



UNIVERSITI PUTRA MALAYSIA

***ACCEPTABILITY OF ENVIRONMENTAL EDUCATION KIT (EE KIT)
AMONG TEACHERS AT SELECTED SCHOOLS IN PENINSULAR
MALAYSIA***

SITI HAJAR BINTI SULAIMAN

FPAS 2014 25



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By

SITI HAJAR BINTI SULAIMAN

**Thesis submitted to the school of Graduate Studies, Universiti Putra
Malaysia, in Fulfillment of the Requirements for the Master of Science**

August 2014

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DEDICATION

To my beloved;

Husband Abdul Jalil Abdul Rahman,

Father Sulaiman Abd. Rahman & Mother Hamidah Hassan

“Thank you so much for your support, understanding, love and patient waiting for the success of long journey....”

Supervisor Tengku Hanidza Tengku Ismail

“Thank you for your guidance and moral support given me throughout the duration of this study....”

To all of you, I am forever grateful for sharing the hardest and sweet memories during the completion of this research, thank you very much.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the Master of Science

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SITI HAJAR BINTI SULAIMAN

August 2014

Chairman : Y.M Tengku Hanidza Tengku Ismail, Phd

Faculty : Environmental Studies

This study includes both the qualitative and quantitative analyses. A qualitative study was conducted in an attempt to assess the use of the Environmental Education Kit (EE Kit) among teachers in Peninsular Malaysia. The study was conducted on teachers from four selected secondary schools, representing four school zones in Malaysia in April and May 2011. The study is carried out because of the lack of EE tools to help teachers to deliver EE at schools.

Data was collected through face-to-face interviews. Responses from the in depth interview will used to construct the questions for the survey. Of the 85 teachers, fifteen of them volunteered to be interviewed. This study aimed to describe and analyze the experience of using the EE Kit for teaching environmental education in schools. The teacher's acceptability of the EE Kit is described in terms of four themes: teachers' perception; teachers' receptiveness; frequency of use; and factors influencing its use. This study revealed 73% (11/15) of the interviewee have a positive view towards using the EE kit.

In the quantitative analysis, three indicators were developed to measure the teachers' acceptability of the EE Kit: Perception, Attitude and Receptiveness. In this study, 81 teachers teaching Science, Geography, English and Malay

Language from four public schools in Peninsular Malaysia who received the EE Kit participated. This study found that, 75/81 (92.59%) knew about the EE Kit, 64/81 (79.01%) used the EE Kit and 11 (13.58%) who knew about the kit but did not use it. This study revealed that teachers positive attitude and perception are positively related to their acceptance towards the EE Kit practice as well as inclination responsible towards environment.

The exploratory analysis using the Principal Component Analysis (PCA) indicate the following: 1) The teachers welcome the idea of new methods of teaching which was described as 'innovative' and 'new ideas' and at the same time 'imparting environmental values to students'; 2) The teachers are supportive of the EE Kit because they see it as valuable teaching tools in assisting their teaching EE component; and 3) The teachers are more receptive to using the EE Kit because they have strong beliefs on the importance of knowing the environment, the value of EE in influencing student behaviour, they have the strong sense of responsibility towards the environment and their interest in environmental issues.

From this study, seven factors were identified as barriers to implementing EE Kit in the classroom: (1) technical difficulties (2) limited resources (3) Not enough time to do in class (4) Language barrier (5) Limited access to the EE Kit (6) Lack of training and (7) Other factors (Figure 4.4). Time constraint and lack of training seemed to be the top two highest complaints from the teachers. Similar results were obtained from the qualitative studies and this finding is affirmed in this study.

Overall, 79% of the teachers are using the EE Kit in the classroom and recommend it to be used in all schools in Malaysia. Two important issues should be given great consideration before introducing the EE Kit nationwide: (1) the need for teacher training on the use of EE Kit, and (2) revising the EE Kit content making it easier for all students, especially for academically as well as linguistically challenged.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk Master Sains

**PENERIMAAN KIT PENDIDIKAN ALAM SEKITAR DI KALANGAN GURU DI
BEBERAPA BUAH SEKOLAH TERPILIH DI SEMENANJUNG MALAYSIA**

Oleh

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Kajian ini merangkumi dua kaedah penyelidikan, iaitu kualitatif dan kuantitatif. Kajian kualitatif telah dijalankan dalam usaha untuk menilai penggunaan Kit Pendidikan Alam Sekitar (EE Kit) di kalangan guru-guru di Semenanjung Malaysia. Kajian ini telah dijalankan ke atas guru-guru dari empat buah sekolah menengah, yang mewakili empat zon sekolah di Malaysia pada April dan Mei 2011.

