



**THE ENVIRONMENTAL SUSTAINABILITY PRACTICES IN SELECTED
HIGHER EDUCATION INSTITUTIONS OF REGION IV: BASIS OF A
PROPOSED TOTAL QUALITY ENVIRONMENTAL
SUSTAINABILITY (TQES) MODEL FOR
HIGHER EDUCATION
INSTITUTIONS**

**A Dissertation
Presented to
the Faculty of the Graduate School
Centro Escolar University**

**In Partial Fulfillment of
the Requirements for the Degree
Doctor of Philosophy in Science Education**

**by
LOLIBETH VILLALUNA-FIGUEROA
October, 2009**



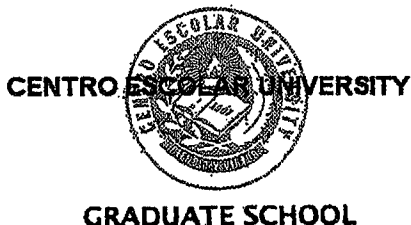
CENTRO ESCOLAR UNIVERSITY

GRADUATE SCHOOL

TABLE OF CONTENTS

List of Tables	x
List of Figures	xiii
Chapter	Page
1 THE PROBLEM AND ITS BACKGROUND	
Introduction	1
Background of the Study	8
Setting of the Study	9
Theoretical and Conceptual Framework	19
Statement of the Problem	27
Assumption of the Study	29
Hypotheses of the Study	30
Significance of the Study	30
Scope and Delimitation of the Study	32
Definition of Terms	33
2 REVIEW OF RELATED LITERATURE AND STUDIES	
Foreign Literature	40
Local Literature	51
Foreign Studies	55
Local Studies	60

Chapter		Page
3	METHODS AND PROCEDURE	
	Method of Research Used	71
	Respondents of the Study	71
	Sampling Technique	72
	Instrument Used	72
	Data Gathering	74
	Statistical Treatment of Data	74
4	PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA	
	Characteristics of the Respondents	82
	Perception of the Respondents on the Extent of Environment Sustainability Practices in the Selected Higher Education Institutions	94
	Comparison of the Perceptions on the Extent of Environmental Sustainability Practices of the Respondents When Grouped According to Age, Gender, Educational Attainment, School Classification and School Locations	122
	Comparison of the Perceptions of the Respondents on the Different Aspects of Environmental Sustainability Practices	164
	The Proposed Total Quality Environmental Sustainability (TQES) Model	175



Chapter	Page
5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	
Summary of Findings	206
Conclusions	231
Recommendations	232
Bibliography	235
Appendices	
A. Letter of Request to School Heads of the Selected Higher Education Institutions	245
B. Letter of Request of Respondents of the Selected Higher Education Institutions	246
C. Research Instrument for Respondents of the Selected Higher Education Institution (for Administrators, Faculty, Senior Students and Non- teaching Staff)	247
D. Questionnaire Proper for the Respondents of the Selected Higher Education Institutions (for Administrators, Faculty, Senior Students and Non- teaching Staff)	248
CURRICULUM VITAE	255

among the members of the academic community in the selected higher education institutions of Region IV that will bring a clear perspective on what a sustainable university is, where a quest towards the three interrelated objectives of environmental literacy, social responsibility, and ecologic integrity is a part of interdisciplinary learning community in developing and maintaining a sustainable academic environment. This will eventually ensure improvement on the quality of life in the academic community as regards assessing critically the environmental sustainability practices of the higher education institutions pertaining to the different aspects of environmental sustainability practices as regards the concept of environmental sustainability, water conservation, energy conservation, solid waste management, air/atmosphere management, and institutional practices on environmental conservation and protection.

Conclusions:

In the light of the findings, the following conclusions were drawn:

1. That the environmental sustainability activities such as the concept of environmental sustainability, water conservation, energy conservation, solid waste management, air/atmosphere management, and institutional practices on environmental conservation and protection in the selected higher education institutions are all being practiced.

2. That the extent of environmental sustainability practices referring to the concept of environmental sustainability, water conservation, energy conservation, solid waste management, air/atmosphere management, and institutional practices on environmental conservation and protection does not matter however, geographical location of the school would have different environmental sustainability practices.

3. That the practices of the different aspects of environmental sustainability activities are not the same among the respondents.

4. A Total Quality Environmental Sustainability (TQES) Model could be of great help in the selected higher education institutions of Region IV in developing positive values towards the achievement of a sustainable academic community as regards enhancing the six (6) aspects of environmental sustainability practices pertaining to the concept of environmental sustainability, water conservation, energy conservation, solid waste management, air/atmosphere management, and institutional practices on environmental conservation and protection.

Recommendations:

Based on the findings and conclusions of the study, the researcher humbly offers the following recommendations:

1. The selected higher education institutions in Region IV regardless of school classifications and school locations should manifest explicit concern and commitment to and for the environment in terms of integrating the six (6) aspects of environmental sustainability practices as regards the concept of environmental sustainability, water conservation, energy conservation, solid waste management, air/atmosphere management, and institutional practices on environmental conservation and protection into the institution's policy, decision-making process, academic program offerings, and curriculum planning as regards sustainable research-based environmental education curriculum, and research and extension services of the institution.

2. The Proposed Total Quality Environmental Sustainability (TQES) Model may be used and disseminated in seminars, forums, and symposia with uniform concepts pertaining to the six (6) aspects of environmental sustainability practices.

3. Scientific researches which include the development of systems of knowledge distribution for sustainability and the pursuit of institutional capacity to meet the needs of a sustainable academic institution may be conducted.

4. Collaborative models for teaching, research, and community service for enhancing the institution's coordinated planning, decision-

making, and evaluation of the six (6) aspects of environmental sustainability practices as regards the concept of environmental sustainability, water conservation, energy conservation, solid waste management, air/atmosphere management, and institutional practices on environmental conservation and protection may be developed and promoted towards a more sustainable academic environment.

5. Similar studies may be conducted using the Proposed Total Quality Environmental Sustainability (TQES) Model to determine how the higher education institutions in other regions manage their environmental resources in the attainment of a sustainable academic community.

6. The Proposed Total Quality Environmental Sustainability (TQES) Model may be used for trial in higher education institutions in other regions in the promotion of a sustainable academic environment.