

## CHAPTER I INTRODUCTION

### 1.1 Background

The coursebook is one of the important variables that support the learning process, curriculum, and learning instructions, especially in developing countries to increase the scientific skills of students. Ariningrum (2013) A coursebook usually used for teaching in a field of study, designed for the class using, generally known as a textbook, pocket dictionary, study guides book or material book. A coursebook is arranged according to the need of students learning. The coursebook is designed to achieve specific learning aims or specific competencies (Permendikbud RI no. 2, 2008 Pascal 1 (3)).

Based on survey in SMA N 1 Berastagi was found the coursebook have been referring to the curriculum 2013. These Books has been validated from National Education Standards Agency in Bahasa known as *Badan Standar Nasional Pendidikan* (BSNP). In this school, writers met many of teachers that who have not used any method in teaching and learning, teaching and learning method that are still monotonous by listening and writing the teacher explanation. So this time the writer will make a Coursebook that will have teaching and learning using several methods such as the scientific approach in System Immune topic on XI grade. In this case, the writer chooses Immune system topic because this material the last material that will be studied in even semester, and according to the writer's experience the last material is always not maximally implemented because of the many school activities at the end of the semester and most of that materials have been studied in the previous chapter such as Circulatory system and Coordination system.

The 2013 curriculum provides a new approach in the teaching process as demand in the 21<sup>st</sup> century. It provides a scientific approach to develop the students' skill, knowledge, and attitude. Moreover, the scientific approach in 2013 curriculum focuses on the productive, creative, innovative and effective students through integrated skills, attitudes, and knowledge. This goal can be achieved by

designing effective and meaningful instruction to the students. Hence, the teacher was supposed to use a scientific approach in teaching and learning process.

In 2013 Curriculum, the teacher was the main figure in curriculum implementation. In line with it, Mulyasa (2013: 41) stated that the main factor to decide the success of curriculum implementation is the teacher's creativity. Good quality of teacher depended on how well they could teach in the classroom. The teacher should have the competence and higher responsibility to do the planned program. In this case, the teacher was demanded to create the students to be productive, creative, innovative in realizing the aim of national education decided by several keys of the figure. The figure was related to the leadership of headmaster, teacher creativity, students activity, socialization, facility, sources of learning, conducive academic area, and participation of the school committee. The teacher was supposed to comprehend the substance of 2013 Curriculum in term of scientific approach and its implementation in teaching and learning process even though there was the effort by the government to increase the quality of teacher through the certification program.

Based on the explanation above, Kemdikbud (2013) supports using the scientific approach in the 2013 Curriculum. There are three points that become the focus in teaching and learning process with *Scientific Approach*, attitudes (effective), skills (psychomotor) and knowledge (cognitive). Attitudes refer "students know why", skills refer to "students know how", and knowledge refers to "what students know". These three points are expected to make students effective, creating innovative, and productive. In other words, with these three points, students have soft skills and hard skills to live properly.

The analysis of the fulfilment of the standard content of the course book includes: 1) Contain the learning aims; 2) contain the information that logic with good language; 3) contain interesting concepts; 4) Presenting an interesting form. Those course books only contain the materials, also bunch of question for practice and have lack of instructions in the learning activities that expected to help students to build the concept being taught. So that we need to develop a scientific approach based course book in the learning activity that could be used both by

Teachers and students. A scientific approach is an approach that oriented or focused on the student (student centre approach) and conducted by five steps of learning relevant to the learning theory of *Bruner, Piaget* and *Vygotsky* those are observing, asking, information collecting, associating and communicating (Rahayu, 2016).

The learning process with a scientific approach geared to "seek out and do something", so the students can build their own concept of what is taught by seeing the surrounding environment. Surjawanta (2011) also show by using the scientific method, the scientist is trying to let the reality spread out, to discuss the supporting theory when the prediction is proved no tested. Gagne in Surjawanta (2011) also states by y the developing of scientific skills, the student would be made creatively, capable to find and develop. Therefore, the scientific approach is very important to apply in the learning process, especially in Biology learning.

