A STUDY OF THE EFFECTIVENESS OF ENGLISH FOR SCIENCE AND TECHNOLOGY (EST) IN PROMOTING CONTENT KNOWLEDGE, LANGUAGE COMPETENCY AND INDEPENDENT STUDY SKILLS AMONG SECONDARY SCHOOL STUDENTS IN THREE DISTRICTS IN PERAK



INSTITUT PENYELIDIKAN, PEMBANGUNAN DAN PENGKOMERSILAN (IRDC) UNIVERSITI TEKNOLOGI MARA 40450 SHAH ALAM, SELANGOR MALAYSIA

DISEDIAKAN OLEH:

MARY THOMAS A/P T.O. THOMAS F. PETER A/L G. FRNCIS SARJIT SINGH A/L UTAM SINGH

MEI 2007

ACKNOWLEDGEMENT

Our greatest appreciation to all parties who have directly or indirectly helped in the successful completion of this research.

Among them:

Associate Professor Dr Abdullah Mohammad Said
Campus Director, UiTM Perak for approving the project and having confidence in us to
complete this project successfully.

Dr. Siti Norlizaiha Harun, the former Coordinator of the Unit for Research and Commercialization and Associate Professor Dr. Mohd. Fauzi Mohd. Harun, the present Coordinator for their advice throughout the course of conducting our research.

En. Adam Bin Darus, Deputy Registrar of Schools, Perak State Education Department and Hj. Md. Monoto Kosnan on behalf of the Education Policy Planning and Research Department, Ministry of Education, Malaysia for giving their consent to carry out the research in schools in the Central Perak, Manjung and Kinta Districts.

All Headmasters, Heads of English Panel, EST teachers and selected Form Four and Form Five students of the schools in the Central Perak, Manjung and Kinta Districts for their willingness and cooperation to be participants in our research project.

Ms Cheah Moey Lan, lecturer at Universiti Sains Malaysia for processing the statistical data for this research project.

and

Ms Jenny Francis for typing this research report.

ABSTRACT

The research was undertaken to establish the effects of English for Science and Technology(EST) in promoting content knowledge, language competency and independent study skills in schools in the Central Perak, Manjung and Kinta Districts. The findings reveal that EST had improved students' proficiency in English Language skills especially in the areas of reading skills and vocabulary enhancement. There was also sufficient evidence to conclude that it had helped learners to cope better with their mainstream subjects especially in the pure sciences. Both teachers and students believed that EST had improved students' content knowledge but the manifestation of students' improvement in content knowledge based on their performance in these subjects is not highly significant. As for the development of independent learning skills, it was discovered that the methodology used in the teaching of this subject did not promote learner autonomy. The findings revealed that the teaching of this subject is still very much teacher dominated. The traditional lecture- style method was the more dominant mode of teaching used in the classroom and whole classroom individual work was more often preferred to small group work or pair work. Some of the problems faced by teachers are:- lack of expertise in integrating content with language teaching which was aggravated by the fact that they had not undergone any relevant training in this area. Besides, the lack of facilities like computer labs limited the manner in which the subject is taught. Finally the lack of confidence to use the spoken language amongst learners had limited student participation in the classroom.

TABLE OF CONTENTS

Abstr	ract	1	
Table of Content		iii	
List of Tables		vñi	
List of Figures		ix	
CHAPTER ONE: INTRODUCTION			
1.0	Background Of The Study	1	
1.1	Statement Of Problem	5	
1.2	Aims Of The Study	6	
1.3	Significance Of The Study	6	
1.4	Scope Of Project	7	
1.5	Definitions Of Terms/Concepts Used In Objectives	7	
1.6	Limitations Of The Study	8	
СНА	APTER TWO: LITERATURE REVIEW		
2.0	Introduction	9	
2.1	Science And Language	12	
	2.1.1 Selection of Content	12	
	2.1.2 Teacher Training	12	
	2.1.3 Ethnoscience and Language	14	
2.2	Language and Content – Integration	15	

CHAPTER ONE

INTRODUCTION

1.0 Background Of The Study

Globalisation and rapid advancement in technology has led to a wealth of information available in various fields. In the field of Science and Technology a certain level of English language proficiency is essential as most of the information available in resources such as books, journals and the Internet is in English language. In addition books and papers, essential for the intensive and extensive study of an academic subject, are also mostly available in English Language. In Malaysia, according to Hazita. A (2003), the mastery of English language as a vehicle for knowledge is essential as it is reported that 85% of all information in the field of science and technology is written in English language. In a seminar on English for Specific Purposes held in Universiti Teknologi Malaysia, Professor Swales, a language expert said that English language is becoming the medium of instruction in the teaching of science and technology subjects worldwide and stressed that "more ESP lecturers are needed to overcome the low standard of English language among students enrolling in universities nowadays, especially in the field of science and technology" (Swales, 2006). This situation