



UNIVERSITI PUTRA MALAYSIA

**ENVIRONMENTAL CITIZENSHIP AMONG PRE-SERVICE TEACHERS
IN MALAYSIAN TEACHERS TRAINING COLLEGES**

HO YUEK MING

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**ENVIRONMENTAL CITIZENSHIP AMONG PRE-SERVICE TEACHERS
IN MALAYSIAN TEACHERS TRAINING COLLEGES**

By

HO YUEK MING

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

August 2007



DEDICATION

Sabri

...unconditional love, unwaveringly supportive

Kathleen

...pillar of strength, unity, actively supportive

Family

... understanding, undemanding, fully supportive

Environmental Citizens of tomorrow...

*Shaun ...Jason...George...WanShi ...Jonathan ...Brandon ...Lauren
Mursyid...Sara...Ridzuan...Maria...Aishah...Arif...Fatihah...Aqil...Hawa*



Abstract of thesis presented to the Senate of Universiti Putra Malaysia
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Chairman: Associate Professor Azizi Hj. Muda, PhD

Faculty: Environmental Studies

Environmental citizenship among Malaysians is generally known to be lacking. Thus, the implicit role of teachers as environmental citizenship role models implicates the need for pre-service teachers to acquire desirable characteristics of the model environmental citizen. The environmental education (EE) program in the Malaysian Teachers Training Colleges is expected to achieve the objective of molding model environmental citizens. In this research, theories and concepts underlying environmental education were integrated in a conceptual framework to contextualize environmental citizenship. A descriptive survey was conducted to assess environmental citizenship and its contributive factors among 2,728 pre-service teachers from ten selected Malaysian Teachers Training Colleges throughout Malaysia.

Environmental citizenship level among the pre-service teachers was found to be moderate, with improvement needed for many of the environmental



citizenship contributive variables. All the contributive variables, identified as environmental behavior, environmental attitude, environmental knowledge, sources from which information about the environment is obtained, and participation in environmental activities were positively correlated with environmental citizenship disposition. It was found that five of the factors contributed significantly towards environmental citizenship. Comparison made between pre-service teachers who were exposed and those not exposed to the EE program during teacher training showed that the former had significantly higher scores in environmental knowledge and environmental behavior. Graduate pre-service teachers were found to fare better in most variables compared to their non-graduate counterparts. Male pre-service teachers were found to have higher scores in environmental knowledge but lower in environmental attitude and behavior than their female counterparts.

It is concluded that the EE Program implemented in the Malaysian Teachers Training Colleges is effective in disseminating environmental knowledge but not in developing environmental attitudes. The EE Program enabled pre-service teachers to source for information but did not empower them to participate in decision-making nor to take action for a better environment. It is suggested that the EE Program incorporates more participative activities and experiential learning to inculcate desirable environmental citizenship attributes among future teachers to empower them in the crusade towards a better environment, and they in turn could empower the next generation of environmental citizens.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KEWARGANEGARAAN ALAM DI KALANGAN GURU PELATIH
DI MAKTAB PERGURUAN MALAYSIA**

Oleh

HO YUEK MING

Ogos 2007

Pengerusi: Profesor Madya Azizi Hj. Muda, PhD

Fakulti: Pengajian Alam Sekitar

Sifat kewarganegaraan alam di kalangan warga Malaysia adalah diketahui kekurangan pada umumnya. Maka, peranan tersirat guru sebagai warga alam contoh menuntut supaya guru-guru pelatih memperoleh dan memupuk sifat warga alam yang diinginkan. Dalam pada itu, program pendidikan alam sekitar di Maktab-maktab Perguruan Malaysia diharap akan mencapai objektif membina warga alam yang dicontohi. Dalam kajian ini, teori dan konsep dalam pendidikan alam sekitar diintegrasikan dalam satu rangka konsep untuk menjelaskan konteks kewarganegaraan alam. Kajian berbentuk tinjauan deskriptif telah dijalankan untuk mengukur sifat kewarganegaraan alam dan faktor-faktor yang menyumbang kepada sifat tersebut di kalangan 2,728 guru pelatih yang terpilih daripada sepuluh buah maktab perguruan di seluruh Malaysia.