Hasil dapatan kajian dikumpul melalui temuduga. Hasil dapatan kajian daripada temuduga akan digunakan bagi membantu membina soalan-soalan untuk kajian kuantitatif. Daripada 85 orang guru yang terlibat dalam penggunaan EE Kit ini, lima belas daripada mereka menawarkan diri untuk ditemuramah. Kajian ini bertujuan untuk memahami dan menganalisis pengalaman guru-guru menggunakan EE Kit untuk pengajaran pendidikan alam sekitar di sekolah. Penerimaan guru terhadap EE Kit diterjemahkan dan empat tema terhasil: persepsi guru; sikap terbuka guru; kekerapan penggunaan; dan faktor-faktor yang mempengaruhi penggunaannya. Kajian ini mendedahkan 73% (11/15) ditemu duga yang mempunyai pandangan yang positif terhadap penggunaan kit EE.

Dalam analisis kuantitatif, tiga tema telah dibangunkan untuk mengukur penerimaan guru terhadap EE Kit: Persepsi, Sikap dan keterbukaan guru menerima EE Kit. Dalam kajian ini, 81 orang guru Sains, Geografi, Bahasa Inggeris dan Bahasa Melayu dari empat buah sekolah awam di Semenanjung Malaysia yang menerima EE Kit mengambil bahagian. Kajian ini mendapati bahawa, 75/81guru (92,59%) tahu mengenai kewujudan EE Kit, 64/81guru

(79,01%) menggunakan EE Kit dan 11 gur(13.58%) tahu mengenai EE Kit tetapi tidak menggunakannya. Kajian ini mendedahkan bahawa sikap guru dan persepsi yang positif akan memberi kesan yang positif bagi penerimaan dan sikap terhadap penggunaan EE Kit serta lebih bertanggungjawab terhadap alam sekitar.

Hasil dapatan kajian dianalisis dengan menggunakan analisis komponen prinsipal (PCA) menunjukkan yang berikut: 1) Guru-guru mengalu-alukan idea metod pengajaran yang digambarkan sebagai 'inovatif' dan 'idea-idea baru dan pada masa yang sama' menyampaikan nilai-nilai alam sekitar kepada pelajar-pelajar 2) Guru-guru yang menyokong EE Kit kerana mereka melihatnya sebagai alat pengajaran yang bernilai dalam membantu Eekomponen dalam pengajaran mereka; dan 3) Guru-guru lebih mudah menerima menggunakan EE Kit kerana mereka mempunyai kepercayaan yang kuat terhadap kepentingan mengetahui alam sekitar, nilai pendidikan alam sekitar dalam mempengaruhi tingkah laku pelajar, mereka mempunyai perasaan yang kuat daripada tanggungjawab terhadap alam sekitar dan minat mereka dalam isu alam sekitar.

Hasil kajian ini, tujuh faktor telah dikenal pasti sebagai halangan untuk melaksanakan EE Kit di dalam kelas: (1) masalah teknikal (2) sumber yang terhad (3) Tidak cukup masa untuk melakukan di dalam kelas (4) halangan Bahasa (5) Akses Terhad kepada EE Kit (6) Kekurangan latihan dan (7) faktor-faktor lain (Rajah 4.4). Kekangan masa dan kekurangan latihan adalah dua aduan tertinggi daripada guru-guru. Keputusan yang sama diperolehi daripada kajian kualitatif dan dapatan ini ditegaskan dalam kajian ini.

Secara keseluruhannya, 79% guru menggunakan Kit Pendidikan Alam Sekitar di dalam kelas dan mencadangkan ia akan digunakan di semua sekolah di Malaysia. Dua isu penting yang perlu diberi pertimbangan yang besar sebelum memperkenalkan EE Kit di seluruh negara: (1) keperluan untuk latihan guru mengenai penggunaan EE Kit, dan (2) menyemak semula kandungan EE Kit bagi menjadikannya lebih mudah dan sesuai untuk semua pelajar, terutamanya cabaranbagi bidang akademik sebagai serta bahasa.

