

CHAPTER I

INTRODUCTION

1.1 Background

The learning process in Indonesia has not been fully resolved properly. Year after year, Indonesian government continues to make improvements in education, one of which is to make improvements in terms of curriculum and standardized processes. Since the implementation of the curriculum 2013, schools in Indonesia are required to apply the learning process is guided by the principles of scientific approach circles until the academic year 2019/2020 (Permendikbud No. 65 in 2013, about Standard Process Primary and Secondary Education). The learning process at K13 in high school to use a scientific approach. The scientific approach is a learning approach that was first introduced in America in the late 19th century (Hodson, 2016). Scientific approach includes five learning experience namely Observing, Questioning, Experimenting, Associating and Communicating. Learning with scientific approach is more effective than traditional learning (Atsnan & Gazali, 2013). The scientific approach can integrated into several learning models.

The Implementation of scientific approaches still many obstacles encountered, especially at the high school teacher. This was evident when PPL, researchers see there are many teachers who do the teaching and learning process by using traditional approach as just lecture method (not according to K13). When making observations with teachers and students at SMAN 5 Medan, teacher has not been made the learning process by curriculum 2013 and still used the lecture method. And consequently students feel bored and learning outcomes is low (as evidenced by KKM, on the topic of environmental change no more than half of the students who meet the KKM). The phenomenon occurs because there are many teachers who have not been able to change the mindset of learning from KTSP curriculum into curriculum 13 and learning materials with a scientific approach is not yet available to support learning.

Based on the research conducted by Utari (2017), in his research has been getting the results that the implementation of the scientific approach is still not performing well. It's caused by several factors, one of these factors is teacher

doesn't have teaching materials based scientific approach. According to Prastowo (2012) teaching materials are all materials (information, tools and text) are arranged systematically, show full of competencies to be mastered and used learners in the learning process with the aim of planning and review of implementation of learning. Teaching materials is a learning component that most influence on what actually happened in the learning process (Kemendiknas). It is very important for the educators have the competence to develop good teaching materials in accordance with the requirements and the necessary requirements, so that the learning material conveyed properly.

Based on the above, need to develop of teaching materials based scientific approach. Development of teaching materials that will be done is modular, because module has not been based on scientific approach. The module is teaching materials that designed systematically based on specific curriculum and packed in the smallest learning unit and allow studied independently in a certain time so that students are able to master competencies. Modules can support the role of the teacher in the learning process because the role of teachers in learning using the module can be minimized, so learning become student-centered, teacher only acts as a facilitator in the learning process and no longer dominating learning, this is in accordance with the curriculum 2013 (Khotim, 2015).

Good module is a module that has been declared valid, practical, and effective. Arikunto (1988) states that validation is a set of activities that aim to attempt something in order to be valid and trustworthy. Emzir (2010) said validation is the process of product design assessment is done by giving a rating based on rational thinking. Validation indicators cover four aspects, namely content, language aspects, aspects of the presentation, and kegrafikan aspects (BSNP).

Modules are valid, practical, and effective can be created by using methods or strategic learning that can grow students' imagination. Some models of learning which is seen in line with the principles of scientific approach, as follows (1) Problem Based Learning, (2) Project Based Learning, (3) Inquiry, (4) Group Investigation (Sulastri, 2014).

Based on the above, in this research the development of module that will be done based on Scientific Approach Group Investigation on the Topic of Environmental Changes Grade X Senior High School.

1.2 Problem Identification

Based on the backround above, problem identification in this research are follow:

1. Learning is still centered on the teacher.
2. The teaching materials that used by teachers is not based on scientific approach especially Group Investigation.
3. There has been no environmental change module based on the scientific approach group investigation.

1.3 The Scope of Research

To direct the research so that the problems are not too widely so do restrictions on the problem as follows:

1. The teaching materials developed is Modules.
2. The module is developed based on scientific approach Group Investigation.
3. The content of module is environmental changes.

1.4 Research question

Based on the background and research scope, research question can be formulated as follow:

1. Does the module of environmental changes topic based on scientific approach Group Investigation is feasible and get a good assessment from experts (scientific approach and design)?
2. Does the module of environmental changes topic based on scientific approach Group Investigation is feasible and get a good assessment from Biology teachers?
3. Does the module of environmental changes topic based on scientific approach Group Investigation is feasible and get a good assessment from students?

1.5 Research objective

1. To know the feasibility of the module of environmental changes topic based on scientific approach Group Investigation by experts.
2. To know the feasibility of the module of environmental changes topic based on scientific approach Group Investigation by Biology teachers.
3. To know the feasibility of the module of environmental changes topic based on scientific approach Group Investigation by students.

3.6 Significances of research

1. For teachers, the development of teaching materials of this research can be used as a source of learning to apply the scientific approach.
2. For the student, this research will be make students more active in learning process and increase their ability to find out the material learning by themselves.
3. For the researcher, as an input and motivation to carry out the profession as a teacher in the future.