Tahap kewarganegaraan alam di kalangan guru-guru pelatih didapati sederhana, dan beberapa pembolehubah yang menyumbang kepada sifat



tersebut perlu diperbaiki lagi. Semua pembolehubah yang dikenalpasti, iaitu tingkah-laku, sikap, pengetahuan mengenai alam sekitar, sumber maklumat mengenai alam sekitar, dan penyertaan aktiviti alam sekitar, didapati mempunyai korelasi yang positif dan signifikan dengan sifat kewarganegaraan alam. Lima daripada faktor-faktor tersebut didapati menyumbang secara signifikan kepada sifat kewarganegaraan alam. Guru-guru pelatih yang telah mengikuti program alam sekitar semasa latihan perguruan didapati mempunyai skor yang lebih tinggi dalam tingkah-laku dan pengetahuan alam sekitar berbanding dengan guru-guru pelatih yang belum mengikuti program tersebut. Guru-guru pelatih lepas ijazah menunjukkan pencapaian lebih baik dalam kebanyakan pembolehubah berbanding guru-guru pelatih diploma. Guru-guru pelatih lelaki mencapai skor lebih tinggi dalam pengetahuan alam sekitar tetapi prestasi mereka adalah lebih rendah dari segi sikap dan tingkah-laku berbanding dengan guru-guru pelatih perempuan.

Kesimpulannya, program alam sekitar yang dilaksanakan di Maktab Perguruan Malaysia adalah berkesan dalam meningkatkan pengetahuan mengenai alam sekitar tetapi tidak begitu berkesan dalam membina sikap yang diinginkan terhadap alam sekitar di kalangan guru-guru pelatih. Program tersebut dapat meningkatkan keupayaan guru-guru pelatih untuk memperoleh sumber maklumat mengenai alam sekitar tetapi tidak membolehkan mereka mengambil tindakan atau melibatkan diri dalam penyertaan awam. Adalah dicadangkan supaya diadakan lebih banyak aktiviti yang menggalakkan penyertaan dalam program pendidikan alam



sekitar di maktab untuk membolehkan bakal guru berupaya menyertai perjuangan ke arah alam sekitar yang lebih sempurna, dan seterusnya mewariskan keupayaan ini kepada generasi warga alam yang akan datang.



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I certify that an Examination Committee has met on 30th August 2007 to conduct the final examination of Ho Yuek Ming on her Doctor of Philosophy thesis entitled “Environmental Citizenship Among Pre-service Teachers in Malaysian Teachers Training Colleges” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the student be awarded the degree of Doctor of Philosophy.

Members of the Examination Committee were as follows:

Ramdzani Abdullah, PhD

Associate Professor
Faculty of Environmental Studies
Universiti Putra Malaysia
(Chairman)

Mohd Majid Konting, PhD

Associate Professor
Faculty of Educational Studies
Universiti Putra Malaysia
(Internal Examiner)

Kamariah Hj. Abu Bakar, PhD

Professor
Faculty of Educational Studies
Universiti Putra Malaysia
(Internal Examiner)

Azizan Baharudin, PhD

Professor
Faculty of Science
University of Malaya
(External Examiner)

HASANAH MOHD. GHAZALI, PhD

Professor and Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 22 November 2007



This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy.