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I would also like to express my deepest appreciation to family and friends for your support in order to successfully execute this research. Hopefully, all effort and contributions from all of you will be blessed. Thank you very much.

I certify that an Examination Committee has met on 28 August 2014 to conduct the final examination of Siti Hajar Sulaiman on her Master Science thesis entitled “An Acceptability of Environmental Education Kit (EE KIT) Among Teachers at Selected Schools in Peninsular Malaysia.” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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REPLACE

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows :

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DECLARATION

Declaration by graduate student

I hereby confirm that:

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DECLARATION

Declaration by members of supervisory Committee

This is to confirm that:

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TABLE OF CONTENTS

	Page
ABSTRACT	I
ABSTRAK	lii
ACKNOWLEDGEMENTS	v
APPROVAL	vi
DECLARATION	viii
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
LIST OF ABBREVIATIONS	xv
CHAPTER	
1. INTRODUCTION	
1.1 Environmental Education	1
1.2 Environmental Education in Malaysian schools	1
1.3 Environmental Education Kit	2
1.4 The Objective of The Study	3
1.5 Problem Statements	3
1.6 Significant of the Study	4
1.7 Limitation of the study	4
2. LITERATURE REVIEW	
2.1 Environmental Education	6
2.2 Environmental Education in Malaysia	8
2.2.1 One of the key areas outlined in the policy	9
2.3 Environmental Education Kit	9
2.3.1 Teacher Education	10
2.4 Environmental Knowledge	11
2.5 Environmental Attitudes	11
2.6 Environmental perception	12
2.7 Overview of Research Designs in Environmental Education	13
3. MATERIALS AND METHODOLOGY	
3.1 Mixed Method	16
3.2 Sample Size	19
3.3 Research Location	19

3.4 Qualitative Study	21
3.4.1 Semi-Structured Interview	21
3.4.2 Video Recorded	23
3.5 Quantitative Study	23
3.5.1 Measuring Environmental Knowledge	23
3.5.2 Development of scales to measure the teachers' acceptability	24
3.6 Method of Analysis	
3.6.1 Qualitative	27
3.6.1.1 Transcription, Screening, Coding and Themes	27
3.6.2 Questionnaire	28
3.6.2.1 Principal Component Analysis	28
3.6.2.2 Pearson Correlation	29
3.7 Validation of Questionnaire	29
3.8 Reliability Analysis	29
4. RESULTS AND DISCUSSION	
4.1 Qualitative Study	33
4.1.1 Profile of the respondents	33
4.1.2 Teacher's Perception of the EE Kit	35
4.1.3 Teacher's Acceptance of the EE Kit	36
4.1.4 Frequency of EE Kit Use	38
4.1.5 Factors that Influence the Use of the EE Kit	39
4.1.6 Construction of the EE Kit Questionnaire	41
4.1.7 Summary	41
4.2 Quantitative Study	
4.2.1 Profile of the Respondents	42
4.2.2 Measuring Teacher's Acceptability	43
4.2.3 Perception of the EE Kit	44
4.2.4 Attitude Towards the EE Kit	46
4.2.5 Receptiveness Towards the EE Kit	46
4.2.6 Environmental Knowledge	48
4.2.7 Relationship between Knowledge, Perception, Attitude and Receptiveness	51
4.2.8 Barriers to Using the EE Kit	51
4.2.9 Summary	53
5. CONCLUSION	
5.1 Conclusion of the Study	54
5.2 Implication of the Study	55
5.3 Recommendation	56
REFERENCES	57

APPENDICES	64
BIODATA OF STUDENT	75
PAPER PRESENTED	76
LIST OF PUBLICATIONS	77



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LIST OF TABLES

Table		Page
3.1	Question of environmental knowledge	24
3.2	Question of perception	25
3.3	Question of attitude	25
3.4	Question of receptiveness	26
3.5	Reliability indices for subscale in the pilot testing	30
3.6	Reliability indices for subscale in actual study	30
4.1	Demographic data of teachers participating (qualitative)	34
4.2	Demographic data of teachers participating (quantitative)	43
4.3	Factor loadings for teachers' perception of EE Kit	45
4.4	Factor loadings for teachers attitude towards the EE Kit	46
4.5	Factor loadings for teachers receptiveness of the EE Kit	47
4.6	Pearson correlation between teachers' knowledge, receptiveness, attitude and perception.	51