Actually, the scientific approach has been introduced in Curriculum of 2006 (KTSP) and the implementation is not maximum, so the success of the implementation of the curriculum of 2013 also determined by the availability of teaching materials such as coursebook which fit by the need of the implementation of scientific steps. In fact, according to a research of evaluation that conducted by Puslitbang kebudayaan, 13,78 of teacher do not understand the substance of the coursebook not yet understand the relationship of learning and the competencies that developed (Puslitbang).

One of the competencies that teachers need to have I carried out his/her duties is to develop teaching materials, such as coursebook. Development of coursebook is important for teacher to make learning more effective, efficient, and in accordance with the competence, that is for the teachers in Senior high School level, both in demands of pedagogical and professional competence is closely related to the ability of teachers in developing learning resources (Ministry of National Education, 2008). Based on the writer's observation when in field experience Program most of the teacher is not capable with the scientific approach and never trying at the school, especially a coursebook with a scientific approach. Prastowo (2012) argued that teachers had not been able to develop creativity to

prepare and create independently and choose ready-made coursebook because it is thought that developing coursebooks is a difficult job and takes a long time in the process of making it.

Based on the background described above, it needs to develop of high school Biology coursebook that contained learning steps in accordance with the scientific approach. Coursebook development is very important not only for the teacher but for students can make independently to make the effective, efficient learning, and also in accordance with the competence to be achieved. If not, it is concerned that there are some differences of perception of biology teachers of the implementation of the scientific approach in teaching biology in High School.

As a result, the developing of Biology coursebook for the teacher is done in this research, which contains the operational steps of its steps of scientific approach in accordance to the demands of curriculum 2013. Based on Widyanarti (2011), the development of coursebook is useful to 1) improving the knowledge, 2) improving curiosity, 3) improving the critically thinking, 4) practice the patience, 5) improve the social skills.

## **1.2 Problem Identification**

According to the problems that identified above, the problems of this research are:

1. Student Biology Coursebook in high school is dominant of materials, Concepts, and knowledge that are memorizing for students and not yet presented the materials using a scientific approach.
2. Good teachers Biology Coursebook and students Biology Coursebook using scientific approach is not yet available.

## **1.3 Problem Scoping**

According to the problems that identified, the problem of this research is a development of coursebook are made by teachers as the guidelines Biology learning using the scientific approach and the quality of the coursebook would be evaluated by experts (Lecturer), teacher and student who learned about the topic. The developmental process of coursebook was limited until developing phase, due

to financial limitations and some considerations, the test of the product that would be done through the expert test (lecturer), the practitioner (teacher), and students respond.

#### **1.4 Problem Formulation**

1. Does the Biology coursebook which developed would get the good scores in accordance with the need of scientific approach according to the Experts, Practitioner, and students?
2. Does the Biology coursebook on “Immune system” developed using scientific approach make the students easier to understand the topics?

