PERCEPTION AND EVALUATION OF PROTOTYPE WEB-BASED MATERIALS FOR ENGLISH FOR SCIENCE AND TECHNOLOGY BY STUDENTS AND TEACHERS

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PERCEPTION AND EVALUATION OF PROTOTYPE WEB-BASED MATERIALS FOR ENGLISH FOR SCIENCE AND TECHNOLOGY BY STUDENTS AND TEACHERS

EVERLYN RADTHA NAMBIAR A/P RAVIDAS

A report submitted in partial fulfillment of the requirements for the award of the degree of Bachelor of Science with Education (TESL)

Faculty of Education
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APRIL, 2010
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Date : 23RD APRIL 2010
This dissertation is dedicated to my beloved parents, Mr. Ravidas Kannaputhuval and Madam Agatha Mening Lusat.

There are no words that can describe how grateful I am to have you in my life. Thank you for your unconditional love and continuous support throughout the completion of this study.
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ABSTRACT

This study looks into the teaching of EST (English for Science and Technology) using web-based materials. In particular, this study sets out to investigate the students’ and teacher’s perception towards EST and the use of web-based materials in EST. In addition to that, this study also aims to acquire the teachers’ and students’ evaluation of the prototype web-based EST material that were developed. For the purpose of this study, supplementary web-based materials were developed for the KBSM EST subject. Hence this study is also the piloting of the prototype courseware. Forty-five students and four teachers of EST were involved in this study. Firstly, the students’ and teachers’ perceptions towards EST and the use of web-based materials were obtained via questionnaire. Then, the materials developed were given to students and teachers to evaluate and the data were collected via questionnaire as well. The data obtained were analyzed using Factors Analysis in the Statistical Package for Social Science (SPSS) software. The findings show that the respondents had positive perception towards EST and the use of web-based materials. Their perception were in support of their evaluation of the web-based materials developed (EST Online).
ABSTRAK

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The advancement of science and technology has been so rapid since the industrial revolution and the development has been so quick that new discoveries are being made and shared for the world to know with or without us even realizing it. Thousands of scientific and technological articles and journals are produced yearly throughout the world as seen in a study conducted by Scopus Research Trends in 2008.

As a result, there has been a rise in the demand for learning English, which according to Scopus Research Trends (2008), is the first language of about 400 million people in 53 countries, and the second language of as many as 1.4 billion more and because of this English was well positioned to become the default language of science in the first half of the 20th century.

The figures are enough to show that English is the international language for science. Thus, in many countries where English is a second and or foreign language, English for Science and Technology (EST henceforth) is implemented to help cope with this. In Malaysia, EST is taught at secondary and tertiary levels but for the purpose of this study, the focus will only be on the secondary level which is EST for SPM (Sijil Pelajaran Malaysia).
Computer technology has been around since the 1940’s and had been integrated into education around 1960’s. With the current advancement in computer and internet technology, learning is made self-accessed and self-paced and it also allows distance learning to occur in real time. Like many other academic subjects, the teaching and learning of EST has also been made available with computer or web-based instruction. The Secondary School Integrated Curriculum or KBSM in its Malay acronym proposes that the EST syllabus integrate computer and the Internet in its instructions.
1.2 Background of Study

English for Science and Technology (EST) is one of the branches of English for Specific Purposes (ESP); it refers to a subject where English is used to aid the learners in the content area of science and technology. Hence it is not aimed to teach the content but to teach language, which in this case may apply to the using of content-based learning.

EST for KBSM was implemented in 2003 as an elective subject with the aims of providing the students with the language basis to access and understand materials on science and technology and to express ideas and concepts in English. (Malaysian Ministry of Education EST Curriculum Specifications: p.1). This measure was taken to aid students in their Sciences subjects when Mathematics and Science were taught in English. The aim was to help students with the switch of medium of instruction from Malay to English. It was taught to Form 4 and Form 5 students as they will be preparing for tertiary studies where English would be used for the subjects in the fields of science and technology.

The teaching of EST has evolved tremendously, from the traditional classroom setting to the utilization of advance computer mediated instruction. KBSM EST has no textbooks but only modules which were distributed to schools and materials were also made available through the internet via the ministry’s website www.moe.gov.my.
1.3 Statement of Problem

The teaching of EST in Malaysian secondary schools is relatively new; it has been around for less than a decade. It is rather a new subject in the KBSM curriculum and hence there are issues on the lack of teaching materials for this subject as well as on the teaching methodology which was pertinent during the first few years of the implementation of EST. So far there are no textbooks for EST in Malaysian secondary schools; the only teaching materials provided by the Ministry are modules which are available for download via the Ministry of Education’s website. Though workbooks are available from independent publishers at local bookstores, teachers of EST still have to be creative in working around the modules or coming up with supplementary materials.

On the part of the teachers, they may have problems with the content of which they may not be familiar with. Teachers not only have to be creative in teaching but would also have to put in more effort in learning the content. With web-based instruction it is hoped the teachers’ problems could be addressed but again the teachers have to familiarize themselves with web-based materials and applications.

The introduction of web resources through the ministry’s website is an effort in encouraging the use of ICT in the teaching and learning of EST. Seeking information from the Internet is one of the skills taught in EST in KBSM and so the teachers and students must be prepared in doing so. The confinement of the lessons to only traditional classroom instruction does not cater to this specification. But with the introduction of web application and ICT, there will be problems arising from the teaching and learning perspectives. Hence, the teachers’ and learners’ perception is very much crucial in finding this information out.

Apart from problems in web based learning, learning in a second language context may also cause anxiety for students. In addition to that, is EST still relevant for our secondary school students when they will no longer be using it in their mathematics and sciences subjects? Some may say yes and some may say no because the universities
are still using materials from abroad which are written in English and when students enroll into tertiary education there will be a need for English language competency. With the government’s move to revert the teaching of Mathematics and Science from English to Malay, where would EST stand and does it give any effect to the teachers and learners.

1.4 Purpose of Study

The purpose of this study is to investigate the EST students’ and teachers’ perception towards EST as well as their perception towards the use of web-based materials in EST. In addition to that, this study also aims to obtain the teachers’ and learners’ evaluation of the prototype web-based learning materials.

1.5 Objectives of Study

The objectives of this study are to:

1. investigate students’ perceptions towards EST and the use of web-based materials,

2. investigate teachers’ perceptions towards EST and the use of web-based materials

3. find out students’ evaluation of the prototype web-based EST materials

4. find out teachers’ evaluation of the prototype web-based EST materials
1.6 Research Questions

This research aims to address the following questions:

1. What are the students’ perceptions towards EST and the use of web-based materials?

2. What are the teachers’ perceptions towards EST and the use of web-based materials?

3. What is the teachers’ evaluation of the prototype web-based EST materials?

4. What is the learners’ evaluation of the prototype web-based EST materials?

1.7 Significance of Study

The findings of this study could contribute towards the curriculum design and implementation of EST. Perhaps it could also provide the curriculum developers with some insights of the current situation with regard to the teaching and learning of EST. Apart from that, it is hoped that the web-based material evaluation would give web-based EST material developers a clearer, detailed insight of the needs of the students and teachers in the implementation of web-based materials for learning. Apart from this, the findings from this study could also be used by anyone who is interested in the studies or development of web-based materials as the same principles can be applied for web-based materials for language learning and other subject areas as well.