

CHAPTER I INTRODUCTION

1.1 Background

Generally learning process in class is depended by interactions between students, teachers and learning materials. Students as achieve obtain information from learning materials and teacher will act as facilitator. A learning process could be an effective activity if student are experiencing changes and informations from learning materials is delivered by teacher (Susilana and Riyana, 2009).

Interactions in classroom have important values in learning process because interactions can encourage good effect in learning process, and have strong connection with students learning results. Classrooms interactions activity like discussion and asking-answering can increase students understanding to topics and encourage them to verbalize their idea (Muijs and Reynolds, 2008).

In learning process, interactions between students, teacher and learning materials can't be done without good communications between them. Ngalim (in Hasruddin, 2009) said that communication is one of the most important factor in learning process. Communication in learning process is a procees message delivery from learning sources and materials through certain medium.

To create a good communication in classroom, teacher can use certain learning media. Learning media has role as medium among learning materials, teacher and students. Learning media can simplify complicated and abstract topics from learning materials. Besides being an helping tools, media also could be learning sources for students. Learning media as learning sources can add students' perception (Djamarah and Zain, 2006).

One of learning media that can be used as learning source and tools to help students in learning activity is students worksheet. Students worksheet is students guidance that instruct students with several activities to develop their cognitive aspect and has purpose to maximaze students understanding as indicator that students has fulfilled the learning results (Trianto, 2009).

Based on interview with teacher, in biology learning activity, there are several problems in class such as, understanding problems in abstract concept and hard to express their opinion about topics. For examples, XI Science 7 students have problems in topics analyze and XI Science 8 students have problems in expressing their opinions during discussion activities.

In interview, teacher said that in class they are using a students worksheet. Students worksheet that is used by students has same characteristics with students worksheet generally. Based on teacher, they are using students worksheet infrequently, only when teacher is unable to attend class or for additional students.

After interviewing a biology teacher, researcher did a pre test about human reproduction systems to both classes. The result of this pretest is both classes have low grades in the test, their grades aren't even qualify to pass the minimum grades.

To solve this problem, researcher came up with the idea of using the students worksheet as learning media. Students worksheet can be developed based on teacher and students need. In this case, a students worksheet can be applied with image and problem solving approach. Images in students worksheet can be used to explain the concepts, structure and help students to identify problems. Based on Bell (2014), images in science learning has important role. They have strong means of communicating scientific concepts. A good images can underscore a scientific concepts and results better than any words.

Besides using images, we can apply problem solving approach to students worksheet. Encourage students to solve problems in learning process can increase students analysis and critical thinking ability (Atikasari, Isnani and Prasetyo, 2012). Problem based learning can increase students creativity and makes them more active in class. In problem based learning, students is expected to analyze a problem, then use concepts and laws from what they learned before to solve the problems. This learning model is known to be important to students because it can help to develop students activity and creativity.

From the description above, researcher is interested in conducting research on “The Effect of Image-Problem Based Students Worksheet on Students Learning Outcomes at Reproductive System Class XI in SMAN 4 Medan Academic Year 2017/2018”.

1.2. Problem Identification

1. Students are difficult to understand abstract concepts in biology topics.
2. Students are hard to express their opinion during class discussion.
3. Students are hard to analyze topics in class.
4. Students are having a low grades on Humans reproductive systems pre test.

1.3. Problem Limitations

This research needs boundaries. So the research will get its precise target of expectation. The limitations of research are

1. The application of Image-Problem based students worksheet as learning media in Reproductive System topic for class XI Science SMAN 4 Medan Academic Year 2017/2018.
2. The students learning outcomes in this research is bounded in students learning outcomes at Reproductive System for class XI Science SMAN 4 Medan Academic Year 2017/2018.
3. The reproduction system that will be taught to students are limited into Human Reproductive Systems.

1.4. Problem Formulation

Based on backgrounds above, researcher formulates the problem of study as follows : Is there any effect of image-problem based students worksheet on students learning outcomes in class XI Science SMAN 4 Medan Academic Year 2017/2018 ?

1.5. Objective Research

The objective of this research is to find the effect of image-problem based students worksheet on students learning outcomes in class XI Science Academic Year 2017/2018.

1.6. Benefits of Research

1. For teachers candidate, this research can be a consideration in dealing with problems which occur during learning process in school.
2. For biology teachers, this research can be a consideration in choosing and making learning media.
3. For students, this research can be a solution to help them to understand topics in biology learning process.

1.7. Operational Definition

Here are some terms that need to be defined operationally to avoid misunderstanding some terms in this research and make this research to be more focused.

1. Learning media is one of education technology which has function to bring and deliver information to students (Susilana and Riyana, 2009).
2. Students worksheet is guidance for students which can be used to guide students to initiate inquiry and problem solving activity (Trianto, 2009).
3. Problem Solve based Learning is one of learning model and approach which is focused in students ability to solve problem in environment. There are 5 syntax that teacher and students must do in this model such as, students orientation to problems, students organization to learn problems, guidance for students, students result development, presentation and evaluations (Gulo, 2011).
4. Learning outcome is result of learning process which ended with the evaluation. Learning outcomes which are measured only in cognitive aspect according to Bloom's taxonomy are at level C1 (remember), C2

(understand), C3 (apply), C4 (analysis), C5 (synthesize), and C6 (evaluation) (Asmin and Mansyur, 2012).



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