#### **1.5 Research Aim**

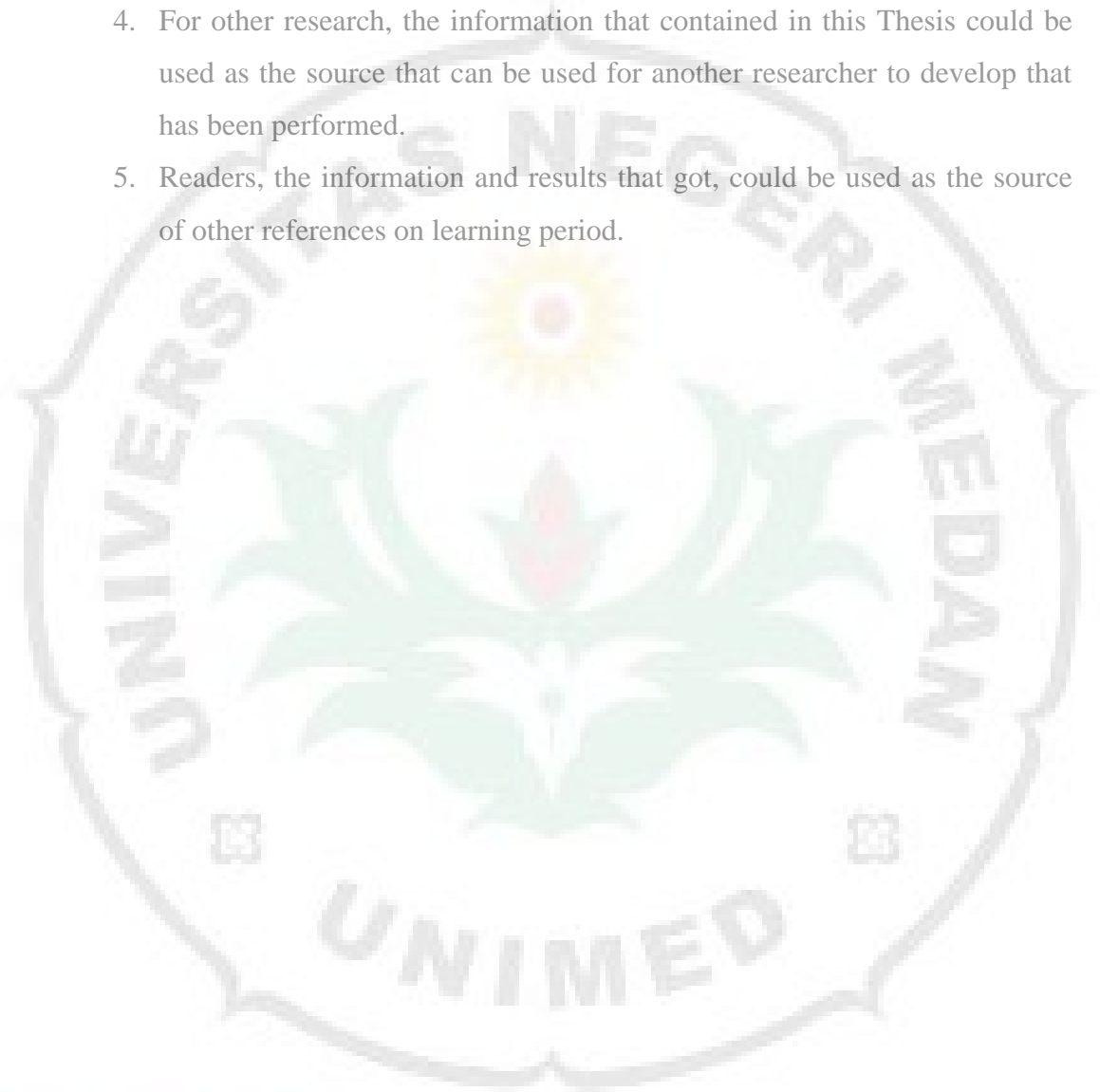
1. To produce a coursebook of “Immune System” that developed using scientific approach get the good scores according to Experts, Practitioners, and students
2. To know whether the Biology coursebook on “Immune System” developed using scientific approach will make the students easier to understand the Topics.

#### **1.6 Research Benefit**

The result of this research, is expected could assist for all people who'd like to get the information, those are :

1. For Teachers, the product of this research could be used for guidance of implementation of scientific approach on “Immune system” subject in high school.
2. For students, the coursebook which produced from this research could guide the students to be active in the learning process by following the scientific approach in the learning steps that has developed.
3. For school, the result of this research could be used as an example of the quality increasing of learning that can be performed and applied in class.

4. For other research, the information that contained in this Thesis could be used as the source that can be used for another researcher to develop that has been performed.
5. Readers, the information and results that got, could be used as the source of other references on learning period.



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