

DECLARATION

I Masauso Msoni, declare that this dissertation is my own work and to my knowledge it has not previously been submitted for any other degree at this or any other University.

CERTIFICATION OF APPROVAL

This dissertation by Masauso Msoni is approved as a partial fulfillment of the requirements for the award of the degree of Master of Education in Environmental Education of the University of Zambia.

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DEDICATION

This is a dedication to my wife and children whose encouragement and patience have been immeasurable to me in my studies at the University of Zambia. I thank them for their moral support and understanding when I could not avail myself as much as I should have done during the period of my study. To you all, this is the reward of your endurance. I love you all.

ACKNOWLEDGEMENTS

The author wishes to thank the following people for help rendered during preparation of the report. Special thanks go to friends and colleagues who kindly read and corrected the manuscript and made suggestions. Many thanks go to Mrs. Fungafunga for helping to type the report. The author is also highly indebted to Prof. C.M. Namafe for his guidance and encouragement during the period of writing this report.

The author also sincerely appreciates the relentless effort of the supervisor Dr. L. Mweemba who was always ready and willing to provide very useful guidance and assistance at every occasion to make completion of the report a success.

May The Almighty God Jehovah bless their efforts and the love they demonstrated.

ABSTRACT

Environmental problems at the global, regional and local levels have been escalating at such a rapid rate in the last few decades that they have emerged as a major concern for the international community, particularly the educational planners and curriculum developers. The underlying objective of this study was to determine the integration and frequency of environmental concepts and topics in the pedagogic principles which constitutes the structure of the mathematics curriculum. It was also to determine the actual strategies that have been employed to integrate environmental education into mathematics curriculum, at the same time highlighting the constraints that have been encountered. This study attempted to investigate the extent to which environmental education had been integrated into the mathematics school curriculum of Lusaka urban Basic and Secondary schools. It looked at the attitude of both teachers and pupils towards the programme and how this had affected the integration. The sample of the study was composed of pupils and mathematics teachers from thirty-three selected Basic and High schools in Lusaka urban district. Data were collected using questionnaire, interview schedule and a content analysis guide.

The items which were analyzed included data from self administered questionnaires , mathematics curriculum documents, mathematics textbooks, continuing professional development (CPD), teachers' workshops, activities and practices, especially lesson observations.

The findings of this study revealed that although teachers had positive attitude towards environmental education but they had misconceptions about natural and environmental phenomena. They lacked knowledge about how the environment functioned, consequently, failed to develop environmental literacy as they were not able to incorporate environmental concepts into the mathematics subjects they are teaching.

The study further revealed some high overall levels of environmental issues being captioned in some mathematics curriculum documents, but the way they were presented in these documents and the way teachers approached lesson delivery did not help pupils to develop positive attitudes towards the environment. However, the overall level of environmental issues integration was found to be very high in the primary school section of grades 1 to 7 mathematics textbooks that were analysed, but very low in the secondary school section of grades 8 to 12 mathematics textbooks. The finding of the study also revealed that a multi-disciplinary approach had been used in integrating environmental education into the mathematics school curriculum.

TABLE OF CONTENTS

Declaration.....	i
Certificate of approval.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Abstract.....	v
Table of Contents.....	vi
List of Tables.....	ix
List of figures.....	x
Acronyms.....	xi
List of Appendices.....	xii

CHAPTER ONE: INTRODUCTION

1.0 Introduction.....	1
1.1 Background.....	1
1.2 Statement of the problem.....	3
1.3 Purpose of the study.....	4
1.4 Objectives of the study.....	5
1.5 Research questions.....	5
1.6 Significance of the study.....	5
1.7 Operational definitions.....	6
1.8 Conclusion.....	7

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction.....	8
2.1 The Importance of Integrating Environmental Education into Curriculum.....	8
2.2 Curriculum Integration in Schools.....	10
2.3 Impediments to Establishing Environmental Education into Curriculum.....	11
2.4 The Zambian Education System and Environmental Education.....	14
2.5 Curriculum Integration Models.....	16
2.5.1 Separate Discipline Approach.....	17
2.5.2 Discipline-based Approach.....	17
2.5.3 Inter-disciplinary Approach.....	17
2.5.4 Total Integration Approach.....	17

2.6	The role of Mathematics in Environmental Education.....	18
2.7	Integration of Environmental Education into Mathematics topics.....	20
2.8	Conclusion.....	22

CHAPTER THREE: METHODOLOGY

3.0	Introduction.....	23
3.1	Research Design.....	23
3.2	Study Site.....	24
3.3	Sample Size.....	24
3.4	Sampling Procedure.....	24
3.5	Data Collection Instruments.....	25
3.5.1	Self Administered Questionnaires for Teachers of Mathematics.....	26
3.5.2	Interviews.....	26
3.5.3	Observation.....	27
3.5.4	Content analysis.....	28
3.5.5	Focus Group Discussions.....	29
3.6	Data Analysis.....	30
3.7	Ethical issues.....	32
3.8	Limitations of the study.....	32
3.9	Conclusion.....	33

