

## CHAPTER I

### INTRODUCTION

#### 1.1. Background

The use of technology can encourage learning with variety devices that can be selected lecturer for use in teaching. Worksheets is the alternative sources for students because the worksheets aid learner to add information about the concept. Student worksheet is one of teaching materials that can be adapted for students (Hidayat, 2014) that the worksheet is one form of teaching materials that can be developed and used to facilitate student learning. Teaching materials are very important to build their own knowledge for thinking and encourage students to participate in classroom activities.

Worksheets are rated high among the students to help their understanding of the key aspects of learning materials. The idea to use worksheet, as we know worksheets can make students be encouraged in the process of learning activities, help students develop concepts, trains students to discover and develop process skills, as guidelines for of lecturers and students in the process of learning activities, helping students in gaining information on the concepts learned through a systematic process of learning activities (Trianto, 2009). The Development Worksheet provides an alternative to innovative, constructive, student-centered learning strategies, focusing on achievement competence expected. Component components in the student worksheet are expected to create learning that takes place interactively, inspiratively, fun, challenging, motivating students to participate actively, and provide enough space for initiative, creativity, and independence according to student's talents and interests.

Along with the development of rapid technological sciences, has appeared learning models that utilize information and communication technology in learning called E-learning. According to Thompson and Yaniawati (2000), "E-learning is instructional content or learning experiences delivered or enabled by electronic technology". There are many types of E-learning that can help of students learn the material and try to learn to be independent, that is Edmodo.

According to Basori (2013), Edmodo is an interesting application for lecturers and students with social elements that resemble Facebook, family affair or delegate experienced by their students can still connect to learning, lecturer can monitor students and students can discussion with another students. Edmodo can be used as learning media for all subjects and activities such as subjects Morphogenesis topic. Use the web as a medium to deliver student worksheets because the web has a vast network and will provide more opportunity for students to choose the time, place and receive more information about the material being studied.

Medan state University as an educational institution has been providing services Free *Hot Spot* and *Sipoel* usable lecturers and students. Digitization of delivering all forms of information, getting cheaper and easier indirectly affect the way students learn in exploring all sorts of information related to material that will be studied. However, problems that often arise on students is the lack of interest in using existing learning applications on their gadget. It is proven from the results of a questionnaire distributed to students Biology Department from 2016 to 2013 randomly. 75% of students consider that laptops and gadgets only items commonly used for social media or just complete the task if required and the lack of learning achievement of student to do the learning unaccompanied by lecturers, students still relied on the presence of lecturer than work themselves using the application on a laptop or gadget. It makes most students can only receive and absorb everything said by lecturer, so the degree of students learning achievement are less reliable (Horton, 2006) for example students Biology Education 2015, the class average own a smartphone or a laptop but most of them using to social media or a laptop that is only used when there is a task only, whereas with gadgets and student-owned laptops will greatly assist the process of self-study and based on the results of questionnaires that they have higher performance compared to other classes and students in the class are already to operating Edmodo.

Subject matter used in this research is morphogenesis topic, which morphogenesis topic is one matter needs higher order thinking that contains many pictures and scheme that describe the steps of development organ structure.

The introduction of organ can be made in worksheet as a picture and using application to make students more understand and clearer for the structure. Not only the structure but also many important concept that needs good analysis to understand it. The way to bring the students get that concept can be done by giving written instruction and critical questions where the answer will bring the student understand the important concept such as concept of development organs of animal. Because of the reasons, researcher chooses morphogenesis topic as the subject matter that will be taught by using worksheet.

Based on the background, the problems described above researcher is interested to research with the title: The implementation of worksheet through Edmodo as E-Learning to students learning achievement on Morphogenesis topic in Biology Education B 2015 Academic Year 2016/2017. This research should be done because it feared the coming year will be outdated student in learning and in danger of failing in education and it can not apply the learning in the form of IT.

## **1.2 Problem Identification**

Based on background above, problem identification of this study are as follow:

1. The less of students worksheet that compatible with students needs.
2. The less of learning media worksheet by using Edmodo as E-learning process
3. Learning focuses on the presence or face to face at lecturer in class
4. Utilization media laptops, smartphone and gadget less be applied in students.

## **1.3 The Scope of Research**

By regarding the extent identified problem so in this research, the scope of study limited in:

1. Learning process is applying of worksheet through Edmodo
2. Subject matter is Morphogenesis topic.
3. Enhancement of students learning achievement in cognitive domain

4. Know the level students learning achievement in affective domain.
5. Know the level students learning achievement in psychomotor domain.
6. The learning process at the Medan State University (Unimed) in Department Biology

#### **1.4 Research Problem**

The research problem in this research can be formulated as:

1. How is the students learning achievement in cognitive aspect by using worksheet through Edmodo
2. How is the level students learning achievement in affective aspect by using worksheet through Edmodo
3. How is the level students learning achievement in psychomotor aspect by using worksheet through Edmodo

#### **1.5 Research Objective**

The objectives of this study are:

1. To enhance the students learning achievement in cognitive aspect by using worksheet through Edmodo
2. To know the level students learning achievement in affective aspect by using worksheet through Edmodo
3. To know the level students learning achievement in psychomotor aspect by using worksheet through Edmodo

#### **1.6 Benefit of Research**

By implementing this study, the benefit/advantages of this research as bellow:

1. This research can become a new alternative as learning media for student.
2. This research can know the utilization media laptops, smartphone and gadget be applied in students to learning

3. This research can increase students learning achievement in cognitive aspect by using worksheet through Edmodo
4. This research can know the level students learning achievement in affective aspect by using worksheet through Edmodo
5. This research can know the level students learning achievement in psychomotor aspect by using worksheet through Edmodo

### **1.7 Operational Definition**

The operational definitions used in this study are as follow:

1. Worksheet is sheets that discuss about morphogenesis topic
2. Students learning achievement is concentrated in student cognitive domain
3. Students learning achievement is also focus on affective domain and psychomotor domain.
4. Edmodo as E-learning media to downloading and upload the worksheet and learning material.
5. E-learning by using smartphones, laptop or gadgets.