The members of the Supervisory Committee were as follows:

Azizi Hj. Muda, PhD

Associate Professor
Faculty of Environmental Studies
Universiti Putra Malaysia
(Chairman)

Mahdi Abdul Wahab, PhD

Faculty of Science
Universiti Putra Malaysia
(Member)

Jegak Uli, PhD

Associate Professor
Faculty of Educational Studies
Universiti Putra Malaysia
(Member)

AINI IDERIS, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 13 December 2007



DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

HO YUEK MING

Date: 29 October 2007



TABLE OF CONTENTS

	Page
DEDICATION	ii
ABSTRACT	iii
ABSTRAK	v
ACKNOWLEDGEMENTS	viii
APPROVAL	x
DECLARATION	xii
LIST OF TABLES	xvi
LIST OF FIGURES	xix
LIST OF ABBREVIATIONS	xxi
 CHAPTER	
1 INTRODUCTION	
1.1 Introduction	1
1.2 Background of the Study	2
1.3 Statement of Problem	9
1.4 Purpose of the Study	14
1.5 Objectives of Study	16
1.6 Research Questions	19
1.7 Research Hypotheses	22
1.8 Scope and Limitation of Study	26
1.9 Significance of Study	27
1.10 Definition of Terms	29
1.11 Operational Definition	33
1.12 Conclusion	34
2 LITERATURE REVIEW	
2.1 Introduction	36
2.2 Environmental Citizenship Concepts	37
2.3 Environmental Education	42
2.3.1 Environmental Education in Malaysia	51
2.3.2 Teacher Education	55
2.3.3 Non-Formal Education: the roles of government agencies, non-governmental organizations and private organizations	58
2.4 Environmental Citizenship Variables	65
2.4.1 Environmental Citizenship	65
2.4.2 Environmental Action	70
2.4.3 Environmental Behavior	71
2.4.4 Environmental Attitude	72
2.4.5 Environmental Knowledge	75
2.4.6 Source of Information	78
2.4.7 Environmental Participation	79
2.5 Socio-demographic Variables	83
2.6 Conceptual Framework	85
2.7 Conclusion	90



3	METHODOLOGY	
3.1	Introduction	92
3.2	Research Framework	92
3.3	Research Design	95
3.4	Research Population	97
	3.4.1 Sampling Procedures	99
	3.4.2 Sample Size Determination	102
	3.4.3 Sample Characteristics	105
3.5	Instrumentation	108
	3.5.1 Instrument	108
	3.5.2 Scale Selection	115
	3.5.3 Validity and Reliability	117
	3.5.4 Pilot Test	122
3.6	Data Collection	123
3.7	Data Analysis	125
	3.7.1 Preliminary Analysis	125
	3.7.2 Exploratory Data Analysis	128
	3.7.3 Statistical Analyses	134
	3.7.4 Hypothesis Testing	137
3.8	Conclusion	142
4	RESULTS AND DISCUSSION	
4.1	Introduction	144
4.2	Demographic Profile	145
4.3	Environmental Citizenship Level Among Pre-service Teachers (Objective 1)	147
4.4	Levels of Environmental Citizenship Contributive Variables Among Pre-service Teachers (Objective 2)	152
	4.4.1 Level of Environmental Behavior	154
	4.4.2 Level of Environmental Attitude	160
	4.4.3 Level of Environmental Knowledge	165
	4.4.4 Level of Source of Information	168
	4.4.5 Level of Environmental Participation	173
4.5	Relationship between Environmental Citizenship and its Contributive Variables (Objective 3)	177
4.6	Environmental Citizenship Predictor Variables (Objective 4)	182
4.7	Comparison of Variables by Academic Program, Exposure to EE and Gender (Objective 5)	194
	4.7.1 Comparison of Variables Between Pre-service Teachers in the Diploma Level Program (KDPM) and Post-graduate Level Program (KPLI) (Objective 5a)	197
	4.7.2 Comparison of Variables Between Pre-service Teachers Who Were Exposed to the EE Program and Pre-service Teachers Who Were Not Exposed to the EE Program (Objective 5b)	212
	4.7.3 Comparison of Variables Between Male and Female Pre-service Teachers (Objective 5c)	227

