

**THE UNIVERSITY OF ZAMBIA ENVIRONMENTAL EDUCATION PRACTICUM IN
LUSAKA DISTRICT**

By

Kafula Chimba

**A dissertation submitted to the University of Zambia in partial fulfillment of the
requirement for the award of the Degree of Master of Education in Environmental
Education.**

**THE UNIVERSITY OF ZAMBIA
LUSAKA**

2020

COPYRIGHT

No part of this document may be reproduced or used in any form or by any means, mechanical, photocopy, recording or otherwise with prior written permission from the author and publisher.

@

Kafula Chimba

All Rights Reserved.

DECLARATION

I, **Kafula Chimba**, do hereby declare that this dissertation represents a product of my work and it has not been submitted at this or other university, all scholarly work used in this dissertation has been duly acknowledged.

Student Signature:..... Date:.....

APPROVAL

This dissertation of Kafula Chimba is approved as fulfilling part of the requirements for the award of the degree of Master of Education in Environmental Education by the University of Zambia.

EXAMINERS

..... Signature..... Date.....

Examiner 1

..... Signature..... Date.....

Examiner 2

..... Signature..... Date.....

Examiner 3

.....Signature.....Date.....

Chair person, Board of Examiners

.....Signature..... Date.....

Supervisor

ABSTRACT

This study was an investigation on the benefits and challenges of UNZA-EE student practicum in selected attaching institutions in Lusaka District of Zambia. The study was conducted because there was an information gap on the benefits and challenges students faced during their EE practicum at the University of Zambia and attaching institutions. There seems to be very little knowledge about the benefits and challenges of UNZA-EE practicum at the University of Zambia and attaching institutions, hence the need to conduct this study. The study was conducted at the University of Zambia and 10 selected attaching institutions.

This study was concurrent embedded mixed method study. The data collection methods used were semi-structured interviews and questionnaire from a sample of ninety seven (97) respondents. The sample comprised 67 UNZA-EE (2018) fourth year students, 10 EE graduates, 10 UNZA -EE lecturers and 10 officers from selected attaching institution. UNZA-EE (2018) fourth year students were sampled using simple random sampling for quantitative data while purposive sampling was used to sample UNZA-EE lecturers, EE graduates and officers from attaching institutions. Qualitative data was analyzed using thematic approach while quantitative data was analyzed using descriptive statistics in form of tables and charts were generated using Special Package for Social Sciences (SPSS), and in some instance Microsoft Word and Excel were used.

The study revealed that the practicum was an essential component of the EE programme because of the benefits students accrued. The benefits accrued included: increased knowledge in Environmental Issues, acquired new knowledge and exposure from industry, ability to work interdependent and independent and developed moral standards to the environment.

The study also established that there were more challenges and areas in need of improvement about UNZA-EE practicum. Challenges such as poor orientation to practical work at the University of Zambia and attaching institutions, insufficient preparation on EE practicum course work at the university, inadequate evaluation process by UNZA among others. Areas in need of improvement included clarity on the nature of tasks assigned by attaching institutions, poor writing skills and standardized of final attachment preparation reports, inadequate funding for visits by university lecturers among others.

Furthermore, the study established that although the practicum was not that beneficial, it was essential to the trainee students. The study concluded that the UNZA-EE practicum was not very beneficial mainly because the challenges and areas in need of improvement about it outweighed its benefits. Most of these challenges were caused by poor funding of practicals and also lack of funds for effective monitoring and observation of students during their practicum. Inadequate funding had negatively affected the implementation and administration of the practicum programme at UNZA.

The study further recommended that government through the Ministry of Higher Education should increase funding to the University of Zambia, particularly the School of Education and specifically the Environmental Education Unit.

Key words: Attaching institutions, benefits, challenges, practicum, areas of improvement and way forward.

DEDICATION

This work is dedicated to my dearest wife, Racheal Kafula, and our beloved children Samuel, Joy, Joshua and Muhau for their patience, support and understanding during my studies.

ACKNOWLEDGEMENT

I am greatly indebted to my supervisor, Professor Charles M. Namafe for his kindness, guidance, encouragement and careful revision of my work, without which this dissertation would not have been possible. My heart felt appreciation goes to Mr M. Muchanga for his tireless effort in the development of my proposal. I give the gratitude and honour that is due to my course lecturers Dr. L. Mweemba, Mr J. Muyunda and Mr M. Muchanga for your tremendous support and encouragement. May God Almighty bless you.

Many thanks also go to my family. You have been a great source of encouragement and inspiration to me as I have observed how most of you work hard to achieve your goals. This also encouraged me to work hard towards this work. To my wife, my love and best friend, Racheal Kafula, thank you for your prayers, love and support. When I felt like giving up on this work, you were there to encourage and push me in the right direction.

I also wish to express my gratitude to stakeholders from various attaching institutions, fourth year (2018) students and EE graduates for the cooperation they rendered to me during the collection and analysis of data. May I also sincerely thank Mr T.K. Phiri, the EE Practicum Coordinator at the University of Zambia, School of Education for his encouragement and support during this study.

Above all, I thank the Almighty God, Jehovah Ebenezer for bringing me this far.

TABLE OF CONTENT

COPYRIGHT	i
DECLARATION	ii
APPROVAL	iii
ABSTRACT	iv
DEDICATION	v
ACKNOWLEDGEMENT	vi
LIST OF FIGURES	xiii
LIST OF TABLES	xiv
LIST OF APPENDICES	xv
ABBREVIATIONS/ACRONYMS	xvi
DEFINITIONS OF KEY TERMS	xvii
CHAPTER ONE: INTRODUCTION	1
1.1 Overview	1
1.2 Background to the Study.....	1
1.3 Statement of the Problem.....	2
1.4 Purpose of the study.....	3
1.5 Specific Objectives	3
1.6 General Research Question.....	3
1.7 Specific Research Questions.....	3
1.8 Significance of the study.....	3
1.9 Delimitation of the study	4
1.10 Limitations of the study	4
1.11 Conceptual framework.....	4

1.12 Theoretical Framework.....	5
1.13 Environmental Education context of the study.....	6
1.14 Structure of the Dissertation.....	7
1.15 Summary of Chapter One.....	8
CHAPTER TWO: REVIEW OF RELATED LITERATURE.....	9
2.1 Overview.....	9
2.2 Historical perspective of Environmental Education.....	9
2.3 Background of student attachment in Environmental Education in Zambia.....	11
2.4 Trends in Students' EE Practicum.....	11
2.5 Practicum and Professional Development in EE.....	12
2.6 Importance of Practicum.....	13
2.7 Studies Related to this Investigation.....	14
2.8 Summary of the Reviewed Literature.....	17
CHAPTER THREE: RESEARCH METHODOLOGY.....	18
3.1 Overview.....	18
3.2 Paradigmatic Orientation of the study.....	18
3.2.1 Analytic Eclecticism.....	18
3.2.2 Ontological Assumption.....	19
3.2.3 Epistemological Assumptions.....	19
3.3 Research Design.....	20
3.4 Target Population.....	21
3.5 Sampling Design.....	21
3.6 Sampling Technique.....	21
3.7 Sample Size.....	22
3.8 Research Instruments.....	22

3.8.1 Questionnaire	22
3.8.2 Semi- Structured Interview Schedule	23
3.9 Data Collection Procedure and Time Line.....	23
3.10 Data Analysis Instruments and Procedures.....	23
3.10.1 Quantitative Data Analysis	23
3.10.2 Qualitative Data Analysis	24
3.11 Types of Data Collection	25
3.11.1 Primary Data.....	25
3.11.2 Secondary Data	25
3.12 Ethical Considerations	25
3.13 Validity and Reliability.....	26
3.14 Chapter Summary	26
CHAPTER FOUR: PRESENTATION OF FINDINGS.....	27
4.1 Overview.....	27
4.2 Demographic Characteristics of Respondents	27
4.3 Benefits of UNZA’s EE Practicum.....	29
4.3.1 Increasing Knowledge in Environmental Issues.....	30
4.3.2 Acquiring new knowledge and exposure from industry	30
4.3.3 Ability to work independently	30
4.3.4 Developing moral standards to the environment	31
4.3.5 Acquiring field work and practical environmental skills.....	31
4.3.6 Developing Communicative and Investigative Skills.....	31
4.3.7 Applying theory to real environmental issues	31
4.4 Challenges of UNZA’s Environmental Education Practicum	32
4.4.1 Poor Orientation to Practical Work at UNZA and Attaching Institutions.....	33
4.4.2 Insufficient Preparation on EE pre-practicum Course work.....	34

4.4.3 Inadequate Evaluation Process by UNZA and Attaching Institutions.....	34
4.4.4 Lack of Communication and Follow-ups by lecturers.....	34
4.4.5 Short Practicum Duration	34
4.4.6 Environmental Education not clearly known by Institutions.....	35
4.4.7 Source of Cheap Labour	35
4.4.8 Heavy Work Load.....	35
4.4.9 Financial Constraint.....	35
4.4.10 Limited Attachment Places	36
4.5 Areas in need of improvement about UNZA’s EE Practicum.....	36
4.5.1 Nature of tasks assigned by Attaching Institutions.....	37
4.5.2 Poor Writing Skills	37
4.5.3 Inadequate Funding of University Lecturers’ visits.....	38
4.5.4 Poor Communication Skills	38
4.5.5 Grading System not Clear.....	38
4.5.6 Improper Supervision at Attaching Institutions	38
4.5.7 Misplacement of Students.....	39
4.5.8 Lack of Computer Skills	39
4.5.9 Lack of Motivation	39
4.5.10 Uncomfortable and hectic working environment	39
4.6 Measures for the way forward concerning UNZA’s -EE Practicum.....	40
4.7 Chapter Summary	41
CHAPTER FIVE: DISCUSSION OF FINDINGS.....	42
5.1 Overview.....	42
5.2 The benefits of the UNZA’s Environmental Education Student Practicum.....	42
5.2.1 Increased Knowledge in Environmental Issues	42
5.2.2 Acquired new knowledge and exposure from the industry	42

5.2.3 Ability to work independently and interdependently.....	43
5.3 The challenges of UNZA’s Environmental Education Student Practicum.....	43
5.3.1 Poor Orientation to Practical work at UNZA and Attaching Institutions.....	43
5.3.2 Insufficient preparation on EE Practicum course work	44
5.3.3 Inadequate evaluation process by UNZA and Attaching Institutions.....	44
5.3.4 Lack of Communication and Follow-ups by University Lecturers	44
5.3.5 Short Practicum Duration	44
5.3.6 EE not clearly known by many institutions	45
5.3.7 Students were used as cheap labour.....	45
5.3.8 Heavy work load.....	45
5.3.9 Financial Constraint.....	46
5.3.10 Limited Attachment Places	46
5.4 The areas in need of improvement about UNZA’s EE student practicum	46
5.4.1 Clarity on the nature of tasks assigned by attaching institutions	47
5.4.2 Poor Writing Skills (Poor Communication skills).....	47
5.3.3 Inadequate Funding for Visits by University Lecturers.....	47
5.3.4 Poor Oral Communication Skills and Lack of Courtesy	48
5.3.5 Grading System for Practicum was Ambiguous.....	48
5.3.6 Improper Supervision at the Attaching Institutions	48
5.3.7 Misplacement of Students during Practicum	48
5.3.8 Lack of Computer Skills	49
5.3.9 Lack of motivation.....	49
5.3.10 Uncomfortable and hectic working environment	49
5.5 Proposed measures for the way forward concerning UNZA’s EE student practicum...	49
5.5.1 Need to bridge the gap between theory and practice	50
5.5.2 UNZA-EE lecturers should adequately prepare students for the practicum.....	50

5.5.3 EED 9003 must be time-tabled and seriously taught with Continuous Assessment	50
5.5.4 Design a standardised assessment.....	51
5.5.5 Student placement should be done by UNZA in recognised institutions.	51
5.5.6 For objectivity all EE lecturers must participate in students’ assessment	51
5.6 Summary of Discussion of Findings.....	51
CHAPTER 6: CONCLUSION AND RECOMMENDATIONS.....	53
6.1 Overview.....	53
6.2 Summary of the Dissertation	53
6.3 Conclusion	53
6.4 Recommendations.....	55
6.5 Areas for Future Research	56
REFERENCES.....	57
APPENDICES.....	65

