



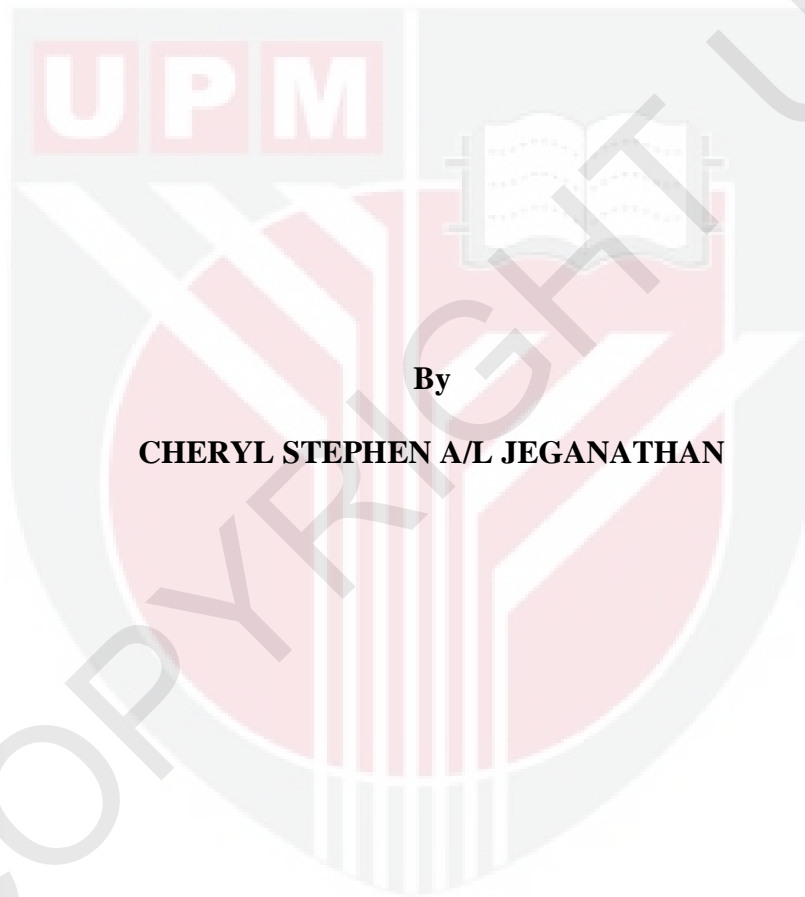
**UNIVERSITI PUTRA MALAYSIA**

**ENVIRONMENTAL LITERACY AMONG UNDERGRADUATES OF  
ENVIRONMENTAL PROGRAMS AT PUBLIC RESEARCH UNIVERSITIES  
IN SELANGOR, MALAYSIA**

**CHERYL STEPHEN A/L JEGANATHAN**

**FPAS 2012 13**

**ENVIRONMENTAL LITERACY AMONG UNDERGRADUATES OF  
ENVIRONMENTAL PROGRAMS AT PUBLIC RESEARCH UNIVERSITIES  
IN SELANGOR, MALAYSIA**



**By**

**CHERYL STEPHEN A/L JEGANATHAN**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,  
in Fulfillment of the Requirements for the Degree of Master of Science**

**December 2012**

Abstract of thesis presented to the School of Graduate Studies of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master of Science

**ENVIRONMENTAL LITERACY AMONG UNDERGRADUATES OF  
ENVIRONMENTAL PROGRAMS AT PUBLIC RESEARCH UNIVERSITIES  
IN SELANGOR, MALAYSIA**

By

**CHERYL STEPHEN A/L JEGANATHAN**

**December 2012**

**Chairman: Associate Professor Mohd. Bakri Bin Haji Ishak, PhD**

**Faculty: Environmental Studies**

Evaluating environmental literacy has been one of the mode by which the extend where the understanding between the nature of interdependence between the natural system and the human social system could be established. While there are many universities that have begun to evaluate their undergraduates, the environmental literacy of undergraduates in Malaysia, have yet to be assessed. The objective of this study is to determine the environmental literacy of the environmental undergraduates at public research universities in Selangor.

In this study, a descriptive research method was used. The set of questionnaires were constructed in different sections, Environmental Attitude, Environmental Behaviour and Environmental Knowledge. Data was collected using a self administered questionnaire to identify the level of environmental literacy among 418

undergraduates enrolled in environmental programs at Universiti Putra Malaysia and Universiti Kebangsaan Malaysia. All the respondents targeted responded to the study.

