

CHAPTER I

INTRODUCTION

1.1 Background of The Study

Nowadays, Indonesian citizen have to face globalization era in their daily life. In this globalization era, some important aspects of our life are growing so fast, such as: knowledge, education, technology, language, etc.

That situation will bring some impacts in our life. The first impact is English as a communication language will be developed. English as an international language will be used as a daily communication language in many countries. Then, there is a lot of books are written in English. The effects of globalization era occur in many countries, include Indonesia. In Indonesia, some schools are adapting from this situation to survive. They develop bilingual education in their schools. There are a lot of international school in Indonesia, starting from playgroup, kindergarten, elementary school, junior high school, and senior high school. In developing bilingual education, the schools use bilingual books to teach their student in learning process. Bilingual books support bilingual education system at schools.

In fact, using bilingual books in learning process at school help the students to understand the material and help the schools to develop bilingual education well. Unfortunately, there is no learning media or such kind of animation to support bilingual education. It is easy to find and buy bilingual books at the book stores, but it is not easy to find bilingual education with media at book stores. On the other hand, bilingual education with media is

useful to understand the concept further. Bilingual books are not enough to build a strong foundation of knowledge concept in the student's mind. So, there is a need to use media in bilingual education to help the student better explore the knowledge deeply. Besides rarely can find bilingual education with media. Another case that happens in Indonesia is the difficulty to communicate in English. Most Indonesian people feel difficult to communicate in English, especially for teachers. The teachers have to teach their subject in English. This situation needs additional skill in English. Therefore, there is a need to make bilingual education with media complemented by pronunciation and mini dictionary. Pronunciation and mini dictionary are the tools that help the teacher or the users to understand more English.

That's why, the solution to solve the effect of globalization that we face right now is "READ PRO" bilingual education. READ PRO stands for REading, Animation, Dictionary, PRONunciation. Reading contains the material or the theory, animation shows the process that we have to learn to be more understand, dictionary will help users when the users do not know the meaning of the words have been used in the theory, and pronunciation guides the users to pronounce the words well.

Physics Department of Widya Mandala Catholic University Surabaya provides the students with trainings and facilities to prepare them as professional and competence Physics teachers. Physics Department also provides additional skills for its graduates. They are:

1. Communicative English skill for Physics teaching
2. ICT-skill for developing physics learning media

According to those skills, hopefully the Physics Department graduates can teach Physics in English well and develop Physics animations as the educational media. Therefore, the proposed media is titled by **Developing Physics learning Media “READ PRO” on Black Body Radiation for Bilingual Education in Senior High School**

1.2 Statement of the Problem

How to develop bilingual Physics learning media that includes text, animation, dictionary, and pronunciation coherently to help Senior High School students study black body radiation?

1.3 Objectives of the Study

1. To develop READ PRO Physics learning media in bilingual education
2. To strengthen Senior High School students' understanding (concept) on black body radiation

1.4 Significances of the Study

The result of this study is to provide the Senior High School students with a new kind of bilingual Physics learning media (READ PRO) on black body radiation. READ PRO will expand the number of learning media variations accessible to Senior High School students.

1.5 Scope and Limitation of the Study

1. The Physics topic to be included in the READ PRO will be limited on black body radiation at the level of Senior High School curriculum.
2. The main program to develop the READ PRO is Adobe Flash CS 5.

1.6 Key Performance Indicator

1. The READ PRO on black body radiation can be produced.
2. At least 70% of the users agree that the learning media (READ PRO) is useful to help them understand black body radiation.

1.7 Definition of the Key Terms

1. READ PRO stands for REading, Animation, Dictionary, PRONunciation. It is a new proposed bilingual learning media that combines text, animation, dictionary, and pronunciation into a convergent and integrated learning media. Reading contains the material or the theory, animation shows the process of some phenomenon, dictionary will translate the words into Indonesian language and pronunciation guides the users to pronounce the words properly.
2. Bilingual education is a method of content subject delivery in dual languages. In this research bilingual refers to English and Indonesian language.
3. Dictionary is the list of all the words have been used in this READ PRO Physics learning media. Dictionary is the word list in English and the translation is deliver in Indonesian. The dictionary consists of the meanings, word type, and also example.

1.8 Organization of the Thesis

This thesis consists of five chapters:

CHAPTER I: INTRODUCTION

The first chapter contains of background of the study, statement of the problem, objectives of the study, significances of the study, scope and limitation of the study, Key Performance Indicator, Definition of the Key Term, and Organization of the Thesis.

CHAPTER II: REVIEW OF RELATED LITERATURE

The second chapter belongsto the body of the thesis. It discusses about Bilingual Education, READ PRO Bilingual Education, Thermal Radiation, Black Body Radiation, Intensity of the Black Body Radiation, Wien Shift Law, and Planck Theory.

CHAPTER III: METHODOLOGY

The third chapter consists of The Research Method, The Research Subjects, Procedure of the Research, Data Collecting Technique, Research Instruments, and Data Analysis Technique.

CHAPTER IV:RESULT AND DISCUSSION

The forth chapter consists of the result of READ PRO bilingual Physics learning media and also the discussion about it.

CHAPTER V:CONCLUSION AND SUGGESTION

The fifth chapter consists of the conclusion of this READ PRO Physics bilingual Learning Media.