LIST OF FIGURES

Figure 1.1 Conceptual Framework	5
Figure 3.1 The Embedded Design.....	22
Figure 4.1 Age Distribution of Participants.....	29
Figure 4.2 Distribution of Marital Status of Participants.....	29
Figure 4.3 Proposed Measure to enhance UNZA's EE Practicum.....	44

LIST OF TABLES

Table 4.1 Distribution of Participant by Gender.....	28
Table 4.2 Benefits of UNZA'S EE Practicum.....	30
Table 4.3 Challenges of UNZA'S EE Practicum.....	34
Table 4.4 Areas in need of improvement about UNZA'S EE Practicum.....	38

LIST OF APPENDICES

Appendix 1: Letter of Consent.....	73
Appendix 2: Authorisation Letter -UNZA School of Education.....	74
Appendix 3: Semi-Structured Interview Schedule for EE Graduates	75
Appendix 4: Semi-Structured Interview Schedule for UNZA-EE Lecturers.....	77
Appendix 5: Semi-Structured Interview Schedule for Officials in Attaching Institutions..	79
Appendix 6: Questionnaire for UNZA-EE 2018 fourth year students.....	81

ABBREVIATIONS/ACRONYMS

EE	Environmental Education
EEP	Environmental Education Practicum
ECZ	Environmental Council of Zambia
GIS	Geographic Information System
MCD MCH	Ministry of Community Development, Mother and Child Health
MOE	Ministry of Education
MOH	Ministry of Health
MTENR	Ministry of Tourism, Environment and Natural Resources
NPE	National Policy on Environment
NGO	Non-governmental Organisation
NISTCOL	National In-service Teachers' College
RPDT	Resolving Paradoxical Dilemmas Theory
SPSS	Statistical Package for Social Sciences
UN	United Nations
UNEP	United Nations Environmental Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNZA	University of Zambia
ZANEEP	Zambia Network for Environmental Educators and Practitioners
ZEMA	Zambia Environmental Management Agency

DEFINITIONS OF KEY TERMS

Attaching Institutions: These are institutions where students go for their community based experience.

Areas in need of improvements: Refers to areas of weaknesses of UNZA's EE practicum.

Benefits: Refers to areas of strength of the UNZA's EE practicum.

Challenges: Problems faced by trainee student during his/her practicum (in and outside the classroom) and prevent or weaken the implementation of EE practicum effective.

Practicum: A program that provides a meaningful field experience offered by the School of Education and Environmental Education Unit in particular.

Way forward: Refers to the immediate actions to be taken to enhance the practicum for the future.

CHAPTER ONE: INTRODUCTION

1.1 Overview

This chapter gives a clear understanding of the study and where the problem under investigation is emanating from. It will also give the statement of the problem, research objectives, questions, purpose of the study, significance of the study, delimitation, limitations, theoretical framework and the conceptual framework.

1.2 Background to the Study

Higher education institutions are under increasing pressure to properly prepare their graduates for the world of work; and within professional courses, the practicum continues to be an important means by which this expectation is addressed. Depending on the discipline, the practicum appears in many forms: as internship, field experience, cooperative education, sandwich program, clerkship, clinical practicum, and the like (Ryan, 1996).

According to Cochran and Lytle (1999), learners learn effectively by doing. Following this philosophy, Environmental Education (EE) programme should embed field experiences, practicum and student teaching within their programmes. These experiences have been credited for being an important bridge between theory and practice allowing teacher candidates and trainee Environmental Educators opportunity to develop and apply knowledge, skills and best-practice using the theoretical underpinnings learned in academic courses. Practical engagement especially where EE is concerned would morph into authentic practical experiences.

Cochran and Lytle (1999) further add that the main objective of practicum should be to provide students with authentic hands on experience. This is needed to develop their hands on skills and to start collecting experiences to enrich their professional development. They further that “it is not enough to read about teaching or to observe others teach, something students have done for years, instead they have to practice because practical knowledge and skills cannot easily be forgotten.” Student teachers such as those in EE need to apply epistemic skills through practice. They would also gradually start developing these epistemic skills into action competence.

During practicum, students particularly those in EE would start to develop their professional identity and see themselves as members of the profession. To develop this identity, Korthagen (2006) emphasizes the need to participate in social practices. Contextually, this social participation can partly be realized through practicum such as those offered through EE. Sim (2006) states that practicum experiences would enable trainee teachers such as those in EE to

develop tolerance, respect, collaborative learning and knowledge production. In the field of practice students are able to integrate theory and practices, gain mastery of intervention skills and learn to deal with ethically diverse situations. In addition, it is in the practicum where students experience and explore how personal and profession aspects of self-come together. Rather than obliterating the identity of the learner, practical learning as being promoted through EE programmes at the University of Zambia (UNZA) would help students face emotions and personal value judgments elicited in their practice. Much as we appreciate the EE practicum through which trainee Environmental Educator at UNZA undergo, there is very little known about the benefits by students during the practicum. Therefore the purpose of this study was to investigate the benefits of Environmental Education practicum on students and selected attaching institutions in Lusaka District of Zambia.

1.3 Statement of the Problem

Practicum has been hailed for integrating classroom education with practical experience in enabling students to develop their professional knowledge and professional skills. (Beard, 1998). Furco 1996 states that practicum has been viewed by different researchers as offering a diversity of benefits to student interns. It engages the student interns in service activities primarily for the purpose of providing them with hands-on experience that enhances their learning. On the other hand, some studies reveal that practicum programme is also faced with challenges. Carlson (2002) points out that students face some challenges during their attachments. The EE curriculum at the University of Zambia recognizes that one way to effectively educate EE students is by sending such students to institutions or communities for attachment or practicum in order for them to have hands-on experience. Although students go to attaching institutions for their practicum, little is known on the benefits and challenges of the University of Zambia's EE practicum on students. Such little knowledge on the benefits and challenges of the EE practicum constitutes a problem in various ways. Firstly, Environmental Educators may not know the potential benefits and challenges of Environmental Education student practicum and secondly, this may create difficulties for the university to improve the practicum programme. The present study was conceived to try and investigate the stated problem.

1.4 Purpose of the study

The aim of this study was to examine the EE practicum offered at the University of Zambia, School of Education with respect to selected institutions in Lusaka District.

1.5 Specific Objectives

The above aim was addressed through the following specific objectives:

- (i) To determine benefits of UNZA's EE students accrue during their practicum.
- (ii) To find out challenges UNZA's EE students face during their practicum.
- (iii) To establish areas in need of improvement on UNZA's EE student practicum.
- (iv) To propose measures for the way forward concerning UNZA's EE student practicum.

1.6 General Research Question

The study addressed the following general research question:

What are the benefits and challenges of the UNZA's EE practicum on its students?

1.7 Specific Research Questions

To address the above general question, the following specific research questions were posed:-

- (i) What are the benefits UNZA's EE students accrue during their practicum?
- (ii) What are the challenges UNZA's EE students face during the practicum?
- (iii) Which areas may be in need of improvement with regard to the UNZA's EE students practicum?
- (iv) What measures can be proposed for the way forward concerning UNZA's EE student practicum?

1.8 Significance of the study

The findings of this study may establish the benefits and challenges of the EE practicum on students. They may also enable environmental educators in general and those at the University of Zambia in Particular, to identify the gaps, reflectively rethink and re-imagine what they have been doing in order to make Environmental Education in general and, particular the EE Practicum relevant to students' academic and professional needs. Further, the findings may also help policy makers to reshape the policies related to Environmental Education.

1.9 Delimitation of the study

This study was conducted at the University of Zambia and limited to 10 selected attaching institutions. Research findings may not therefore, apply to other organizations and universities in the whole country.

1.10 Limitations of the study

Permission to interview some people was tedious due to the bureaucracy in some organizations and government institutions. Individual interviews were not easy to organize as the respondents kept on postponing the meeting times and dates. As a result, the postponements dragged the research period, hence making it more costly for the researcher in terms of transport logistics. Environmental Education is an emerging subject in Zambia. Therefore, another major limitation of the study was lack of availability of literature on the University of Zambia EE Practicum and attaching institutions in Lusaka District of Zambia. As a result, most of the literature reviewed was related within Zambia and from studies done outside. However, this was used as a spring board for carrying out this study to contribute to the body of knowledge.

The next section brings out the conceptual framework of the research and how this dissertation was organized.

1.11 Conceptual framework

According to Miles and Huberman (1994:18) a conceptual framework may be defined as “a visual or written product that explains either graphically or in narrative form, the main things to be studied, the key factors, concepts or variables and the presumed relationships among them.” Furthermore, Orodho (2009) opines that a conceptual framework is defined as a model of presentation where a researcher represents the relationship between variables in the study and shows the relationship diagrammatically. In other words, a conceptual framework shows the way ideas are organized to achieve a research purpose.

Figure 1.1 is an illustration of a conceptual framework for this study.

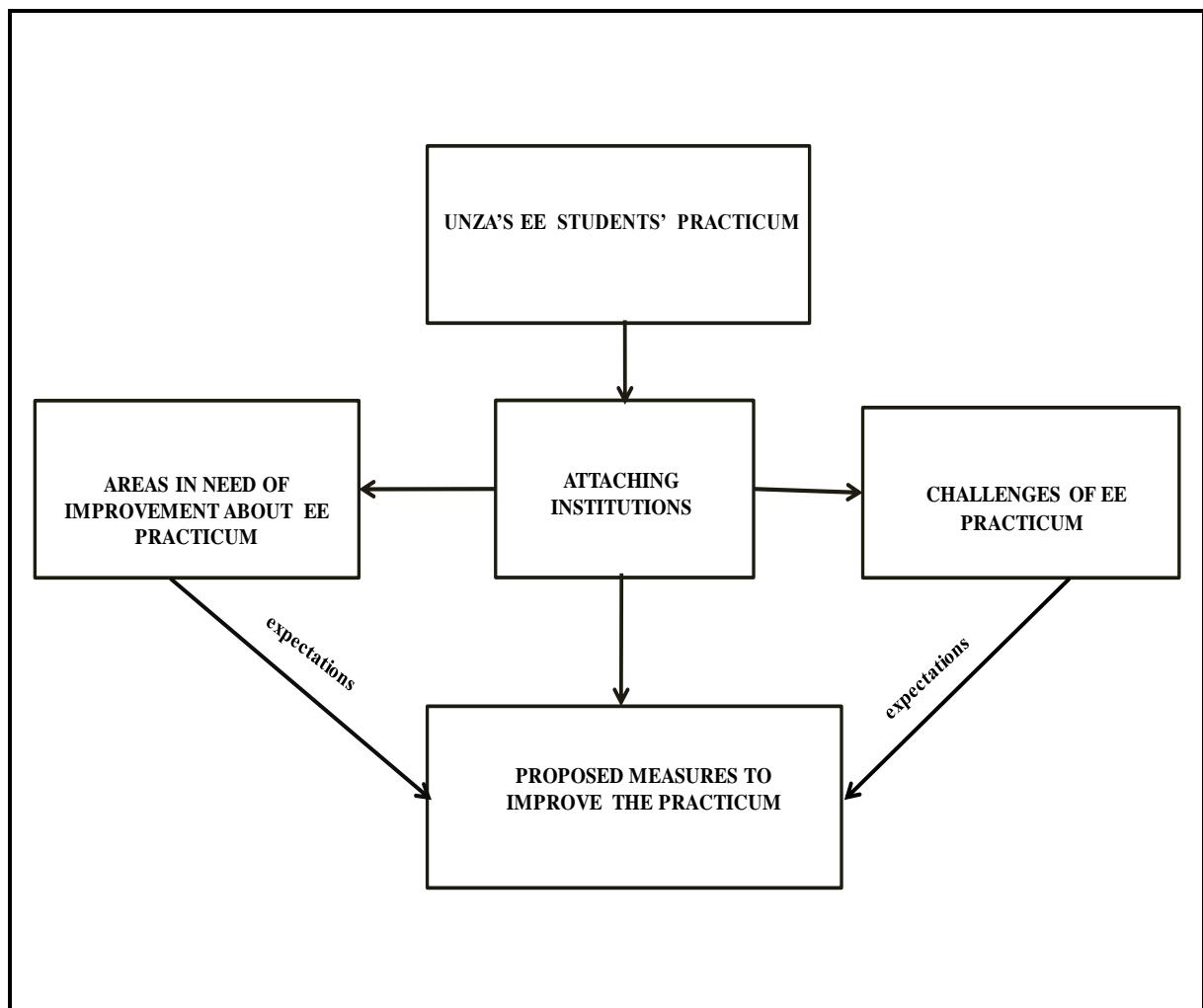


Figure 1.1 Conceptual Framework of the research

Source: Author Constructed.