The result of the study shows that the Environmental Literacy dispositions of the undergraduates were generally found to be at the moderate level, with a mean of 3.47 based on a five-point scale. When comparison was done using the contributive variable, undergraduates were found to be high in terms of their environmental behavior (Mean=3.81) and environmental attitude (Mean=3.68) and moderate level of environmental knowledge (Mean=2.93). The dispositions of the undergraduates are similar regardless of the different environmental program taken in public research universities in Selangor or in the nature of their gender. Undergraduates in Year 2 show increased level of environmental knowledge compared to Year 1. However, undergraduates from Year 3 and above do not show significant increase in this field compared with the undergraduates in Year 2. The results were similar to the previous researches, which was presented in the discussion section. It can be concluded that the environmental literacy of the undergraduates is in the moderate level, mainly contributed by moderate level of environmental knowledge, which needs improvement. The Environmental Literacy of the undergraduates is not influenced by the different environmental programs or by gender. Recommendations were discussed at the final chapter on enhancing in further study on research of environmental literacy.

Abstrak tesis yang dikemukakan kepada Sekolah Pengajian Siswazah Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**KECELIKAN ALAM SEKITAR DI KALANGAN PRA-SISWAZAH DALAM  
PROGRAM ALAM SEKITAR DI UNIVERSITI PENYELIDIKAN AWAM DI  
SELANGOR, MALAYSIA**

Oleh

**CHERYL STEPHEN A/L JEGANATHAN**

**December 2012**

**Pengerusi: Professor Madya Mohd. Bakri Bin Haji Ishak, PhD**

**Fakulti: Pengajian Alam Sekitar**

Penilaian kecelikan alam sekitar adalah cara di mana tahap pemahaman kebergantungan di antara sistem alam semulajadi dan sistem sosial manusia dapat dikenalpasti. Ada di antara universiti di luar negara yang telah bermula menilai para graduan pra-siswazah, namun di negara ini, penilaian kecelikan alam sekitar masih belum dilaksanakan di kalangan para graduan pra-siswazah. Penyelidikan ini bertujuan untuk mengenalpasti tahap kecelikan alam sekitar dalam kalangan graduan pra-siswazah alam sekitar di universiti penyelidikan awam di Selangor.

Di dalam kajian ini, kaedah penyelidikan berbentuk diskriptif telah digunakan. Satu set soalan telah dibentuk di dalam bahagian melibatkan tingkah laku, sikap dan pengetahuan tentang alam sekitar. Data dikumpul menggunakan soalan-jawab sendiri untuk mengenalpasti kadar kecelikan alam sekitar dalam kalangan 418 pelajar pra-

siswazah yang mengikuti program alam sekitar di Universiti Putra Malaysia dan Universiti Kebangsaan Malaysia. Kesemua responden telah menjawab soalan yang disediakan.

Hasil penyelidikan menunjukkan bahawa kecelikan alam sekitar dalam kalangan pelajar pra-siswazah didapati pada tahap sederhana, dengan min 3.47 dalam perbandingan skala 5 mata. Apabila dibandingkan dengan pembolehubah kontributif, para pelajar pra-siswazah didapati mempunyai tahap yang tinggi bagi tingkah laku terhadap alam sekitar (Min=3.81) dan sikap terhadap alam sekitar (Min=3.68) tetapi mempunyai tahap pengetahuan sederhana tentang alam sekitar (Min=2.93). Tahap kecelikan alam sekitar didapati hampir sama dalam kalangan pelajar pra-siswazah daripada program alam sekitar berlainan di universiti penyelidikan awam di Selangor dan dalam kalangan lelaki atau perempuan. Pelajar pra-siswazah dalam tahun 2 menunjukkan peningkatan pengetahuan alam sekitar yang mendadak berbanding dengan pelajar pra-siswazah tahun 1. Walaubagaimanapun, ia telah dikenalpasti bahawa pelajar pra-siswazah dalam tahun 3 ke atas tidak menunjukkan perubahan signifikan berbanding dengan pelajar pra-siswazah tahun 2. Hasil penyelidikan menunjukkan persamaan dengan penyelidikan lepas yang pernah dilakukan dibentangkan in bahagian perbincangan. Kesimpulan penyelidikan ini adalah kecelikan alam sekitar para pelajar pra-siswazah adalah sederhana, dipengaruhi terutamanya oleh pengetahuan alam sekitar yang sederhana dalam kalangan pelajar pra-siswazah, yang memerlukan peningkatan. Kecelikan alam sekitar tidak dipengaruhi oleh faktor program alam sekitar atau jantina. Cadangan untuk

memperkembangkan penyelidikan kecelikan alam sekitar yang akan datang telah dibincangkan dalam bab terakhir.