LIST OF FIGURES

Figure		Page
3.1	Concurrent Design	17
3.2	Sequential Design	18
3.3	Geographical location of the participating schools	20
3.4	Selected example of the EE Kit	22
3.5	Data Analysis Technique	31
4.1	Environmental knowledge: Teachers responses to 4-item questions on the cause of environmental problems	49
4.2	Environmental knowledge: Teachers responses to 5-item questions on the extent of environmental problems	49
4.3	Perceived barriers to using the EE Kit	52

LIST OF ABBREVIATIONS

EE	Environmental Education
	Worldwide Fund for Nature (previously known as World Wildlife
WWF	Fund)
KPM	Kementerian Pendidikan Malaysia (Ministry of Education, Malaysia)
NGO	Non- Governmental Organization
UNEP	United Nations Environmental Program
UNESCO	United Nations Education, Science and Cultural Organization
MNS	Malaysian Nature Society
TREES	Treat Every Environmental Special
DG-PAS	Dinamika Guru Pendidikan Alam Sekitar

CHAPTER 1

INTRODUCTION

1.1 Environmental Education

The history of the development of the main terms and definitions of the environmental education has been studied by different authors. According to the Disinger (1983) the term “Environmental Education” appeared for the first time in 1948 at the meeting of the International Union for the Conservation of Nature and Natural Resources. Gough (1997) and Palmer (1997,1998) date of the appearance of the definition of EE to the end of the 1960s when this term began to be used and discuss on the international level.

According to Stapp et al. (1969) Environmental Education is a process aimed to produce a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution. One of the most widely accepted definitions of EE was given in the Tbilisi Declaration which was developed at the international conference of environmental educators, sponsored by UNESCO in 1977 (MacGregor, 2003).

The objective of Environmental Education (EE) was defined as learning *from* and *about* the environment to achieving the following objectives: 1) Awareness on environment and its associated problems; 2) Knowledge and basic understanding on environment and its associated problems through various experiences; 3) Acquiring values and instilling concerns for the environment; 4) Acquiring skills to identify and solve environmental problems; and 5) Active involvement in tackling environmental problems (UNESCO-UNEP, 1997). Since then, scholars have added several terms to the EE definitions, for example, education *about*, *in/through*, and *for* the environment (Fien, 2000).

1.2 EE in the Malaysia Schools

Formal education

In terms of formal education, the Ministry of Education developed a curriculum subject for EE and has implemented various teaching and learning strategies to enhance environmental awareness and internalize values on the importance of environmental protection (Nadeson and Abdul Rashid, 2010). In line with the National Education Policy, ‘Environmental Education across the Curriculum’ was

introduced in both primary and secondary schools in 1998 (Zohir & Shaari, 2011).

EE is infused in each subject in schools, rather than taught as a single subject. The development of the school curriculum in Malaysia emphasizes the integrated curriculum in general education concerned with the balanced growth of students through developing basic skills and inculcating healthy lifelong attitudes and moral values that are fundamental to maintenance of Malaysian society. It has been almost two decades after the implementation of EE across curricular; the general perception is that Malaysian has yet embraced a good environmental attitude and behavior.

Informal education

The non-governmental organization (NGOs) such as Environmental Protection Society of Malaysia, the Environmental Management and Research Association of Malaysia, the Malaysian Nature Society and World Wide Fund for Nature Malaysia play an important role too in promoting the importance of awareness of the environment. They had carried out in non-formal ways, for example, by raising public awareness through campaigns and published materials as a reference to a citizen. Apart from distributing information all about the environment, they intend to be more action oriented to raise environmental issues, which have been increasing year by year.

1.3 Environmental Education Kit (EE Kit)

In line with the policy on, 'Environmental Education across the Curriculum', the Ministry of Education, WWF-Malaysia and university partners (University Putra Malaysia, Universiti Malaya and University Sains Malaysia) are developing Environmental Education Model (known as Environmental Education Kit - EE kit) for Form 1, Form 2 and Form 3 (Nadeson and Abdul Rashid, 2010).