EE students during their practicum in attaching institutions face a number of challenges and have a lot of areas in need of improvement. To this effect, certain measures should be put in place in order to improve or enhance the practicum

1.12 Theoretical Framework

Swason (2013) asserts that theories are formulated to explain, predict and understand phenomena and in many cases to challenge and extend existing knowledge with the limits of critical binding assumptions. A theoretical framework is a structure that can hold or support a

theory of a research study. The theoretical framework introduces and describes a theory that explains why a research problem under study exists. This study was guided by one of the appreciative theories of change known as Resolving Paradoxical Dilemmas Theory (RPDT) popularized by Cooperrider and Whitney (2011) and Bushe (2007). To appreciate means valuing or the act of recognizing the best phenomena around us; affirming past and present strengths, successes and potentials; to perceive those things that give health, vitality, excellence to social systems. In its specific context to this study, RPDT guided systematic discovery of what people in professional institutions and people attached to such institutions think about strengths, and weaknesses; failure and successes of EE practicum in terms of its capability to foster institutional, professional and social development. RPDT was critical in building constructive relationships between the intent of the EE practicum and what people talk about as its past and present capabilities, achievements, unexplored potentials, innovations, strengths, opportunities, benchmarks, high points moments, strategic competences and insights into its main vision for the future (Cooperrider and Whitney, 2011). Currently, and in as far as EE practicum is concerned, such parameters are still in a gray, if not a black box. Hence, they need to be examined from the view of institutional and academic relevance of EE practicum as offered by EE programme at the University of Zambia.

1.13 Environmental Education context of the study

Environmental Education may be defined as a process directed at creating awareness and understanding the environmental issues that lead to responsible individual and group actions (Kansas, 2012). The components include: awareness, knowledge, attitudes, skills and participation all of which could be perfected or shaped through Environmental Education practicum which all EE students at the University of Zambia have to undergo before graduation. Students' practicum in EE would firstly create awareness on the issues of EE to various institutions and society at large, help disseminate knowledge about EE to people who have no idea of what it is all about and improves student's perception on how society looks at environmental issues. Moreover, once the society has the knowledge, their attitudes towards the environment would change. Student attachments promote improvement of skills in students as well as employees they find in various institutions they are attached to. Student attachment to institutions also promotes participation by various stakeholders in the society, which leads to an effective dissemination of the knowledge of EE to many people.

The University of Zambia has contextually structured its EE program within the framework where, EE is being offered within the institution and at the same time working towards integrating it into the broader community through a course EED 9003 “Environmental Community Experience Practicum.” This course is compulsory for all fourth year students. Its aim is to introduce students to practical educational issues in need of investigation whose roots are environmental. For this task, students will require to identify an environmental problem or question that can be addressed or answered through educational means. This practicum is undertaken during the same period as School Teaching Practice (Phiri,2016). The aim of EED 9003 at the University of Zambia is to prepare students to:

- (a) demonstrate investigative skills on an environmental topic arising from the areas of education that they have studied so far. This will enable students to demonstrate the application of their skills and knowledge which they have acquired at the university on any given Environmental topic from the areas of education that they have studied.
- (b) plan and execute an investigation to explore an environmental question at local scale leading to a report. This will present students with opportunities to learn from field work.
- (c) acquire techniques and the art of report writing skills. For instance, students who intend to do their attachment at Zambia Environmental Management Agency.
- (d) write reports on Environmental Impact Assessment so that at the end of the attachment students are able to write a report of their experiences gained from the attaching institutions.
- (e) employ education as a means to addressing the environmental question or issue note above. Students will be able to use Education for Sustainable Development, as a means of addressing environmental concerns that may be encountered in the community.
- (f) help environmental educators to address environmental problems by sensitising and educating the community on the issues of sustainable development. Education is an essential tool for achieving sustainability (ZEMA, 2011).

1.14 Structure of the Dissertation

There are six chapters in this dissertation. The first chapter provides general information to the study and the background to the problem being investigated. It further justifies the importance of such a research. The chapter further outlines the objectives of the study, the research

questions, operational definitions, conceptual framework as well as a detailed Environmental Education context of the study. The second chapter reviews related literature from different researchers who have looked at the practicum. The third chapter discusses the methodology that was implored in the study. The study adopted both qualitative and quantitative approaches. The fourth chapter presents the findings of the study by arranging the data to make it clearly understood. The fifth chapter presents the discussion of all data collected and outlines how the objectives were achieved. The sixth chapter presents the conclusion and makes recommendations to the study and proposes areas for further research. Just after the sixth chapter are the references and the appendix respectively.

1.15 Summary of Chapter One

This chapter introduced the study on the examination of the University of Zambia's Environmental Education Practicum in Lusaka District, Zambia. The chapter also presented the background to the problem, the problem statement, research objectives and questions, purpose of the study, significance of the study, the conceptual and theoretical frameworks applied to the study. The next chapter provides a review of literature related to this study.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Overview

This chapter focuses on literature reviewed on the historical perspective of Environmental Education, background of student attachment in Environmental Education in Zambia. It will also focus on the trends in students' EE practicum at the University of Zambia, practicum and professional development in EE, as well as studies related to this investigation.

According to Bless and Higson-Smith (2000), literature review is defined as a crucial summary and an assessment of the current state of knowledge or state of the art in a particular field. Cowell (1999:34), also defines literature review as, "summarised published information on a particular subject matter at a given period of time". From these definitions, literature review then can be defined as written materials on a specific topic involving getting information from such sources as journals, magazines, books, research dissertations and theses. Going through these written materials is indispensable before embarking on a research.

2.2 Historical perspective of Environmental Education

The roots of Environmental Education can be traced back to as early as the 18th century when Jean-Jacques Rousseau stressed the importance of an education that focuses on the environment. Jean-Jacques Rousseau maintained that education should include a focus on the environment which is one of the main things a teacher has to do to facilitate opportunities for the students to learn. Several decades later, Louis Agassiz, a Swiss-born naturalist, echoed Rousseau's philosophy as he encouraged students to Study nature not books. This was known as the Nature Study. These two influential scholars helped lay the foundation for Environmental Education, (McCrea, 2006). The first landmark in the history of Environmental Education at the international level was the United Nations' Conference on the Human Environment (UN, 1972) which strongly expressed the need for an international framework for the development of Environmental Education. The Stockholm Conference was the creation of the United Nations Environment Program (UNEP) which has the mission "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and people to improve their quality of life without compromising that of future generations". However, the Stockholm conference had accomplished little to concretely integrate environmental concerns into development policies and plans, (McKeown, 2002).

In Zambia, the integration of EE into the education system was recognised to be one of the most effective ways of ensuring that environmental management occupies a significant role in the society (Mweemba, n.d). One strategy of achieving EE and public awareness was through mandatory EE in all formal and non-formal education institutions (MTENR, 2007).

However, EE was also carried out in informal education systems although not emphasised in the National Policy on Environment (NPE). In non-formal education systems, EE is targeted at both the literate and non-literate people who are out of formal learning institutions (Oduro-Mensah 1992). The Ministry of Education through its National Policy on Education, 'Educating Our Future' recognises the need to produce a learner capable of participating in the preservation of the ecosystem in one's immediate and distant environments (MoE, 1996). Formal EE has been introduced in principle, in colleges of education and schools through the Ministry of Education (MoE). The recognition of EE in learning institutions by both MoE and MTENR calls for competent environmental educators to implement it. Teacher education institutions and teacher educators have been identified by UNESCO as key change agents in re-orienting education to address sustainability (Mckeown, 2010).

Primary Colleges of Education are involved in the training of both pre and in-service teachers responsible for EE implementation in primary schools. Previously, EE was undertaken as a separate subject at Chalimbana National Inservice Teachers' College (NISTCOL) for primary school teachers pursuing Primary Teachers' Diploma by Distance Learning. However, at pre-service teacher training colleges and school levels, EE is not taught as a separate subject or study area but as a crosscutting issue. Musonda (1999) outlined that EE is identified as an area of concern that cuts across disciplines and therefore, tries to synthesis knowledge pooled from several disciplines. Hence, every lecturer in all study areas is expected to teach it in some form or the other (Namafe, 2006). This entails that all lecturers in colleges of education should be knowledgeable and competent to deliver EE in their lessons. MoE (1996) acknowledges that teacher quality is the key to meaningful personal and national development and that the quality and effectiveness of an educational system depends on the quality of its teachers. Therefore, the availability of qualified and competent environmental educators in colleges of education and schools is critical to its effective implementation and survival.

The foregoing studies focused on the global historical perspective of EE and the integration of EE in formal and informal education institutions in Zambia. EE in Zambia has been taken as a crosscutting issue hence the integration. However, this study focuses on the EE programme at

UNZA and specifically on the benefits and challenges that EE students face during their practicum from the attaching institutions.

2.3 Background of student attachment in Environmental Education in Zambia

The practicum commenced in 2011 when the first cohort of student Environmental Educators were in their fourth year. During the practicum students spent an entire term, roughly a period of four months, at an institution of their choice. The students' assessment during this practicum was based on field observation by an Environmental Education lecturer visiting the student at an institution of attachment, an appraisal from the student's supervisor within the institution of attachment as well as assessment of the student's attachment file, and institutional sustainability status report written by the student (Phiri, 2016). Since then the EE practicum has grown roots and every fourth final year student was to undertake these field experiences before their graduation. The attachment of students through practicum since 2011 has helped to open in-roads in a number of institutions that previously were not aware of Environmental Education or didn't have a clear understanding of what it is. Once an EE student reports to an institution for practicum they basically had two responsibilities, that is, to fit into the institution's day-to-day operations and assimilate as much as they can, as well as, to offer innovative solutions to environmental sustainability problems at the institution's behest (Phiri,2016).

However, since its inception in 2011 there has been no study on the benefits and challenges of the EE practicum on its students. This was what necessitated the researcher to undertake this study.

2.4 Trends in Students' EE Practicum

According to Phiri (2016) a statistical analysis of the 416 students that took part in the practicum from 2011 to 2014 revealed that a total of 92 students were attached to Clinics and Hospitals under the Ministry of Community Development, Mother and Child Health (MCDMCH) and Ministry of Health (MoH). This number accounted for 22% of the overall number of students that took part in the school/community experience. This was closely followed by 20% of students attached to various Non-Governmental Organisations (NGOs). A further 15.1% were attached to the councils under the Ministry of Local Government and Housing right across the country.

The trend in students' EE practicum shows that most students go for attachments in government institutions compared to NGOs. Despite students going for the practicum in

attaching institutions, little is known on the benefits and challenges students face during the practicum.

2.5 Practicum and Professional Development in EE

Practicum has been defined differently by different authorities. McMahon and Quinn (1995) note that practicum is supervised work experiences whereby students leave their institutions and get engaged in work related programmes, during which period they are closely supervised by experienced job incumbents. The philosophy behind practicum is to put into practice the theoretical essences and applying this correctly in the work situation (DuBey et al,1985). To this end, practicum is any carefully monitored piece of work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience or duration of attachment.