4.8	Conclusion	242
5	CONCLUSION AND RECOMMENDATIONS	
5.1	Introduction	244
5.2	Summary of Research Findings	244
5.2.1	Environmental Citizenship Disposition Among Pre-service Teachers	245
5.2.2	Factors that Contribute Towards Environmental Citizenship	247
5.2.3	The Relationship Between Environmental Citizenship and its Contributive Factors	251
5.2.4	Variables that Predict Environmental Citizenship	251
5.2.5	Differences Between KPLI and KDPM Pre- service Teachers	252
5.2.6	Differences Between Pre-service Teachers Who Were Exposed to the EE Program and Those Who Were Not	253
5.2.7	Differences Between Male and Female Pre- service Teachers	255
5.3	Recommendations	257
5.4	Contributions From This Study	265
5.5	Conclusion	267
	REFERENCES	269
	APPENDICES	280
	BIODATA OF THE AUTHOR	369



LIST OF TABLES

Table		Page
3.1	Dependent and Independent Variables	93
3.2	Nesting Design with Two Levels of Sampling	100
3.3	Distribution of Samples Across Colleges	102
3.4	Age Range	106
3.5	Gender Composition	107
3.6	Ethnic Composition	107
3.7	Questionnaire Format	110
3.8	Analysis of Environmental Knowledge Subscale Items	114
3.9	Reliability Indices for Subscales in Pilot Test	120
3.10	Reliability Indices for Subscales in Actual Study	123
4.1	Demographic Profile	145
4.2	Selected Statistics for Environmental Citizenship	148
4.3	Environmental Action Ranking	150
4.4	Descriptive Statistics for Environmental Citizenship Contributive Variables	154
4.5	Frequencies (in percent) for Environmental Behavior Subscale Items	157
4.6	The New Environmental Paradigm (NEP) Scale Items	161
4.7	Statistics for NEP Attitude Subscale Items.	163
4.8	Frequencies (in percent) for Environmental Attitude (NEP) Subscale Items	164
4.9	Percentage Correct Responses to Environmental Knowledge Subscale Items	167
4.10	Source of Information Items Ranking	170
4.11	Level of Environmental Participation	173



4.12	Pearson Correlation Coefficients of Environmental Citizenship and its Contributive Variables	179
4.13	Model Summary	185
4.14	Estimates of Coefficients for the Model	186
4.15	Excluded Variables	187
4.16	ANOVA Table	187
4.17	The Multicollinearity Diagnostic for the Final Model	188
4.18	Group Statistics: Comparison Between KPLI and KDPM	198
4.19	Independent Samples Test: Comparison Between KPLI and KDPM	199
4.20	Chi-square Test of Independence for Environmental Organization Membership by Academic Program	207
4.21	Chi-square Test of Independence for Nature Camp Participation by Academic Program	209
4.22	Chi-square Test of Independence for EIA Review Participation by Academic Program	211
4.23	Group Statistics: Comparison Between Pre-service Teachers Who Were Exposed to EE and Pre-service Teachers Who Were Not Exposed	214
4.24	Independent Samples Test: Comparison of Variables Between Pre-service Teachers Who Were Exposed to EE and Those Who Were Not	215
4.25	Chi-square Test of Independence for Environmental Organization Membership by EE Exposure	222
4.26	Chi-square Test of Independence for Nature Camp Participation by EE Exposure	224
4.27	Chi-square Test of Independence for EIA Review by EE Exposure	226
4.28	Group Statistics: Comparison of Variables Between Male and Female Pre-service Teachers	228



4.29	Independent Samples Test: Comparison Between Male and Female Pre-service Teachers	229
4.30	Chi-square Test of Independence for Environmental Organization Membership by Gender	236
4.31	Chi-square Test of Independence for Nature Camp Participation by Gender	238
4.32	Chi-square Test of Independence for EIA Review Participation by Gender	239