CHAPTER FOUR: PRESENTATION OF RESULTS

4.0	Introduction.....	34
4.1	Human Resource.....	34
4.2	Teacher Professional Development.....	36
4.3	Environmental Literacy among Teachers.....	38
4.4	Environmental Topics in the Mathematics Textbooks.....	41
4.5	Integration of Environmental Concepts in Schools.....	44
4.5.1	Teaching of Mathematics.....	44
4.5.2	Lesson Observation.....	45
4.5.3	School vision/Mission Statement.....	45
4.5.4	Mathematics Clubs.....	47
4.5.5	Environmental Days.....	48

4.5.6	Green School.....	48
4.6	The analysis of the Mathematics syllabuses.....	49
4.6.1	Mathematics syllabus grades 1-7.....	49
4.6.2	Mathematics syllabus grades 8-9.....	51
4.6.3	Mathematics High School syllabus grades 10-12.....	52
4.7	The Analysis of the grade 1-12 Mathematics textbooks.....	55
4.7.1	Illustrations.....	56
4.7.2	Examples.....	60
4.7.3	Exercises.....	63
CHAPTER FIVE: DISCUSSION OF RESULTS		
5.0	Introduction.....	68
5.1	Teachers of Mathematics and Environmental education.....	68
5.2	Environmental topics and concepts in the Mathematics textbook.....	69
5.3	Integration of Environmental topics and Concepts.....	70
5.4	The Analysis of the Mathematics Syllabuses.....	71
5.5	The Analysis of Mathematics Textbooks.....	71
CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS		
6.0	Conclusions and Recommendations.....	78
6.1	Recommendations.....	80
	References.....	82
	Appendix 1.....	88
	Appendix 2.....	92
	Appendix 3.....	93

LIST OF TABLES

Table 1	Characteristics of the sample by gender.....	35
Table 2	Type of schools respondents drawn from.....	35
Table 3	Age in years of teachers.....	36
Table 4	Teachers of Mathematics knowledge about resource recycling.....	38
Table 5	Teachers of Mathematics knowledge about water disposal.....	39
Table 6	Teachers of Mathematics concepts about energy shortage.....	39
Table 7	Teachers of Mathematics concepts about water pollution.....	39
Table 8	Teachers of Mathematics knowledge about traffic jam.....	40
Table 9	Teachers of Mathematics knowledge about air pollution.....	40
Table 10	Teachers of Mathematics knowledge about climate change.....	40
Table 11	Teachers of Mathematics knowledge about loss of natural resources.	41
Table 12	Environmental topics found in some selected Mathematics textbooks.	42
Table 13	Environmental concepts in Mathematics practical exercises.....	43
Table 14	Mathematics clubs in schools.....	47
Table 15	Lower Basic relevant illustrations in the Mathematics textbooks.....	56
Table 16	Middle Basic relevant illustrations in the Mathematics textbooks.....	58
Table 17	Upper Basic relevant illustrations in the Mathematics textbooks	59
Table 18	High School relevant illustrations in the Mathematics textbooks.....	60
Table 19	Lower Basic School relevant exercises in the Mathematics textbooks	61
Table 20	Middle Basic Schools relevant topics in the Mathematics textbooks	62
Table 21	Upper Basic relevant examples in the Mathematics textbooks.....	62
Table 22	High School relevant examples in the Mathematics textbooks.....	63
Table 23	Lower Basic School relevant exercises in the Mathematics textbooks	64
Table 24	Middle Basic relevant exercises in the Mathematics textbooks.....	65
Table 25	Upper Basic relevant exercises in the Mathematics textbooks.....	66
Table 26	High School relevant exercises in the Mathematics textbooks.....	66
Table 27	A sample of EE proposed integration Basic and High School Mathematics Syllabus	73

LIST OF FIGURES

Figure 1.	Educational level of respondents.....	37
Figure 2.	Institutions of learning.....	38
Figure 3.	Number of environmental topics in textbooks.....	44
Figure 4.	Integration of environmental concepts.....	45
Figure 5.	Status of mission statements.....	46

ACRONYMS

UNESCO	-	United National Educational Scientific and Cultural Organisation
CDC	-	Curriculum Development Centre
CPD	-	Continuing Professional Development
EE	-	Environmental Education
M o E	-	Ministry of Education
LEESF	-	Lesotho Environmental Education Support Project
IUCN	-	International Union for the conservation of Nature and Natural Resources
UNEP	-	United Nations Environment Programme

LIST OF APPENDICES

Appendix	1	-	Questionnaire for teacher.....	87
Appendix	2	-	Interview schedule for Headteachers.....	91
Appendix	3	-	Classroom observation scheduled.....	92