Practicum is supervised discipline and career-related work experience that involves active learning, critical reflection and professional development (Gavigan, 2010). Trainee students of EE are required to apply real world experiences to the academic content and use this knowledge to make informed decisions about their career paths. Taylor (1988) in a study found that academicians, practitioners and students themselves have widely extolled the benefits of practicum. They view practicum as structured career and relevant work experiences obtained by students prior to graduation from academic programmes. Schambach and Kephart (1997) submitted that practicum during college offer variety of benefits to students such as increasing opportunities for finding jobs upon graduation, reinforcing the skills learned from courses, gaining better understanding of organizations and solidifying career focus.

Herr (2000) believed that internship education allows for the linkage between theoretical and methodological structures. The linkage between the two areas allows students and universities/colleges the opportunity to explore the ever-changing environment of professional work and maintain a connection to the theoretical knowledge. Due to frequent professional practice changes, it is vital that continuity between the stakeholders and the professional development of students is present in higher education.

Joyce et al. (1976: 6), defined professional development as “formal and informal provisions for the improvement of educators as people, educated persons, and professionals, as well as in terms of the competence to carry out their assigned roles.” Internships allow students to link their professional training with their classroom education.

Students usually have a goal of entering into a career after obtaining their degree. A college degree is the gateway to economic advancement (Roska, 2005). Colleges and universities must

prepare those students who want to enter into their career directly after graduating. Educators believe a linkage between students' participation in an internship and transition to the profession does exist (Matthew, Taylor & Ellis, 2012). Students seek education as a way to enter into their career field, colleges and universities therefore they should assist students with preparations for employment after graduation. The ever changing employment market causes students to desire employment preparation beyond the classroom education. Universities and colleges can provide students with educational preparation through internships.

Internship allows students to engage in career development and gain employment skills. Through internship students can develop good working habits and other personal qualities, become more confident in order to contribute towards enhancing the early employment experiences (Birch et al. 2010). Haimson & Bellotti (2001) discovered that internship provides students with valuable, first-hand, work-based experiences and relevant workplace skills. Beard (2007) asserted that well-organized and carefully supervised internship programs can enhance students' skills, and help develop the competencies for classroom learning as well as employment. Research studies also reported that the students have the possibility to gain appreciation of professional careers and specific skills needed for success in their chosen profession (Beard 2007).

However, little is known on how beneficial the EE practicum at UNZA is in the professional development of students.

2. 6 Importance of Practicum

Practicum has offered different benefits to different people (Furco, 1996). It provides students with hands-on experience so that they enhance their learning or understanding of issues relevant to a particular area of study (Lubbers, 2001). Furthermore, practicum has assisted the internee to bridge the gap between the academic learning process and the practical reality (Furco,1996). In some fields such as accounting students' academic performance improved notably (English and Koeppen, 1993). In support, Beard (1998) established that students involved in practicum had their knowledge base and motivational level enhanced drastically. Further benefits include improvement in career-related direction, gaining practical experience (Lubbers, 2001), improved marketability of graduates (Swift and Kent, 1999), interpersonal skills (Beard and Morton,1999) and understanding of the theories of classroom learning (Cook *etal.*, 2004).

Scott (1992), states that practicum is the best way for students to explore the suitability of a particular job. It bridged the gap between the theory of the classroom and the world of practice (Nevett,1985). It was also perceived as a valuable way to acquire broad competencies where the practical knowledge obtained supports and complements the theoretical studies learnt in classrooms (Mihail, 2006). According to Knechel and Snowball (1987), internship attachments were found to enhance students' performance in their courses. When it comes at the end of the final semester, a practicum of such nature would not contribute much to their academic attainment. Practicum is meant to improve students/performance, growth and effort (Cabell, 2000).

Practicum has been seen to be beneficial in socialising the student through training and teamwork assignments at the workplace (Lubbers, 2008). Mihail (2006) noted that interns have successfully developed their personal skills, particularly relating to information technology, time management, communication skills, teamwork, specialist knowledge and ability to prioritize tasks. Poole (2004) points out that students develop an awareness of self in the practicum, practice skills to enhance the well-being and development of people with other abilities, learn to use oral and written communication that are consistent with the language of practicum setting and profession and get opportunities to critically assess, implement and evaluate institution policies and procedures within ethical guidelines. Some students on attachment were of the opinion that they gained interpersonal skills in the real work situation. This is probably so in situations whereby they interact and communicate on issues that may need group approaches (Mihail, 2006). Bearing in mind that conflicts are always in existence in organisations, the interns are therefore exposed to situations which assist them to develop the interpersonal skills for use in their present and future organizations. However, little is known on the importance and relevance of the EE practicum at the University of Zambia. This also prompted the researcher to conduct this study.

2.7 Studies Related to this Investigation

The study done in Jordan by Hamaidi et al (2014) investigated student-teachers' perspective of practicum practices and challenges. The findings of the study revealed that the participants had benefited from the practicum practices in the development of many teaching skills. Hamaidi et al (2014) in his study concentrated much on the benefits of teaching skills, while the present study focused on many benefits UNZA-EE students accrue during their practicum experience. Hamaidi et al (2014) also revealed the challenges that student teachers encountered during their practicum as lack of guidance provided by practicum supervisors, issue of assessment, problem

of understanding and handling of teaching assignments during their practicum, absence of cooperative teacher's orientation and guidance role. The above study concentrated on the perception of challenges encountered by student-teachers' teaching practice in general, while the present study focused on the challenges student faced during their EE practicum in particular. Hence, this study.

The foregoing study focused on the student-teachers' perspectives of the practicum experiences and challenges, while the present study focused on examining benefits and challenges students undergo during the EE practicum.

Another study done in Ethiopia by Halulu (2013) assessed the practice and challenges of practicum implementation programme at Abbi Addi College of Teachers' Education in Tigray Region. The main findings revealed that student-teachers had positive perception towards the role of practicum programme in promoting their pedagogical skills as well as subject matter knowledge. Halulu (2013) focused on the perception of the practice in the implementation of the practicum programme in general, while the present study concentrated on the benefits of UNZA-EE student practicum in particular. The previous study also revealed that it faced many challenges which hindered the implementation of the practicum programme as lack of appropriate criteria for evaluation, intermitted supervision of the college and lack of adequate school facilities. The above study concentrated on the challenges which hindered the implementation of the practicum programme in general, whereas the present study focused on the challenges faced by UNZA-EE students as they undergo their practicum. Therefore, the need of conducting this study.

The study focused on the practice and challenges of practicum implementation programme at the College of Teacher Education in Ethiopia, while the present study focused on examining the benefits and challenges students undergo during their EE practicum.

The study done in Zimbabwe by Bukaliya (2012) investigated on the potential benefits and challenges of internship programme in an Open Distance Learning, a case study of the Zimbabwean Open University. The study revealed that the majority of the students preferred the attachment programme because it exposed them to the real expectations of the world of work. Bukaliya (2012) limited the benefits to the exposure of students to expectation of the world of work, on the other hand, the present study focused on many benefits students accrue during the EE practicum in particular. The study also revealed a number of challenges that militated against the effectiveness of the programme. These included; reluctance of some fulltime employees to disclose important information to students, supervisors too busy to

provide effective supervision and short duration of the attachment. The previous study concentrated on the challenges of internship programme in general, whereas, the present study focused on examining the challenges UNZA-EE students faced during their practicum in particular.

The study above is related to this study however, this study focused on examining the benefits and challenges of UNZA-EE Student practicum in particular, while the above study focused on the investigation of potential benefits and challenges of internship programme in general.

The study done in Kenya by Kamunzyu (2010) investigated challenges faced by Hospitality Industrial Attachment as a learning experience in selected institutions in Nairobi. The findings of the study were that the main challenges that were faced by the hospitality industrial attachment included lack of adequate guidance, support to students during the industrial attachment and lack of adequate funds. However, the present study concentrated on the challenges that UNZA-EE students faced during their practicum in particular. Hence, this study.

The foregoing study focused on challenges faced by Hospitality Industrial Attachment as a learning experience in selected institutions in Nairobi, while the current study focused on examining the benefits and challenges UNZA-EE students undergo during their practicum.

A study in Zambia by Simuyaba et al (2015) investigated on teachers' and head teachers' perceptions on the performance of University of Zambia student-teachers on teaching practice. The main findings were that the training offered to these students did not prepare them to real-life situations in the field. It was further revealed that, the absence of values, attitudes, morals and practical approaches, methods and techniques to suit real life situations in schools made the training offered in ineffective and to some extent irrelevant.

The previous study dwelt much on teachers and head teachers' perceptions of the UNZA student-teachers on teaching practice in general and did not focus on its benefits and challenges. On the other hand, this study sought to examine the benefits and challenges of the UNZA EE student practicum in particular. Hence, this study.

Another study done in Zambia by Manchishi and Mwanza (2013) investigated on how effective the University of Zambia School Teaching Experience was. The main findings were that the UNZA student teaching practice was not very effective because the period was too short, the lecturers and teachers were not helpful and the instruction received (content and methodology) was not adequate to prepare the student teachers for the teaching experience.

The study above focused on investigating the effectiveness of the University of Zambia School Teaching Experience in general however, the present study focused on examining the benefits and challenges of the UNZA EE Student practicum.

2.8 Research Gaps in the Literature Review

Previous related studies that have been done on the practicum programme in Zambia have all focused on the perception and effectiveness of the practicum. These among others include Simuyaba et al (2015) and Manchinshi and Mwanza (2013). Furthermore, related studies conducted outside Zambia have concentrated on the practice, benefits and challenges of the practicum in general. These include Halulu (2013) and Bukaliya (2012) among others. The record of how many researchers have done studies on the benefits and challenges of UNZA-EE student practicum remains unknown to date. It is for this reason that the study concentrated on examining the benefits and challenges of UNZA-EE's student practicum.

2.9 Summary of the Reviewed Literature

The chapter provided a review of literature related to the study. It traces the development of EE in the world at large and Zambia inclusive. It also looked at the background of student attachment, trends in student's practicum, professional development in EE and importance of the practicum. Related research works on the practicum programme were reviewed and acknowledged.

The following chapter explains the methodology that was used to carry out this study and give the reasons for the choice of a particular approach or technique.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Overview

This chapter presents the paradigmatic orientation, epistemological assumptions, ontological assumptions, research design, target population, sample size, sampling design and methods of data collection. It will further look at analytical framework, data interpretation, validity, ethical considerations and possible limitations.

3.2 Paradigmatic Orientation of the study

Two popular research philosophies which today are among social science researchers. These are positivism and post-positivism. This research took the post-positivism approach. This school of thought upholds that not all problems can be addressed using qualitative methods. Post-positivism is defined as a meta-theoretical stance that critiques and amends positivism (Colin, 2002). Frustrations with the strictly empirical nature of positivist philosophy led to the development of post-positivism during the mid-late 20th century, and it argues that one can make reasonable inferences about a phenomenon by combining empirical observations with logical reasoning (Bhattacharjee, 2012). Although post positivism is an amendment to positivism and that it recognizes critiques against logical positivism, it is not the rejection of scientific method, but rather a reformation of positivism to meet these critiques (Robson, 2002). Post-positivists accept that theories, knowledge and values of the researcher can influence what is observed. Post-positivism encourages social science to think more critically towards the status quo and the reaction against positivist epistemology, questioning its methodology and claim to formulating scientific theories. Since post positivism is not rigid it accommodates both qualitative and quantitative methods, analytic eclecticism philosophy was used.

3.2.1 Analytic Eclecticism

The study used analytic eclecticism. Eclecticism has been derived from the verb root 'elect'. To elect means to choose and pick up. The good ideas, concepts and principles from various schools of thought have been chosen, picked and blended together to make a complete philosophy. Thus eclecticism is a philosophy of choice and it is nothing but fusion of knowledge from all sources. It is a peculiar type of educational philosophy which combines all

good ideas and principles from various philosophies. The philosophy of analytic eclecticism states that it does not hold rigidly to a single paradigm or set of assumptions, but instead draws multiple theories, styles or ideas to gain complementary insights into a subject (Creswell, 2012). Eclectics use elements from multiple philosophies, texts, life experiences and their own philosophical ideas. These ideas include life as connected with existence, knowledge, values, reason, mind and language (Creswell, 2012) This research tradition was used in that it was flexible and allowed the use of both qualitative and quantitative methods. In this study quantitative method was used by administering a semi-structured questionnaire to fourth year EE students from the same higher learning institution. In the same vein, qualitative method was used to carry out interviews by use of a semi-structured interview schedule for EE UNZA lecturers and officers from various attaching institutions in Lusaka District of Zambia. Thus, post-positivism was a convenient paradigm that matched with the mixed method technique of data collection that was used in this research and as such it was used to guide the research methodology.

