

## CHAPTER I

### INTRODUCTION

#### 1.1 Background

One of the key successes in teaching learning process is the present of teaching material. Teaching material in secondary ideally packed in meaningful content, full of active learning, and can gain student be active. Teachers have to be innovative in arrange the teaching material. The examples of teaching material are textbooks, student worksheets, and module.

Nowadays, almost all of school using conventional book as teaching material in every activities. It is not bad, but student usually feel board in gaining the material because in the conventional book containing of narrative style, uncommunicative and overcrowding description. Student always feels board when they read it. Thus, the motivation of student in reading book is still low. Based on that condition many of school in secondary grade create many innovations in gaining the student motivation in learning science.

One of the innovations that occur in the school is the using of module in science learning process (Djamarah, 2006). Based on this observation research, there is one of school that using module system in teaching the material. This observation research is conducted in one of bilingual school in Bandung. This school using module system as a guide teacher in delivering the material and also used by student as a sources in learning science. This module call “Zambak Modular System”.

Zambak Modular System is science module that containing the material consists of concept, supplementary questions, multiple choice questions and puzzle (Eksi, Aydin, and Celik, 2006). The style of this module is Compiled by flexible learning pattern, structure based on the needs of students and the final competency to be achieved. This module has communicative style and solid

instructional process. Zambak Modular System is available in software application too, to make easier in teaching learning process.

Zambak Modular System is only used in PASIAD school (*Association with Pacific Countries in Economical and Social Solidarity*) (Eksi, Aydin, and Celik, 2006).. One of the PASIAD school in Bandung is bilingual school and used by researcher to conduct this research. Bilingual school it has been trend in Indonesia to find schools with bilingual programs. The government, specifically the Department of National Education, has launched a program called “bilingual program” in which several subjects are taught in English. The objectives of this program are to produce graduates whose command of English in high and to produce graduates who have high competence in several subjects in accordance with the development of those subjects. Bilingual program has become a significant breakthrough, encouraging the use of English in non-English subjects. For Indonesian schools, English is the international language and is useful for global interaction. It seems that people are required to have a decent level of English competence in this century. It makes parents very enthusiastic to support their children in their quest to learn English early, especially at school.

One of bilingual school in Bandung was formed in collaboration between Yenbu foundation Indonesia and PASIAD Turkey. Based on interview, This school using national+ curriculum as they guidance in teaching learning process. National+ curriculum is consist of KTSP (kurikulum tingkat satuan pendidikan/ educational unit level of curriculum) and the additional sources is the supplement module that provide by turkey educational ministry. The evaluation of PASIAD school is national final exam, final exam per semester, midterm exam, weekly test, etc.

The main objective of teaching and learning process in this school is make students really understand to the concept. To gaining the understanding of students civitas academic of this school provide all the facilities and sources including zambak modular system as a main sources. All of the components of zambak modular system can stimulate students become active learners. By using

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this module students can solve problems, answer questions, formulate questions of their own, discuss, explain, debate, or brainstorm during class.

To make student centered in classroom teacher has to create many activities such as group discussion, debate, quizzes, role play, posters student producing mind maps in class, etc. Zambak Modular System can gain student to do a lot of activities. Because Zambak Modular system is containing of content that easy to understand and emphasize to the activities that have to conduct by student.

To know the content organize structured and the implementation of Zambak Modular System used in the classroom, so researcher conduct observation of research in 8<sup>th</sup> grade of one of bilingual school in Bandung in physical and chemical changes experiment and the evidence of chemical reaction concept. Both concepts chosen, because students will learn those concepts in teaching and learning process.

## 1.2 Problem Statements

Based on the background description, so the problem statement that will be investigate is, “How is the concept of physical and chemical changes and the evidence of chemical reaction organize and implemented when using zambak modular system in one of bilingual school in Bandung for 8<sup>th</sup> grades students?”

This research problem has 4 specifics research questions, there are:

1. What are the characteristics of module contained in zambak modular system?
2. How are the content material of physical and chemical changes and the evidence of chemical reaction concepts in zambak modular system?
3. How are the implementation of physical and chemical changes and the evidence of chemical reaction concepts described with content organization and learning cycle in teaching and learning process based on zambak modular system?

4. What are the factors that influencing the implementation of zambak modular system in physical and chemical changes and the evidence of chemical reaction concepts?

### **1.3 Research Objectives**

1. To describe characteristic of module contained in zambak modular system.
2. To identify the content organize of physical and chemical changes and the evidence of chemical reaction in zambak modular system.
3. To describe the learning cycle implementation of physical and chemical changes and the evidence of chemical reaction concept based on zambak modular system.
4. To analyze the factors that influences the implementation of learning of zambak modular system in physical and chemical changes and the evidence of chemical reaction concept.

### **1.4 Research Significant**

1. Give the information about zambak modular system to the school institutions in developing learning module for chemistry in secondary school.
2. Tell the how is the learning cycle implementation formatted by using zambak modular system in physical and chemical changes and the evidence of chemical reaction concepts.
3. Describe the condition of teaching learning process by using zambak modular system in physical and chemical changes and the evidence of chemical reaction concept for chemistry teacher to develop the positive findings as a suggestion in teaching chemistry subjects.

### **1.5 Systematic Research Writing**

Systematic writing of this research are consist of 5 chapters, there are:

- 1) Introduction consists of background, problem statement, research objectives, research significant, and systematic research writing.

- 2) Literature review consists of the explanation of learning cycle, learning media, teaching materials, modular system learning, and zambak modular system.
- 3) Research Methodology consist of the location of research, design of research, stages of research, and research design.
- 4) Result and discussion consist of the components module of zambak modular system, writing structure of zambak modular system, the characteristic of module, the content material of zambak modular system, content organization of zambak modular system, the implementation of zambak modular system, learning cycle in implementation of zambak modular system, analysis of learning cycle in implementation of zambak modular system, the factors that influencing the implementation of zambak modular system, and the general discussion.
- 5) Conclusion consists of conclusion and recommendation.