## ACKNOWLEDGEMENT

First and foremost, I would like to thank the Almighty for His abundance grace and mercy showered upon me along this journey, without Whom none of this would be possible. My utmost appreciation to my lovely wife, Adelene, for understanding my needs for further education and goals.

I would like to wish my deepest gratitude to the chairman of my supervisory team, Associate Professor Dr. Mohd. Bakri Bin Ishak, who has been my source of inspiration in pursuance of educational achievement. He had been the mentor that I always wish that I had and will ever have. My deepest gratitude also extended to the member of my supervisory team, Madam Rosta Harun, for her gentle guidance in the valuable knowledge provided.

At the same time, I would like to thank all the people for their contribution and support, directly or indirectly, to the success of this study. This list is seems limitless; however special names need to be mentioned.

- 1) Professor Dr. Sahibin Abd. Rahim (UKM)
- 2) Dr. Ghurfan bin Redzwan (UM)
- 3) Prof. Dr. Nordin bin Othman (MSU)
- 4) Assoc. Prof Dr. Mohd. Talib Latif (UKM)
- 5) Assoc. Prof Dr. Latifah Abd. Manaf (UPM)



This thesis was submitted to the School of Graduate Studies 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:

**Bakri Bin Ishak, PhD**

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

**Rosta Binti Harun**

Senior Lecturer  
Faculty of Environmental Studies  
Universiti Putra Malaysia  
(Member)

---

**BUJANG BIN KIM HUAT, PhD**

Professor and Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date:

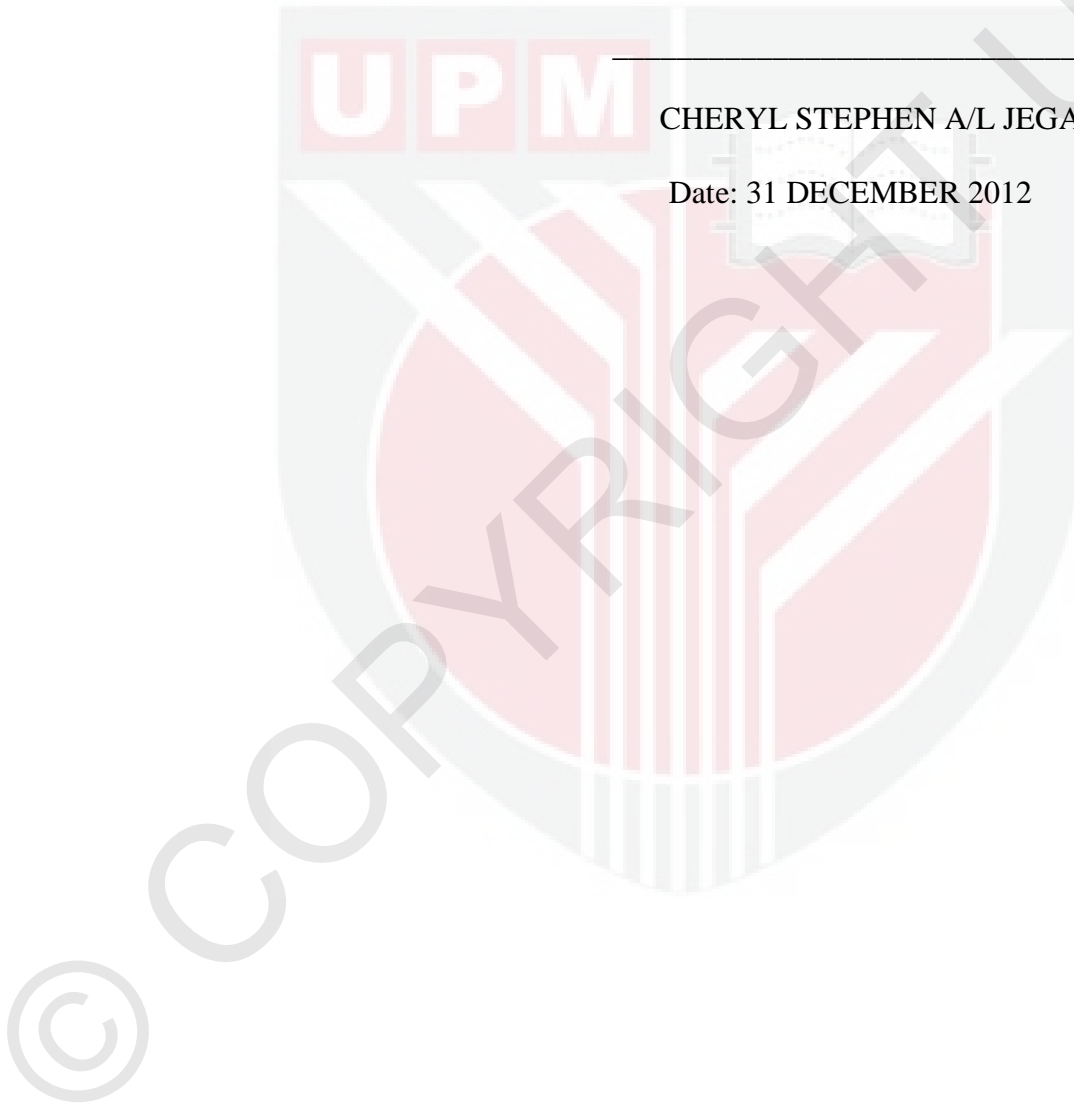
## DECLARATION

I declare that the thesis is 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 Universiti Putra Malaysia or other institutions.

---

CHERYL STEPHEN A/L JEGANATHAN

Date: 31 DECEMBER 2012



## TABLE OF CONTENTS

	<b>Page</b>
<b>ABSTRACT</b>	ii
<b>ABSTRAK</b>	iv
<b>ACKNOWLEDGEMENTS</b>	vii
<b>APPROVAL</b>	viii
<b>DECLARATION</b>	x
<b>LIST OF TABLES</b>	xi
<b>LIST OF FIGURES</b>	xiv
<b>LIST OF ABBREVIATIONS</b>	xv
<b>DEFINITION OF TERMS</b>	xvi
<b>CHAPTER</b>	
<b>1 INTRODUCTION</b>	
1.1 Background of the Study	1
1.2 Statement of Problem	6
1.3 Objectives of Study	9
1.4 Summary	10
<b>2 LITERATURE REVIEW</b>	
2.1 Introduction	11
2.2 Review of Environmental Literacy and its Contributive Variables	11
2.3 Review of Selected Research Methods	19
2.4 Summary	23
<b>3 METHODOLOGY</b>	
3.1 Introduction	25
3.2 Research Framework	25
3.3 Research Design	26
3.3.1 Study Area and Target Population	26
3.3.2 Sample Size Determination	29
3.3.3 Survey Instrumentation	30
3.4 Data Collection Technique	33
3.5 Validation of Data	36
3.5.1 Reliability Analysis	36
3.5.2 Pilot test	37
3.6 Data Analysis Techniques	39
3.6.1 Preliminary Analysis	39
3.6.2 Exploratory Data Analysis	40
3.7 Summary	44
<b>4 RESULTS AND DISCUSSION</b>	
4.1 Introduction	45
4.2 Results	45

4.2.1	Environmental Literacy Disposition	47
4.2.2	Environmental Literacy Contributive Variable Disposition	49
4.2.2.1	Environmental Behavior	51
4.2.2.2	Environmental Attitude	53
4.2.2.3	Environmental Knowledge	57
4.2.3	Comparison of Variables in the Different Environmental Programs	61
4.2.3.1	Environmental Literacy	63
4.2.3.2	Environmental Behavior	64
4.2.3.3	Environmental Attitude	65
4.2.3.4	Environmental Knowledge	65
4.2.4	Comparison of Variables in the Different Years of Study	66
4.2.4.1	Environmental Literacy	69
4.2.4.2	Environmental Behavior	70
4.2.4.3	Environmental Attitude	70
4.2.4.4	Environmental Knowledge	71
4.2.5	Comparison of Variables between the gender of the respondents	72
4.2.5.1	Environmental Literacy	74
4.2.5.2	Environmental Behavior	75
4.2.5.3	Environmental Attitude	75
4.2.5.4	Environmental Knowledge	76
4.3	Discussion	76
4.3.1	Environmental Literacy Disposition	77
4.3.2	Environmental Literacy Contributive Variables Disposition	77
4.3.2.1	Environmental Behavior	78
4.3.2.2	Environmental Attitude	78
4.3.2.3	Environmental Knowledge	79
4.3.3	Differences between Environmental Programs	79
4.3.4	Differences between Years of Study	80
4.3.5	Differences between Genders	81
4.4	Summary	81
<b>5</b>	<b>CONCLUSION AND RECOMMENDATIONS</b>	
5.1	Conclusion	83
5.2	Limitation of Study	84
5.3	Recommendations	85
	<b>REFERENCES</b>	86
	<b>APPENDICES</b>	95
	<b>BIODATA OF STUDENT</b>	122