3.2.2 Ontological Assumption

According to Njoroge and Bennars (2000) ontology is the philosophical study of being, of whatever is. The term concerns what is said to exist in some world- that which can potentially be talked about. Ontology can also mean a set of terms and their associated definitions intended to describe the world in question (Nkwi, 2000). The ontological assumption is that social reality is socially constructed through institutions, media and society. Reality exist out there which is factual and trans factual. Therefore, the reality of how beneficial the student practicum is, is through social interaction and stating what and how they learn from the media. This assumption influences the research in that the benefit of the practicum has a positive impression on the future career prospects of the students and their professional development.

3.2.3 Epistemological Assumptions

Njoroge and Bennars (2000) state that epistemology involves philosophical reflections on issues related to knowledge. Hirschheim et al (1995) indicates that the term “epistemology” means the nature of human knowledge and understanding that can possibly be acquired though diverse types of inquiry and native methods of investigation. It is also a way of understanding and explaining how we know. Epistemology is also concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate (Maynard, 1994). Knowledge can be acquired through diverse

types of inquiry and alternative methods of investigation. According to Nkwi (2001) what counts as worthwhile knowledge is determined by the social and positional power of the advocates of that knowledge. In addition, knowledge is produced by power and is an expression of power rather than truth. This means that its people in power influence decision making. They can determine what truth to give to the people even when that thing might not even be true.

3.3 Research Design

Research design refers to a plan or framework within which research must be carried out so that the desired information can be obtained with greater precision. It is the glue that holds the research project together (Kasonde-Ngandu, 2013). According to De Vaus (2001:9) “The function of a research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible”. Obtaining relevant information, therefore, entails specifying the types of evidence needed to answer the research question, test a theory, to evaluate a programme or to accurately describe some phenomenon. Therefore, in this study a mixed method research was used. Its central premise is that the use of quantitative and qualitative approaches, in combination, provides a better understanding of research problems than either approach alone. In this study an embedded design was adopted. The embedded design is a mixed method design in which one data set provides a supportive, secondary role in a study based primarily on the other data set (Creswell, Plano Clark et al, 2013). The purpose of this design is to answer different questions that require different types of data. Researchers use this design when they need to include qualitative or quantitative data to answer a research question within a largely quantitative or qualitative study. Therefore, this study embedded the qualitative component within a quantitative design in which qualitative datum was used to answer research questions within a highly quantitative study. The embedded design used in this study involved the collection of both quantitative and qualitative data, but the qualitative data type played a supplemental role within the quantitative data type. Hence, the embedded design was appropriate for the collection of data from different groups of respondents. The exploratory nature of qualitative research permitted the gathering of new information and revealed valuable attitudes and perspectives that could hardly be assessed through the traditional quantitative approach alone (Creswell, 2008). In addition, Sambili (2000:163) supports the combination of these methods in order to ‘reveal several dimensions of a phenomenon to deal with shortcomings of each approach and double-check the findings by examining them from several different vantage points’.

Below is the framework of the embedded design as used in this study.

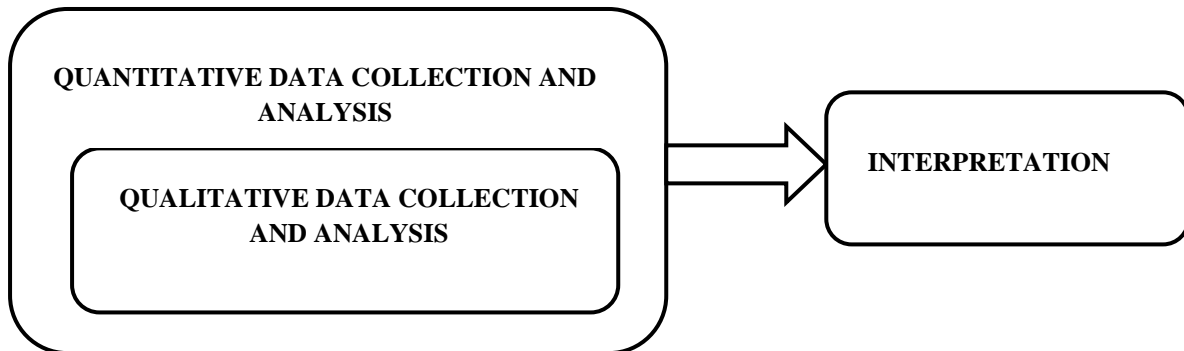


Figure 3.1 The Embedded Design

(Source: Creswell and Plano Clark, 2011)

3.4 Target Population

The target population of this study comprised UNZA-EE 2018 fourth year students, EE graduates, UNZA-EE lecturers and officials from selected attaching institutions both from government institutions and non-governmental institutions.

3.5 Sampling Design

This study used simple random sampling and purposive sampling techniques. Purposive sampling technique was used to select respondents for qualitative data from lecturers and officers from attaching institutions. Patton (2002) explains that purposive sampling lies in selecting information- rich case for study in depth. It was used to sample respondents for qualitative data because information -rich cases are those from which one learns a great deal about issues of central importance to the purpose of the inquiry. The researcher used purposive sampling technique on lecturers and officers from attaching institutions because they had a lot of information about trainee student since they supervised them.

3.6 Sampling Technique

The study used simple random sampling design and purposive sampling techniques. Simple random sampling technique was used to select respondents under quantitative method. According to White (2013), simple random sampling is a selection technique that provides each population element an equal chance of inclusion in the sample. This made it possible for each individual to have an equal chance of being selected. The UNZA-EE 2018 fourth year

students were 200. To get a sample size from the whole population, a table published by Glenn (1992) in (Singh and Masuku 2014) which shows the level of precision or sampling error 10% was used. Finally, the sample size was arrived at 67 respondents for quantitative part.

Furthermore, purposive sampling technique was used to select respondents for qualitative data from attaching institutions, UNZA-EE lecturers and EE graduates since it illustrates characteristics of a particular subgroups of interest and get main variations. The purpose of purposive sampling is to capture major variation even though a common core may emerge in the analysis (Platton, 2002). This technique can lend credibility to the study. Therefore, it was used to sample out 10 officers from attaching institutions, 10 UNZA-EE lecturers and 10 EE graduates in order to give out more credible information on the study since they are experts in this area.

3.7 Sample Size

The sample comprised 67 UNZA-EE 2018 fourth year students, 10 EE graduates, 10 UNZA-EE lecturers and 10 officials from attaching institutions. Therefore, the total sample size was 97. The sample was obtained from the readily willing students, officials from attaching institutions and UNZA-EE lecturers who were able to give credible information required for the study.

3.8 Research Instruments

Data collection tool employed in quantitative research was a semi- structured questionnaire while semi-structured interview guides were used for qualitative data collection.

3.8.1 Questionnaire

Questionnaires (Appendix 6) were administered to 67 participants by the researcher. In this study questionnaires were used to collect data since all the participants were literate and easy to use such a large sample size. During data collection 67 questionnaires were administered to UNZA-EE 2018 fourth year students. All the 67 questionnaires were completed correctly and collected which represented 100% questionnaire retention from the 67 that were initially administered.

A pilot study was conducted to ensure validity and reliability of the questionnaire and to identify any needs for revisions. The pilot study involved administration of the questionnaire to 20 students, 3 lecturers, and 8 attaching institution supervisors (all of whom were not included in the sample for the study) who had participated in previous student attachment programs and could readily be reached. Participants of the pilot study were asked to complete the instrument and to provide comments or suggestions for revising any ambiguous items. The final instrument for the study was produced after analysis of the pilot data and subsequent revisions in the wording of a few items.

3.8.2 Semi- Structured Interview Schedule

The study also used semi-structured interview guides (Appendix 3,4 and 5) to collect data from UNZ- EE lecturers, EE graduates and officials from attaching institutions. Using the interview guide one-on-one interviews were conducted and tape-recorded to collect data on all the research questions. Open-ended questions were used in the interviews to collect data in-depth in order to have a detailed understanding of the subject matter. An interview guide was used for this category of research participants so that the researcher could gain insight into the subject matter and also tape-recorded them for the purpose of a verbatim.

3.9 Data Collection Procedure and Timeline

Before embarking on data collection, permission was sought in advance from the relevant authorities to access and conduct research in public institutions. The researcher also carried an official introductory letter (Appendix 2) from the Directorate of Research and Graduate Studies at the University of Zambia for identification purposes. Both quantitative and qualitative data collection for the study took place from 27th February to 30th April, 2018 respectively.

3.10 Data Analysis Instruments and Procedures

A mixed method (concurrent embedded) was used in which mainly qualitative data was analysed and was supplemented by quantitative data.

3.10.1 Quantitative Data Analysis

Quantitative data was collected through the use of questionnaires. The data was transcribed and embedded into qualitative data. Information from 67 questionnaires was entered and analysed using statistical package for social sciences (SPSS version 20). Descriptive Statistics in form of

statistical tables, figures were generated and in some instances Microsoft word and excel were used.

3.10.2 Qualitative Data Analysis

Qualitative data from interview schedule were analysed using thematic approach. Castleberry (2018), analysis of qualitative data can be outlined in five steps: compiling, disassembling, reassembling, interpreting and concluding. Therefore, the study used these steps to analyse the data. The following gives a description of the five stages that are involved in thematic approach.

1. Compiling: this stage involves transcribing the data. This entails that the researcher has to read over and over the collected data in order to become intimately familiar with it. The researcher dissects the data to discover its components.

2. Disassembling: Under this step the researcher takes the data apart and creates meaningful groups through coding. He identifies similarities and differences in the data and codes them accordingly. Descriptive coding is used to identify roles, process or place while vivo coding uses verbatim words or phrases the participants' narrative to describe the unit of data.

3. Re-assembling: This involve codes to which each concept is mapped and contextualised with each other to create themes related to the research question in order to represent some level of patterned response or meaning within the data set. Themes are further divided into sub themes. Hierarchies are constructed in similar codes to produce higher-order- codes. Matrices are also constructed by arranging respondent roles, themes, variables, emerging concepts into rows and columns to provide a broad visual representation that grounds findings in a data set. Hierarchies and matrices are used as tools that can be used to provide a structure with which to reduce qualitative data as well as communicate relationships among groups, context, codes, charts and diagrams.

4. Interpreting: For this step of analysis, the researcher develops a thematic map which is a visual representation of themes, codes and their relationships. The maps involve detailed description of the themes and describe the patterns identified across the coded data. Interpretations include discussions of relationships between themes and global findings in the

context of all codes. The researcher in this study identified interpretations from the data to answer research questions after the data was coded.

5. Concluding: In this final step, raw data forms codes, themes and thematic maps. The researcher will identify and define these themes which will lead to interpretation of data. The researcher will use conclusion as responses to the research questions or purpose of the study.

Therefore, qualitative data from interviews was transcribed and a final report was written. This was done by carefully recording conversations in order to interpret, reduce and code key responses for the purpose of discussion. Some responses were also isolated and have been used as original quotes for verbatim to highlight important findings of the study.

3.11 Types of Data Collection

This section outlines the types of data that was collected and gives ways on how it was collected. The two types of data that were used are primary and secondary data.

3.11.1 Primary Data

Primary data is simply the data that is observed or collected directly from first-hand experience (Bernard, 1995). In this study, the data was collected through structured questionnaires and semi- structured interviews.

3.11.2 Secondary Data

The study sourced its secondary data from books, journal articles, reports, dissertations, documentaries, electronic and print media from the University of Zambia and other books related to Environmental Education. The procedure of analyzing the data involved reading, reviewing and comparing different findings that have already been documented by different scholars in the context of examining UNZA EE practicum in Lusaka District and attaching institutions.

