

CHAPTER I

INTRODUCTION

1.1 Background

The development of education right now is the first priority to increase the quality of education. Improvement of the human resources and non-human resources are some efforts to achieve the goal. One of them is the improvement of the learning process. A system in the learning process can be ascertained that the source of successful learning in school associated with a number of components that are involved in it. The components are curriculum, strategies, teachers, media, methods, students and surrounding of learning and education process (Farisi, 2007).

Something prepared well will give a good activity, as well as a class. The class where students can absorb the knowledge and motivated to learn in the class. Learning environment should be provide opportunities for students to involve the students actively in various activities, such as observe, asking / give a question, explain, comment, propose a hypothesis, collect data, and the others activities. So the students are able to learn actively and hectic in task that made them motivated, just not sit down quietly and listen. Open attitude towards learning to encourage flexibility in thinking and prepares the students to the real world (Armstrong, 2004; Santrock, 2007)

Learning must be prepared before being implemented in the classroom. All are be setting in the world of formal education. In order to achieve good learning, learning must be done with a variety of strategies. But sometimes a strategy designed in such a way does not apply when the students begin to do activities outside the learning process. Often a few minutes after the study began, the students began to noisy or talking with his friends. When the learning and teaching taking place, some students began to put his/her head on the table, yawning, or there may be asleep in the class so that the learning pass. This incident happened several times by investigators when the Integrated Field Experience Program (PPLT).

From some exposure above, there appears many problems in biology learning and teaching that occurs during the learning process, such as: (1) The students done the other activities that are not suitable when the learning process takes place; (2) The others activities were done by the student caused the students feel bored; (3) The class be passive because the students are not involved in the process of teaching and learning activities that seem unplanned; (4) And the lack of innovation in the learning media that can stimulate students activeness in the process of teaching and learning activities.

The problems upfront indicated that learning biology still categorized not fun to makes the students active in the process of teaching and learning activities. If this problems unchecked that could have an impact on students understanding of the subject matter, and will be actualized as a result of lower daily tests and in the national exam (Gustafson and Branch, 1997).

Learning media is anything that can be used to deliver a message from the sender to the receiver, so that it can stimulate the mind, feelings, concerns, interests of students, and become active learning, creative, effective and fun so that learning occurs (Sadiman, 1986). The learning process is an example of the communication process. Therefore, instructional media has an important role in clearly the presentation of messages and information in the continuity of learning. The use of instructional media in teaching and learning can be generate new passions and interests, raise motivation and stimulation of learning activities, and even bring psychological effects on students (Hamalik, 1986).Based on these descriptions, if the learning media is important present in the learning activities because of much roles.

Interactive learning model approach is often known by the name of your child's questions. This model is designed so that students will be asked and then find the answers to their own questions (Faire & Cosgrove in Dewa, 2014). So from the opinion above interactive in this research want the student know the answer of their question by the media learning where is the media can use by the students, her/his friend and the teacher and make interaction between the third subject that used media.

Therefore, the researcher want to develop interactive learning media in the form of a puzzle that makes the students active in the process of teaching and learning activities with the instructional design of Hannafin and Peck. Researcher chose to use media puzzle in learning process because puzzle media is one of educative games that useful for: (1) improve cognitive skills, (2) improve fine motor skills, (3) train the ability to reason, (4) exercise patience, (5) improve the social skills (Widyanarti, 2011).

According to Carin and Sund (in Ash'ari, 2006), learning science is a science of learning that requires observation and experimentation in understanding the universe. Biology is a branch of science, therefore biology definitely need a media learning media as intermediary in the process of observation and experimentation. Biology consists of facts, concepts and procedure. The concepts and fact divided into tangible and intangible that the tangible facts and concepts can be seen directly but intangible facts and concepts can not be seen directly. And in this case I as a researcher chooses a topic of cell division as intangible concept that needed a learning media to help explain this topic and to be used as teaching materials to developed the interactive puzzle media because the topic of cell division is a material that is difficult so require a learning media to explain this subject matter well to the students to make easy to know and easy to be understood.

The researcher choose the Instructional Design Hannafin and Peck Model because this model will be produce a product as learning media that suitable with the aim and purpose of researcher. Referring to the development of instructional media that will be developed in the learning process as described in the exposure in advance, the researcher do the research with the title "The Development of Hannafin and Peck Instructional Design by Interactive Puzzle in Cell Division Topic for SMA Students".

1.2 Problem Identification

Based on the background of the problems that have been raised in advance, it can be identified the problem as follows:

1. The learning media used are still not able to stimulate the students interest in of biology lessons.
2. The learning media used in schools are not be able to encourage the active participation of students during the learning process.
3. The learning media with the playing concept that could stimulate the activity of students in the subject matter of cell division not yet developed by the teacher, so in generally only an image that the printed in the books of biology.

1.3 Problem Scooping

Based on the problems that have been identified previously, given the limited number of researcher it is necessary to do the restriction problems. This is done to research more be focused and not deviate from the purpose of research. So the researcher focused on the following aspects:

1. The development of interactive puzzle learning media biology for students in the Senior High School.
2. The subject matter contained on the media is limited to cell division subject matter include the mitotic and meiotic division.
3. The development of product using the model of Instructional Design Hannafin and Peck conducted until 3 Stages to the Development and Limited Test but only until the Development stage producing instructional media.
4. Evaluation of the quality in learning media interactive puzzle do by contents experts and construct experts.

1.4. Research Question

Based on the identification and limitation of the problems outlined above, the authors formulate the problem as follows:

1. Is the implementation process of the development of learning tools on the Interactive Media Puzzle in subject matter cell division for SMA students using instructional design Hannafin and Peck model?
2. Does the learning device in the form of interactive puzzle learning media of cell division material developed for SMA students to qualify according the experts.

1.5. Research Aim

The purpose of this research are as follows:

1. To develop an Interactive Puzzle Learning Media on the subject matter of cell division for Senior High School based on The Hannafin and Peck model.
2. To know the quality of Interactive Puzzle Learning Media on the subject matter of cell division.

1.6. Research Benefit

The results of this study are expected to be meaningful to all parties who utilize information on the results of this research as follows:

1. For the teacher, the results of this research can be used as examples of improvements that could be tested biology learning in the classroom, in particular to foster the development of instructional design to enable students to be actively involved in learning process.
2. For students, the experience during the research activities of this action is expected to motivate themselves to always play an active role in learning, which in turn will improve learning outcomes of biology.
3. For schools, the improvement of learning will encourage schools to continue to make continuous improvement to improve the quality of education services in school.
4. For researchers, experience and information obtained during this study will be an experience for researchers to develop the capacity themselves to the ideals of professional teachers.
5. For readers, finding and recording the results of this study can be used as a reference for future research.