LIST OF FIGURES

Figure		Page
2.1	Conceptual Framework for Environmental Citizenship Education	86
2.2	Conceptual Model of Environmental Citizenship and its Contributive Factors	89
3.1	Age Distribution	106
4.1	The Normal P-P Plot of the Regression Standardized Residual	189
4.2	Scatterplot of Standardized Residuals	190
4.3	The Scatterplot of Standardized Predicted Values Versus Observed Values	191
4.4	Model of Environmental Citizenship and Predictor Variables	194
4.5	The Boxplots of EC Mean Scores for KPLI and KDPM	200
4.6	The Boxplots of Environmental Behavior Mean Scores for KPLI and KDPM Pre-service Teachers	202
4.7	The Boxplots of Environmental Attitude Mean Scores for KPLI and KDPM Pre-service Teachers	203
4.8	The Boxplots of Environmental Knowledge Mean Scores for KPLI and KDPM Pre-service Teachers	204
4.9	The Boxplots of Source of Information Mean Scores for KPLI and KDPM Pre-service Teachers	206
4.10	The Boxplots of Environmental Citizenship Mean Scores for Exposed to EE and Not Exposed to EE	216
4.11	The Boxplots of Environmental Behavior Mean Scores for Exposed to EE and Not Exposed to EE	218
4.12	The Boxplots of Environmental Attitude Mean Scores for Exposed to EE and Not Exposed to EE	219
4.13	The Boxplots of Environmental Knowledge Mean Scores for Exposed to EE and Not Exposed to EE	220



4.14	The Boxplots of Source of Information Mean Scores for Exposed to EE and Not Exposed to EE	221
4.15	The Boxplots of Environmental Citizenship Mean Scores for Male and Female Pre-service Teachers	230
4.16	The Boxplots of Environmental Behavior Mean Scores for Male and Female Pre-service Teachers	232
4.17	The Boxplots of Environmental Attitude Mean Scores for Male and Female Pre-service Teachers	233
4.18	The Boxplots of Environmental Knowledge Mean Score for Male and Female Pre-service Teachers	234
4.19	The Boxplots of Source of Information Mean Score for Male and Female Pre-service Teachers	235



LIST OF ABBREVIATIONS

AWB	Asean Wetlands Bureau
CEPS	Citizenship Education Policy Studies
CFC	Chloro-fluoro Carbons
DG-PAS	Dinamika Guru Pendidikan Alam Sekitar
DSP	Dominant Social Paradigm
EAICI	Environmental Action Internal Control Index
EAKS	Environmental Action Knowledge Skills
EC	Variable name for 'Environmental Citizenship'
EE	Environmental Education
EDA	Exploratory Data Analysis
EIA	Environmental Impact Assessment
EPSM	Environmental Protection Society of Malaysia
EPRD	Educational Planning and Research Division
FRIM	Forest Research Institute of Malaysia
IEAKS	Index of Environmental Action and Skill
IUCN	International Union for the Conservation of Nature
KDPM	Kursus Diploma Perguruan Malaysia
KNOWSCOR	Mean Environmental Knowledge score (variable name)
KPLI	Kursus Perguruan Lepas Ijazah
KPM	Kementerian Pendidikan Malaysia (Ministry of Education, Malaysia)
MARDI	Malaysian Agricultural Research and Development Institute
MACTION	Mean Environmental Action score (variable name)



MATTITUD	Mean Environmental Attitude score (variable name)
MBEHAV	Mean Environmental Behavior score (variable name)
MINFO	Mean Source of Information score (variable name)
MNS	Malaysian Nature Society
MOSTE	Ministry of Science Technology and the Environment
MTTC	Malaysian Teachers Training College(s)
NEP	New Environmental Paradigm
NGO	Non-Governmental Organization
NIBY	Not in My Backyard
NVP	New Vision Policy
OPP2	Second Outline Perspective Plan
OPP3	Third Outline Perspective Plan
PV	Proportion of Variance
RRIM	Rubber Research Institute of Malaysia
SAM	Sahabat Alam Malaysia (Friends of the Earth Malaysia)
SPM	Sijil Pelajaran Malaysia
STPM	Sijil Tinggi Pelajaran Malaysia
TED	Teacher Education Division
TREES	Treat Every Environment Special
UNEP	United Nations Environmental Program
UNESCO	United Nations Education, Science and Cultural Organization
WIAP	Wetlands International Asia-Pacific
WWF	Worldwide Fund for Nature (previously known as World Wildlife Fund)



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