3.12 Ethical Considerations

Ethical clearance was obtained from the Humanities and Social Sciences Research Ethics Committee (HSSREC) during the course of the fieldwork in March, 2018. Moreover, throughout the research ethical principles stipulated in the HSSREC (UNZAREC Form1b)

were adhered to and these included issues of informed consent, non-deception and confidentiality of participants, voluntary participation and right of withdrawal at any time. Participants were told about the importance of participating in the study, and the names of participants were with-held in order to protect their privacy. The information collected for the study was purely for academic purposes.

3.13 Validity and Reliability

To ensure validity and reliability of this study, the researcher used methodological triangulation, which enabled the researcher to collect data through questionnaires and interviews. The research's instruments were examined by research experts before embarking on the research in order to cross examine the appropriateness of the instruments. In addition to methodological triangulation, member checking method was also involved in which experts in the area of practicum experiences in the attaching institutions were requested to go through the work.

3.14 Chapter Summary

The chapter presented the methods used in conducting the study from data collection to data analysis. It outlined the research design, sampling techniques and procedures, sample size, instruments and the methods used to collect and analyse the findings of the study and provided justification for the methods and procedures used. It also explained the limitations, validity and reliability of the study.

CHAPTER FOUR: PRESENTATION OF FINDINGS

4.1 Overview

The previous chapter discussed the main methodological aspects of this study; showing details of the research methodology, design, procedures and techniques that were adopted. This chapter presents the data derived from research objectives and research questions were used to present the findings of this study.

This chapter presents the research findings. The presentation of data refers to ways of arranging data to make it clearly understood (Kombo and Tromp, 2006). Thus, the purpose of data presentation in this chapter is in a bid to provide answers to research questions set. This chapter starts by giving the demographic background of the participants in the study. This gives an enhanced understanding on the UNZA-EE practicum. For qualitative data the findings were presented using thematic approach in line with the four research questions set out in chapter one of the study. For quantitative data, descriptive statistics in form of statistical tables, figures, mean and standard deviation with the aid of Special Package for Social Sciences (SPSS) and Microsoft Excel were used in order to facilitate descriptive statistics and findings presented in line with the research questions stated in chapter one.

4.2 Demographic Characteristics of Respondents

This section provides an overview of demographic characteristics of respondents. The purpose of this section is to create a demographic profile of the respondents who participated in the study. This information is useful as it helps in interpreting the research findings and provides an indication of the representativeness of the research.

Table 4.1 Gender Distribution of Participants

Sex	Frequency	Percent
Male	53	59
Female	37	41
Total	90	100

Source: Field data, 2018

The distribution from Table 4.1 shows that there were 53 male students representing 59 per cent and 37 females representing 41 per cent of the total number of student respondents who filled in the questionnaires.

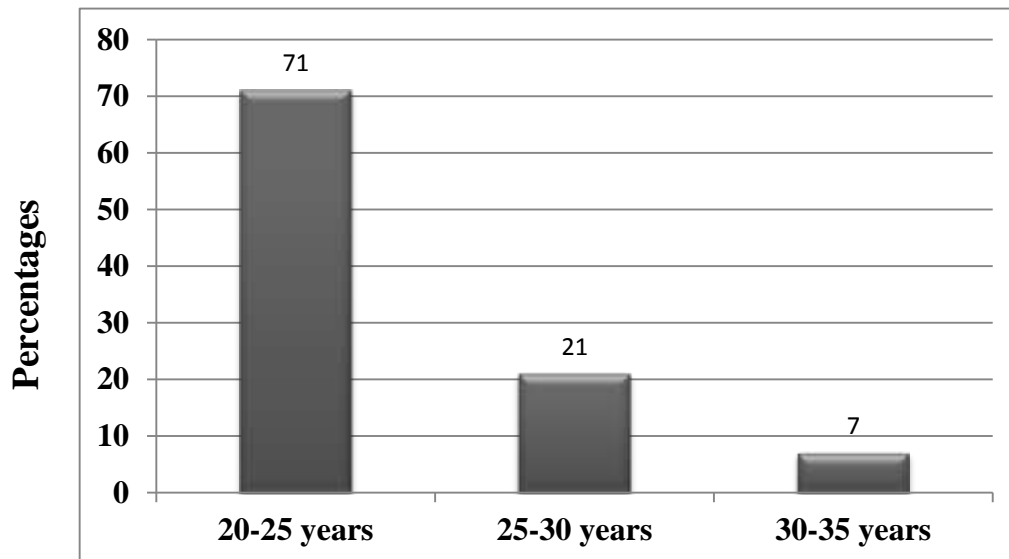


Figure 4.1: Age Distribution of Participants

Source: Field data, 2018

Figure 4.1 shows the demographic characteristics of respondents aged between 20-35 years and above interviewed in the study. A high proportion of population (71%) were aged between 20-25years, (21%) aged between 30-35 years and (7 %) aged between 30-35years. The findings further indicate that the age group of respondents was appropriate since most of them were around the age group between 20-25years which is ideal for tertiary education level.

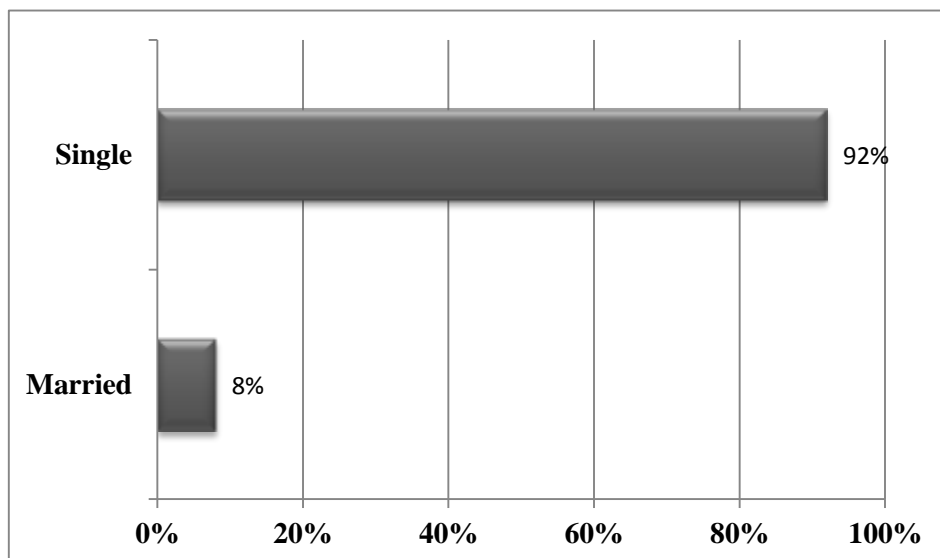


Figure 4.2 : Distribution of Marital Status of Participants

Source: Field data, 2018

Figure 4.2 shows that 92% were single and 8% were married. This reaffirms the fact that majority of the respondents were in the age group between 20-25 years, which is the ideal age for people to do tertiary education.

4.3 Benefits of UNZA’s EE Practicum

In line with objective number one, the participants were asked on the benefits of UNZA-EE practicum. Descriptive statistical Table 4.2 highlighted the benefits that UNZA-EE students get during their practicum experience.

Table 4.2 Benefits of UNZA EE Practicum

Themes	N	Mean	Std. Deviation
Increased Knowledge base on Environmental issues	67	4.6	0.747
Acquired new knowledge and exposure from industry	67	4.48	0.824
Developed the ability to work independently and interdependently	67	4.39	0.956
Was helped to develop my moral standards towards the environment	67	4.16	1.027
Develop a sense of responsibility in addressing environmental issues	67	3.28	1.181
Acquired fieldwork skills on environmental issues	67	2.58	1.093
Developed practical environmental skills	67	2.46	1.157
Developed communication skills with colleagues	67	2.30	1.111
Developed investigative skills on environmental issues	67	2.20	0.924
Application of theory to actual environmental issues	67	2.05	0.906
Grand Mean		32.50	

Source: Field data, 2018

Findings on the benefits of the practicum shows that increased knowledge base on environmental issues was highly supported by the participants with a mean score of 4.60 and its standard deviation was 0.747, followed by acquired new knowledge and exposure from industry with a mean score of 4.48 and its standard deviation was 0.824, developed the ability to work independently and interdependently was also strongly supported by the participants because of its mean score which was 4.39 and its standard was 0.96. The mean score for was helped to develop my moral standard towards the environment was 4.16 and its standard deviation was 1.027 which indicated that most of the participants supported the benefits. The mean score for a developed sense of responsibility in addressing environmental issues was 3.28 and its standard deviation was 1.181 which gave an implication that participants supported it. The themes which had low mean scores included: acquired field work skills on environmental issues, developed practical environmental skills and developed communication skills with colleagues. Application of a theory to actual environmental issues had the lowest mean score of

2.05. This gave an indication that this and those with low mean scores were not strongly supported; therefore most of the students did not acquire the much needed skills during their practicum.

From the information given on table 4.2, it was observed that the practicum was an essential component of the Environmental Education programme. This was evident by the higher mean scores of the first four themes. This gave a clear indication that they were strongly supported by participants. The study also revealed that the last six themes had low mean scores, which gave an indication that very few participants supported the themes and the implication was that most students therefore, didn't get full benefit during their practicum experience.

Further, divergent views were given by participants to the question concerning the benefits of UNZA-EE practicum, and the following themes came up in line with qualitative data:

4.3.1 Increasing Knowledge in Environmental Issues

Seven (7) out of ten (10) participants said the UNZA-EE practicum was vital to the students in that it enhanced their knowledge in environmental issues. The participants further revealed that the practicum was very necessary to students, as it concretises the theory learnt at the university to the real world of work. One of the EE graduate's exactly words were as follows:

"I gained more knowledge during my practicum experience and learnt real environmental issues on the ground, whoa!.....it was a thrilling experience indeed"(Interviewee 7-March, 2018).

4.3.2 Acquiring new knowledge and exposure from industry

Interviews with eight (8) participants revealed that most students acquired new knowledge and exposure from the industry. To support this point one of the officers from attaching institutions commented that:

"When students come for their attachments in our institutions they learn new things and are exposed to the real world of work in the industry which gives them a clear understanding of what they have been learning at the university and benefit them"(Interviewee 3-March, 2018).

4.3.3 Ability to work independently

Nine (9) out of ten (10) participants revealed that students were able to work and interact freely with other members of staff at the attaching institution. One of the officers from the attaching institution had this to say:

“Most of the students who come for attachments in our institution and perform well are those who freely work together with other members of staff, in doing so they tend to learn a lot of things as they mingle and interact” (Interviewee 9-March, 2018).

4.3.4 Developing moral standards to the environment

Eight (8) out of ten (10) participants revealed that students developed moral standards towards the environment. To support the above stated benefit, one of the UNZA-EE lecturers stated that:

“After the practicum experience most students tend to develop the right attitude and respect towards the natural and built-in environment” (Interviewee 4-March, 2018).

4.3.5 Acquiring field work and practical environmental skills

Four (4) out of ten (10) participants revealed that a few students acquired environmental practical skills. To support the above statement, one of the EE graduates lamented:

“I didn’t get any environmental practical skills during my practicum; this was because whilst at UNZA we literally did nothing concerning practicals in most courses it was really hard for me to do meat inspection which I didn’t do at the university” (Interviewee 3-March, 2018).

