

CHAPTER I INTRODUCTION

1.1. Background

The development of an increasingly advanced era requires the availability of qualified and competent human resources. This can be overcome through the educational process, because with the education of humans can develop their own potential and the environment in facing challenges in the future. One form of efforts from the government through the Ministry of Education and Culture to realize the function of national education by developing and updating the curriculum. The Government implements the 2013 Curriculum simultaneously and evenly in schools from basic education to tertiary education. The 2013 curriculum requires students to be active and student-centered learning. The learning process in the 2013 curriculum using the Scientific Approach (Suryawati, 2015).

The learning process with the scientific method has student-centered characteristics (student center), involves science process skills. One strategy that prioritizes learning process according to the invention of the scientific method in learning activities to acquire knowledge is inquiry. Teachers in inquiry learning can be more used to students to prove something about the subject matter that has been learned. Inquiry-based learning model is dominated by students (student center) in finding their own knowledge through a series of learning activities, it is necessary for instructional materials in accordance with the curriculum of 2013 (Herawan, 2007).

In supporting the process of learning biology in schools, learning can be equipped with teaching materials that can help students achieve their learning goals. One of the teaching materials that are well known and widely used in learning activities in schools is the student worksheets. The student worksheets is a guide used by students in observation, experimentation, and demonstration

activities to facilitate investigation (Trianto, 2011). According to research conducted by Arafat, et al (2012) that student worksheets can help and improve student performance in teaching and learning activities. Student worksheets can be used as a means to understand the concepts learned in learning.

Currently teachers in schools have used student worksheets a lot in the learning process, but widely circulated student worksheets partially contains a summary of the subject matter or a review of the subject matter for each topic students will study, as well as contains practice exercises consisting of questions, both compiled solely by the teacher and student worksheets designed by the publisher. The results of the study conducted by Hilda (2015) also stated that the student worksheets in circulation generally contained practice exercises or summaries of teaching materials for each topic.

Researcher have conducted interviews with biology teachers at SMAN 7 Tanjungbalai. Based on the interview, it can be seen that the school has implemented the 2013 curriculum. The biology teacher has used student worksheets when learning both using student worksheets from the publisher or developed by the teacher himself. However, the existing student worksheets is not fully in accordance with the 2013 curriculum and not all subject matter studied in tenth grade has student worksheets. When learning takes place, students also have not been able to find their own concepts of science in solving problems. The making of student worksheets by this teacher also does not meet the criteria for making good student worksheets.

Based on the above interview, researchers will make student worksheets on based on guided inquiry on bacterial subject. Inquiry is one of the learning strategies that prioritizes the discovery process in accordance with scientific methods in learning activities to gain knowledge. That is because in learning with scientific methods must be based on evidence of the discovery of objects that can be observed with more specific reasoning principles. Teachers in inquiry learning can be more used to students to prove something about the subject matter that has been learned.

Availability of student worksheets for tenth grade at SMAN 7 Tanjungbalai based on inquiry is still small, it is expected that the existence of Guided Inquiry-based student worksheets will be one alternative learning suitable to be applied to train students to work scientifically. Guided Inquiry based student worksheets also trains students to work scientifically and can develop critical thinking skills as well as independently to solve the problems presented. Ali's (2014) research on inquiry-based student worksheets states that student learning outcomes as measured through written tests in the form of problem descriptions include 3 worksheets of students tested. Mastery learning outcomes of students amounted to 86.67% or in the very feasible category. In addition, the percentage of student responses that gave a positive response of 89.47% in the very feasible category.

Based on the above background, the researcher created an student worksheets that can assist students in the learning process and can develop scientific work skills with the title *“Production of Student Worksheets Based on Guided Inquiry on Bacterial Subject Matter for Tenth Grade at SMAN 7 Tanjungbalai”*.

1.2. Problem Identification

Based on the background of the above problems, several problems can be identified as follows

1. Availability of student worksheets for tenth grade at SMAN 7 Tanjungbalai based on inquiry is still small.
2. The available student worksheets has not yet to the invention process in accordance with the scientific method.
3. The available student worksheets generally still contain material and a collection of practice questions.
4. Not all biology subject matter has student worksheets, specifically for bacterial subject matter.

1.3. Problem Scope

Based on the above problem formulation, researchers can limit the problem under study so as not to deviate and in accordance with the objectives of the study.

The following are the limitations of the problem in this study:

1. The material contained in student worksheets is the subject matter of bacteria designed based on guided inquiry.
2. Designed of student worksheets is validated by material experts, learning experts, teachers and student responses.
3. The production of student worksheets products is developed using research and development (R&D).

1.4. Problem Formulation

Based on the identification of the problems outlined above, the research problem formulation is:

1. What is the validity level of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai according to the material expert?
2. What is the validity level of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai according to education expert?
3. What is the validity level of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai according to design expert?
4. What is the teacher response of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai?
5. What is the response of students after using student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai?
6. How are the student learning outcomes after using student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai?

1.5. Research Purposes

The purpose of this study are:

1. To determine the validity level of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai according to the material expert.
2. To determine the validity level of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai according to education expert.
3. To determine the validity level of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai according to design expert.
4. To determine the teacher responses of student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai.
5. To determine the student responses after using student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai.
6. To fine out student learning outcomes after using student worksheets based on guided inquiry on bacterial subject matter for tenth grade at SMAN 7 Tanjungbalai.

1.6. Research Benefits

With the implementation of the above research objectives, it is expected that the benefits obtained after the study are as follows:

1. For students
Helping students actively engage in classroom learning processes based on guided inquiry.
2. For teachers and prospective teachers
student worksheets resulting from this research development can be used as operational guidelines for teachers in teaching bacterial subject matter.
3. For schools

The results of this study can improve the quality of learning in schools and

can be used as an example to encourage the provision of teaching materials in the form of student worksheets.

4. For researchers

As input in an effort to develop student worksheets based on guided inquiry and as a reference for further research.

1.7. Operational Defenition

Some terms used in this research are defined operationally as follows:

1. Production is a process or steps to produce a product. The production of this student worksheets using research and development (R&D).
2. student worksheets is printed teaching material in the form of sheets compiled systematically containing competency standards, basic competencies, indicators, learning objectives, materials, and instructions for learning that aim to guide students to carry out active activities.
3. Guided inquiry learning is a process of learning approach that involves students in finding concepts or learning material that is being studied.
4. The bacterial is one of the biological material that studies about groups of organisms that do not have a cell nucleus membrane.