outcome between students that taught with CAI-based learning media using macromedia flash and without CAI-based learning media on interactions in ecosystem topic grade VII SMP Negeri 3 Medan Academic year 2013/2014.

1.4. Research Questions

In Accordance with the issues that have been stated, than the problem can be formulated:

1. How the quality of CAI-based learning media using macromedia flash in Interactions in ecosystem topic for grade VII SMP Negeri 3 Medan academic year 2013/2014?
2. Is there any effect of CAI-based learning media using macromedia flash on student's learning outcome in interactions in ecosystem topic for grade VII SMP Negeri 3 Medan academic year 2013/2014?

1.5. Research Objectives

1. To Develop and know the quality of CAI-based learning media using macromedia flash as the new additional learning source in interactions in

ecosystem topic for grade VII SMP Negeri 3 Medan academic year 2013/2014

2. To know the effect of CAI-based learning media on student's learning outcome in interaction in ecosystem topic for grade VII SMP Negeri 3 Medan academic year 2013/2014

1.6. Significance of Research

1. For teachers, they can enhance the innovative learning instructional by using interactive media on teaching and learning process in classroom.
2. For Students, they can understand the subject especially in interactions in ecosystem topic and may have a good learning outcome in biology.
3. For researcher, especially myself as the teacher candidate can apply the using of interactive media in the teaching and learning process if I had become a teacher.
4. As an Idea donation for the next researcher and it can be useful in developing science.