4.3.6 Developing Communicative and Investigative Skills

Three (4) out of the ten (10) interviewed said that few students were able to develop communicative and investigative skills during their practicum. The study further revealed that students were not taught communicative skills as well as investigative skills at the university. To support the above statements, one of the EE graduate expressed concern and said:

“UNZA no longer offers communication skills as it used to do in the past, most students from the university nowadays lacks communication skills, imagine a fourth year student from the University of Zambia one of the highest learning institution in the country failing to express himself or herself during the practicum experience, it is a big shame!.....” (Interviewee 3-March, 2018)

4.3.7 Applying theory to real environmental issues

Two (2) out of the ten (10) participants revealed that very few students were able to correctly apply the theory they learnt at the university to the real environmental issues on the ground. The study revealed that this could be due to lack of practicals in most courses done at the university. To support the above mentioned point, one the UNZA-EE lecturer lamented and commented that:

“We do not do much in terms of practical in most courses in Environmental Education due to lack of funding from the central administration, most of our students are not exposed to

practicals hence they find it hard and strange when they go for their practicum experience where they are required to carry out some practical works” (Interviewee 1-March, 2018)

In summary, the research findings from both quantitative and qualitative data revealed that the UNZA-EE practicum was an essential part of the Environmental Education Programme. The study further revealed that most students did not get the much expected benefits. This was because they faced difficulties to apply the theory learnt at the university to practice, which is one of the main objectives of a practicum. This could have been due to many factors such as lack of practicals while at the university, a mismatch between the university curriculum and the needs of the industry among others. The subsequent segment presents findings on the second objective.

4.4 Challenges of UNZA’s Environmental Education Practicum

In line with objective number two, the participants were asked on the benefits of UNZA-EE practicum. Descriptive statistical Table 4.3 highlighted the challenges that UNZA-EE students face during their practicum experience.

Table 4.3 : Challenges of UNZA’S Environmental Education Practicum

Themes	N	Mean	Std. Deviation
Poor orientation to practical work at UNZA and attaching institution	67	4.94	0.239
Insufficient preparation on EE practicum course work	67	4.88	0.327
Inadequate evaluation process by UNZA and attaching institutions	67	4.81	0.398
Lack of communication and follows ups with University lecturers during the practicum	67	4.78	0.42
Practicum duration was short and poor timing	67	4.7	0.461
Environmental Education not clearly known to many institutions	67	4.67	0.473
Students used as cheap labour by attaching institutions	67	4.63	0.487
Heavy work load assigned by attaching institutions	67	4.6	0.552
Financial Strain faced by students during the practicum	67	4.6	0.579
Inadequacy of attachment places	67	4.43	0.657
Grand mean		47.04	

Source: Field data, 2018

Empirical evidence from Table 4.3 indicates that all the 10 items of challenges outlined by the study to the respondents were the reality on the ground as the declaration was overwhelming from the mean scores. Findings on the challenges of the practicum from Table 5.3 above

showed that poor orientation to practical work at UNZA and attaching institutions was very highly supported with a mean score of 4.94 and its standard deviation was 0.239, followed by insufficient preparations on EE pre-practicum course work with a mean score of 4.88 and its standard deviation was 0.327, inadequate evaluation process was also strongly supported by the participants because of the higher mean score which was 4.81 and its standard deviation was 0.398. The mean score for lack of communication and follow ups by university lecturers during practicum was equally higher which was 4.78 and its standard deviation was 0.42. The mean score for practicum duration was short and poor timing was 4.7 and its standard deviation was 0.461, followed by assignment of unproductive tasks by attaching institutions whose mean score was 4.67 and standard deviation was 0.473, students used as cheap labour by attaching institutions had mean score of 4.63 and its standard deviation was 0.487, heavy work load assigned by attaching institutions had mean score of 4.6 and its standard deviation was 0.552 and financial strain faced by students during the practicum had a mean score of 4.6, and its standard deviation was 0.579. The last theme which is inadequacy of attachment places also had a high mean score of 4.43 and its standard deviation was 0.657.

From the information given on 4.3 it was noted that the practicum had a lot of serious challenges that students faced during their practicum experience. This was evident by the higher mean scores of all the ten themes which were strongly supported by many participants.

Furthermore, divergent views were given by participants to the question concerning the challenges faced by students during their practicum experience, and the following themes came up in line with qualitative data:

4.4.1 Poor Orientation to Practical Work at the University Of Zambia and Attaching Institutions

Eight (8) out of ten (10) participants said that one of the challenges that students faced was poor orientation to practical work at UNZA. The findings further revealed that there were little or no practicals done in most courses due to lack of equipment and reagents. To support the above point, one of the EE graduate commented that:

“Environmental education at UNZA is more theoretical than practical; there is urgent need for more practicals to be done especially in courses like Occupational Health and Safety, Advanced Environmental Management, Environmental Health and many others.”(Interviewee 8-March, 2018)

4.4.2 Insufficient Preparation on EE pre-practicum Course work.

Seven (7) out of ten (10) participants revealed that there was insufficient preparation of students on the EE practicum course work. The study further revealed that the students were less exposed to practical work in most courses. This was because the pre-practicum course was not time-tabled and taught, as such many students lacked essential information about the practicum. To further stress the point, one of the UNZA-EE lecturers had this to say:

“At the moment the EE pre-practicum course is not time-table and isn’t taught there isn’t much work that is being done to adequately prepare students for their practicum experience.”(Interview 7-March, 2018).

4.4.3 Inadequate Evaluation Process by UNZA and Attaching Institutions

Eight (8) out of ten (10) participants revealed that the current evaluation process by UNZA was not good enough. The study further revealed that the current evaluation sheet was highly subjective and that it has no specific parameters to apply to all EE students. To support this point, one of the UNZA-EE lecturer stated that:

“the current Environmental Education evaluation sheet is weak, highly subjective and the process of monitoring and evaluation is rushed through, it is poorly administered to say the least”(Interviewee 6-March, 2018).

4.4.4 Lack of Communication and Follow-ups by lecturers

Interviews with nine (9) participants revealed that there was lack of communication and follow-ups with university lecturers during practicum. The findings further revealed that students felt neglected and were left in a dilemma. One of the EE graduate’s exactly words were:

“The lecturer called me at night that the following morning I was to be observed this sent me into panic, as I had to prepare the whole night. I strongly feel that lecturers should regularly visit the students, so that they see what students are doing because students have issues that would need the intervention of the lecturers. I feel students are left on their own for a very long time, I think if the communication aspect could be enhanced.....yaah”(Interviewee 3-March, 2018).

4.4.5 Short Practicum Duration

From the interviews conducted eight (8) out of ten (10) participants said that the short period of the attachment was another challenge faced by students during their practicum. To support this point, one of the officers from the attaching institution commented that:

“The current duration for the practicum is not long enough for the trainee students to acquire the much needed skills, knowledge and experience as they prepare to join the world of work” (Interviewee 7-March, 2018).

4.4.6 Environmental Education not clearly known by Institutions

Eight (8) out of ten (10) participants revealed that Environmental Education was not known by many institutions out there. One of the EE graduate said that:

“As I went to look for a place to do my attachment many institutions I approached expressed ignorance about Environmental Education and declined my request” (Interviewee 4-March, 2018).

4.4.7 Source of Cheap Labour

Seven (7) out of ten (10) participants said that students were used as cheap labour by most attaching institutions. To support the above stated challenge, one of EE graduate said that:

“During my attachment period and being students on attachments we were seen as a source of cheap labour to undo the back log of things for the attaching institution” (Interviewee 6-March, 2018).

4.4.8 Heavy Work Load

Eight (8) out of ten (10) participants said that heavy work load posed a challenge amongst many students. The findings further revealed that students were given a lot of work to do such that they didn't have enough time to do their reports. To support the above mentioned point, one of the EE graduate lamented that:

“Most attaching institutions have a tendency to give a lot of work to students this is because they take advantage of you and threaten to write a bad report at the end of your attachment if you don't do the work.” (Interviewee 5-March, 2018).

4.4.9 Financial Constraint

Interviews with nine (9) participants revealed that financial constraint was yet another challenge faced by students during their practicum. One of the EE graduate expressed concern and stated that:

“Since we were not given any allowances from the university as well as the attaching institutions, it was very difficult to put logistics in place and at the same time expected to perform very well during the practicum, it was really tough.” (Interviewee 7-March, 2018).

4.4.10 Limited Attachment Places

Eight (8) out of ten (10) participants revealed that students faced a big challenge to secure places for attachments. To support the above point, one of the EE graduate commented that:

“It was very difficult for me to secure the place for my attachment, as most of the institutions I went to had already students from other colleges and universities doing their practicum. This made some of our colleagues to go and be attached to institutions that were irrelevant to their field of study in order to be observed and graduate at the end of the day” (Interviewee 4-March, 2018).

In summary, the research findings from both quantitative and qualitative revealed that students faced a lot of challenges during their practicum in attaching institutions, as alluded to in the previous findings. The subsequent segment presents finding on the third objective.

4.5 Areas in need of improvement about UNZA’s EE Practicum

In line with objective number three, the participants were asked about the areas in need of improvement on UNZA-EE practicum. Descriptive statistical Table 4.4 highlighted the challenges that UNZA-EE students face during their practicum experience.

Table 4.4 : Areas in need of improvement about UNZA’s Environmental Education Practicum

Themes	Mean	Std. Deviation
Clarity on nature of tasks assigned by attaching institution	4.85	0.399
Poor writing skills and standardised of final attachment preparation report	4.81	0.292
Inadequate funding for visits by university lecturers	4.78	0.455
Poor communication skills and lack of courtesy by students	4.64	0.569
Grading system for assessment is ambiguous	4.58	0.527
Improper supervision at the attaching institution	4.49	0.612
Misplacement of students during the practicum	4.45	0.61
Lack of computer skills for some works	4.42	0.655
Lack of motivation like allowances	4.27	0.77
Uncomfortable and hectic working environment	4.25	0.766
Grand mean	45.54	

Source: Field data, 2018

Empirical evidence from Table 4.4 indicates that all the 10 items of areas in need of improvement outlined by the study to the respondents were the reality on the ground as the declaration was overwhelming from the mean scores. Information from Table 4.4 shows that

the mean score for specificity on the nature of tasks assigned by attaching institution is 4.85 and its standard deviation is 0.399, poor writing skills and standardised of final attachment preparation report whose mean score is 4.81 and its standard deviation is 0.292, and inadequate funding for visits by university lectures the mean score is 4.78 and its standard deviation is 0.455. The mean score for poor communication skills and lack of courtesy by students is 4.64, and its standard deviation is 0.569, followed by grading system for assessment is ambiguous whose mean score is 4.58 and standard deviation is 0.527. The mean score for improper supervision at the attaching institution is 4.49 and its standard deviation is 0.612, and misplacement of students during the practicum the mean score is 4.45 and its standard deviation is 0.61, also followed by lack of computer skills for some works whose mean score is 4.42 and its standard deviation is 0.655 while lack of motivation like allowances the mean score is 4.27 and its standard deviation is 0.77. The mean score for uncomfortable and hectic working environment is 4.25 and its standard deviation is 0.766.

From the information given on Table 4.4 it was observed that the practicum had a lot of serious areas in need of improvement about the UNZA-EE practicum. This was evident by the higher mean scores throughout the ten themes which were strongly supported by many participants.

Furthermore, divergent views were given by participants to the question concerning areas in need of improvement about the UNZA-EE practicum, and the following themes came up in line with qualitative data:

4.5.1 Nature of tasks assigned by Attaching Institutions

Seven (7) out of ten (10) participants said that some of the tasks that were given by attaching institutions didn't concern their field of study. To support the above stated point, one of the EE graduate commented:

“At the institution where I was attached I was given to photocopy papers and filing, because those in management didn't know exactly where to place me because they didn't have much information about Environmental Education. I was assigned to do general administrative work. To me I felt there was a mismatch between what I learnt at UNZA and what I was assigned to do at the host institution.”(Interviewee 6-March, 2018).

4.5.2 Poor Writing Skills

Interviews with eight (8) participants revealed that most students had poor writing skills. To support this point, one of the officers from attaching institution's exactly words were:

“Most of the students sent have poor writing skills for university level which increases workload for us by double checking structure and grammar” (Interviewee 8-March, 2018).

4.5.3 Inadequate Funding of University Lecturers’ visits

Seven (7) out of ten (10) participants revealed that due to inadequate funding to the lecturers by the university, they hardly visited the students in attaching institutions except the day of observation. To support the above point, one of the EE lecturer stressed that:

“UNZA should increase funding so that lecturers can have regular visits and monitor what students are doing in the field.”(Interviewee 5-March, 2018).