EE Kit is introduced in each subject rather than taught as a single subject in school. The application of EE kit is introduced for Science, Geography, English and Bahasa Malaysia subjects. The EE kit consists of teaching materials (e.g. Games and activities, power-point slides, magazines, etc.) that teachers can use in class.

Four schools were chosen by the Ministry of Education located in four different zones, SMK Damansara Jaya, Selangor; SMK Pinang Tunggal, Sg. Petani, Kedah; SMK Lanchang, Pahang and SMK Taman Kota Jaya, Kota Tinggi, Johor. The introduction of the EE kit for Form 1 started in 2007 followed by Forms 2 and 3 in the following years. The EE kit consists of 'fun' teaching materials (e.g. Games, power point slides, poems, etc.) that will aid teachers in incorporating environmental elements into selected topics for each subject (WWF – KPM, 2007).

Recently, the data on the extent of EE kit use of these pilot schools is still limited; hence, the success of the EE kit inculcating environmental values through class activities is not fully evaluated (Nadeson et al, 1998). Therefore, this study will provide an integrated picture of the usage of EE Kit among teachers and the performance of teachers, especially concerning the practices being implemented in the curriculum activities.

1.4 The objective of the study

1. To evaluate an acceptability among teachers towards Environmental Education Kit.
2. To identify factors influencing the use of the Environmental Education kit among teachers.

The questions guiding this research are (1) what is the teachers' perception towards the EE Kit (2) What are the barriers that prevent teachers from using the EE kit and (3) How teachers' acceptance on EE Kit

1.5 Problem statements

The Malaysian Ministry of Education developed a curriculum standard on EE which include topics to be covered, suggested teaching and learning strategies to be taught in the primary and secondary schools. Among the general objectives of EE is to enhance environmental awareness and inculcate environmental values among school children. With the introduction of EE across curriculum, environmental topics that are appropriate can be infused into the existing school curriculum. Teachers are encouraged to incorporate EE components in their subject matter. Despite of more than a decade of EE in the Malaysian schools, the extent of incorporation of EE components in each subject, the quality and its delivery in the classroom is not known.

No known studies were carried out to evaluate the effectiveness of EE. Most of researches carried out concentrate on environmental awareness, attitude and behavior among in-service teachers and school children. Among the complaints by the teachers for not able to teach EE is their lack of knowledge of EE and not knowing how to teach EE in their subject matter. The study is carried out because of the lack of EE tools to help teachers to deliver EE at schools. Taking this into consideration, EE Kit is developed to assist teachers in incorporating EE elements in their classroom. Since the introduction of the EE Kit to the pilot schools, the data on the extent of its usage is not known. To address this problem, a study is carried out to collect information on the EE Kit use in the classroom focusing on the teachers' practice and needs as well as barriers that prevent them from using the EE kit.

1.6 Significant of the study

Since the program has been implemented, program outcomes assessment, evaluation needs to be established. Therefore, the study is to evaluate teachers' acceptance towards the EE Kit and what are the factors influencing the use of the EE Kit. This study will provide data on teacher profile and affective variables which could serve as baseline data to pave the way for further research improvement of this program.

The barriers have been identified in this study will further improve the implementation of the EE Kit across the curricula. The feedback from the teachers will be forwarded to the module developer as well as the Ministry of Education so that the module can be improved before it can be distributed to all schools in Malaysia.

1.7 Limitations of the Study

1. Location of the study

The scope of the study is limited to four pilot schools. These schools are chosen by the Ministry of Education and not chosen by the researcher. Only four schools, representing four school zones, were chosen by the Ministry to test the EE Kit.

2. Subject selected

The respondents are the teachers teaching four subjects, that is, Malay Language, English, Geography and Science. This selection criteria have been set by the module developer which consists of representatives from the Ministry of Education, WWf officers, university lecturers, expert teachers (Guru Pakar), and teachers teaching the above four subjects.

3. Access to EE Kit

Each school was given limited sets of EE Kit, due to financial constraint. Some of the EE Kits are kept in the headmaster's room; therefore, not all teachers have access to the kit. Some of the EE Kits have to be shared among the teachers, further hindering full access to the kit.

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