4.5.4 Poor Communication Skills

Eight (8) out of ten (10) participants said that poor communication skills was also one of the areas in need of improvement. The findings further revealed that some students were arrogant, pompous and lacked courtesy. One of the Officers from the attaching institution commented that:

“Most of the students from UNZA we receive here have poor communication skills and have no courtesy, some of them are pompous and arrogant they feel they are the most educated”(Interviewee 3-March, 2018).

4.5.5 Grading System not Clear

From the interviews conducted seven (7) out of ten (10) participants said that the grading system of the practicum was not very clear. To support the above point, one of the EE graduate commented that:

“The grading system of the practicum was not clear I was not sure whether it was only based on the teaching file, sustainability final report or also involved the tasks performed during the practicum at the attaching institution.”(Interviewee 6-March, 2018).

4.5.6 Improper Supervision at Attaching Institutions

Eight (8) out of ten (10) participants revealed that supervision of students by supervisors from attaching institutions was not properly done. The findings further revealed that some supervisors were not qualified and didn’t know much about Environmental Education. One of the EE graduate lamented that:

“My supervisor was under qualified and felt inferior and could hardly supervise me, each time I wanted to ask something from him, of which I was not sure of he would pretend to be very busy, as such most of the time I was left to do things on my own without proper guidance from the site supervisor.”(Interviewee 8;March, 2018).

4.5.7 Misplacement of Students

Nine (9) out of ten (10) participants revealed that many students were wrongly placed in departments or sections during their practicum in attaching institutions. To support the above point, one of the EE graduate made the following remarks:

“During my practicum I was placed in Public Relation’s Department instead of the Inspectorate Department which was in line with my study and where I could have acquired the much needed practical skills was disadvantaged because t didn’t acquire the expected relevant skills related to my study area.”(Interviewee 9-March, 2018).

4.5.8 Lack of Computer Skills

From the interviews conducted seven (7) out of ten (10) participants said that majority of the students were computer illiterate. The findings further revealed that due to lack of computer skills, students faced challenges to present and analyse data using Microsoft excel and SPSS. To support the above point, one of the officers from the attaching institution said that:

“We are in the computer era, it is a pity that most of the students from UNZA who come here for attachments are computer illiterate and are therefore not able to analyse data using Microsoft excel or SPSS when assigned to do some work which involves data collection and analysis.”(Interviewee 6-March, 2018).

4.5.9 Lack of Motivation

Six (6) out of ten (10) participants revealed that most students are not motivated because they are not given allowances for the practicum. One of the UNZA-EE lecturers stressed that:

“Due to lack of motivation like allowances, students feel demotivated during the practicum they have to put logistics in place on their own.”(Interviewee 4- March, 2018).

4.5.10 Uncomfortable and hectic working environment

Eight (8) out of ten (10) participants revealed that students worked under difficult conditions during their practicum. To support this point, one of the EE graduate lamented that:

“Due to limited office space, I was given to work from the store room which was full of irritating chemicals that made me to be uncomfortable because of the bad smell I was made to inhale.”(Interviewee 6-March, 2018).

In summary, the research findings both from quantitative and qualitative data on the third objective revealed that there equally more areas in need of improvement about the UNZA-EE practicum.

4.6 Measures for the way forward concerning UNZA's -EE Practicum

The final objective of the research was to propose measures for the way forward concerning the University of Zambia Environmental Education Practicum.

Participants were asked to propose measures that could enhance the EE practicum.

This information is shown in Figure 4.3

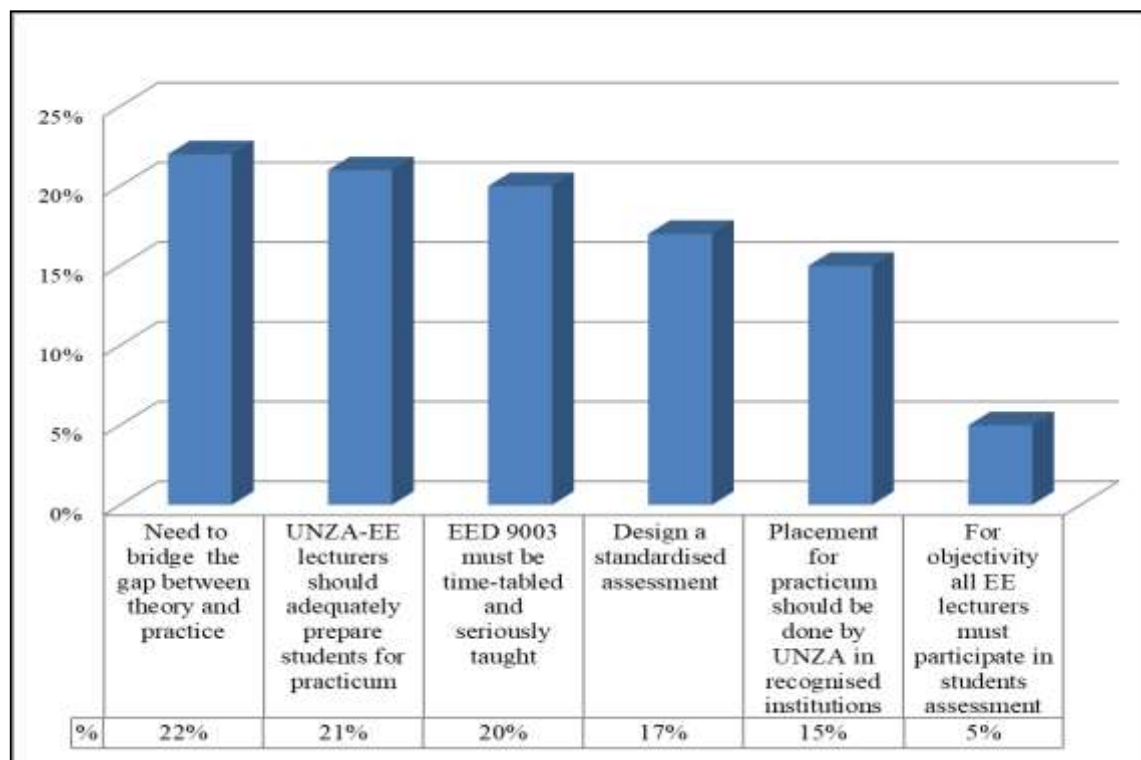


Figure 4.3 : Proposed measures to enhance the UNZA EE Practicum by participants

Source: Field Data, 2018

Participants were accorded a chance to propose measures to enhance the EE Practicum. Twenty-two per cent (22%) felt there was need to bridge the gap between theory and practice, twenty-one per cent (21%) were of the view that UNZA lecturers particularly under Environmental Education Unit should adequately prepare students for the practicum. This was followed by twenty per cent (20%) where participants suggested that EED 9003 must be time-tabled and seriously taught with continuous assessment (CA).

Seventeen per cent (17%) of participants suggested that a standardised assessment be designed. Followed by fifteen per cent (15%) also proposed that placement for student practicum should be done by the UNZA lecturers specifically by the EE Practicum Coordinator in recognised institutions. The least had five per cent (5%) which stated that, for the sake of objectivity all

lecturers in EE Unit must participate in the assessment of students. The first five proposed measures came out strongly; this was a clear indication that there was urgent need to implement them in order to make the practicum more beneficial. In summary, the research findings on the fourth objective revealed that in order for the practicum to improve the above proposed measures were strongly supported to be implemented.

4.7 Chapter Summary

Chapter 4 presented the compiled data that was collected and justified the purpose of data presentation. The chapter used interviews, graphs, charts, tables and verbatim to present the data that was gathered. Research findings revealed that challenges and areas in need of improvement concerning the EE practicum were more than the benefits. The next chapter discusses findings after examining the data that has been presented.

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.1 Overview

The main focus of chapter six was to elaborate further on answers to research questions presented in chapter five. The discussion was done following the four research objectives which included to; determine benefits of UNZA's EE Practicum, find out the challenges of UNZA EE practicum, establish areas in need of improvement about UNZA's EE Practicum, and to propose measures for the way forward concerning UNZA's EE Practicum.

The next section discusses findings in line with the first objective on information about the benefits of the UNZA's EE Practicum.

5.2 The benefits of the UNZA's Environmental Education Student Practicum

Some of the major benefits that students acquired during the practicum included: Increased knowledge in Environmental Issues, acquired new knowledge and exposure from industry, ability to work interdependently and independently and developed moral standards to the environment. The other benefits which were acquired are field work and practical environmental skills, developed communicative and investigative skills. The least benefit was applied theory to real environmental issues.

5.2.1 Increased Knowledge in Environmental Issues

Majority of the respondents acquired more knowledge on environmental issues according to findings. This entails that practicum experience contributed significantly and positively towards enhancing the knowledge base of students. This finding replicates those by English and Koeppen (1993) which suggest that an internship programme is able to improve the academic performance of interns. Further, Beard (1998) notes that internship programme contributes significantly and positively towards enhancing the knowledge base and motivational level of students.

5.2.2 Acquired new knowledge and exposure from the industry

From the study findings, many students developed new knowledge and exposure from the industry. Many respondents positively affirmed that EE trainee students gained experience and exposure from the attaching institutions during the practicum. This finding is in line with the related studies by Gault et al (2000), and Beard and Morton (1999) where interns responded

that they experienced greater exposure to a variety of experiences on the job. Practical experience and exposure gained during the internship programme are found to be helpful in improving career decision making (Brooks *et al.*, 1995; Taylor, 1998).

5.2.3 Ability to work independently and interdependently

The ability to work independently and interdependently, developed moral standards towards the environment, communication skills and a sense of responsibility in addressing environmental issues. This finding is similar with the related studies by Beard and Morton (1999) and Lam and Ching's (2007) whose results found that the internship programme successfully improved the soft skills of interns. In supporting the theory used in this study, the findings of the study under objective number one are backed by the theory. The theory states that it seeks to build constructive relationships between the intent of EE practicum and what people talk about its present capabilities, strengths and opportunities. The benefits which are the strengths of the practicum were identified through constructive relationship among the attachees, attachers and training institution. Therefore, objective number one has been achieved as discussed under this section.

In the context of the second objective, the next segment discusses the challenges of UNZA's EE practicum.

5.3 The challenges of UNZA's Environmental Education Student Practicum

The major challenges that students faced during the practicum included: Poor orientation to practicum work at UNZA and attaching institutions, insufficient preparation on EE practicum course work, inadequate evaluation process by UNZA and attaching institutions, lack of communication and follow ups with university lecturers and short duration for practicum. The other challenges were that EE was not clearly known to many institutions, students were used as cheap labour by attaching institutions, heavy work load assigned by attaching institutions, financial strain faced by students during the practicum and inadequacy of attachment places.

5.3.1 Poor Orientation to Practical work at UNZA and Attaching Institutions

Findings in this study revealed that most students received poor orientation to practical work at UNZA as well as attaching institutions. It was revealed that students had little or no practicals done in many courses due to lack of chemicals and equipment. It was further revealed that at attaching institutions students were not properly oriented and didn't know exactly what was expected of them. This finding was related with Kazis and Goldberger (1995) who noted that

most employers would not commit their employees to take students through their practical work during the whole attachment period.

5.3.2 Insufficient preparation on EE Practicum course work

Findings have also revealed that students had insufficient preparation on EE practicum course work. It was revealed that there was not much that was being done in order to thoroughly prepare students for the practicum, the reason that this course was not taught. Students were only given scanty guidelines a week prior to their practicum. The findings were related to those of Lam & Ching (2007) who revealed that educational institutes fail to prepare students adequately in order to cope with the challenges and demands of work in this sector.

5.3.3 Inadequate evaluation process by UNZA and Attaching Institutions

Findings revealed that inadequate evaluation process pose a challenge in the proper administration of a practicum. Findings showed that the current evaluation process was not adequately done, this was because the current evaluation sheet was highly subjective and had no standard parameters to apply to all the EE students. This finding concurs with those of Guidry & Cohen (2001) who revealed that evaluation tools continue to lack standardization. Evaluation of students is critical for their educational development. Therefore there was urgent need to come up with a standard evaluation sheet for effective monitoring and evaluation.

5.3.4 Lack of Communication and Follow-ups by University Lecturers

Lack of communication and follow-ups by lecturers was another challenge faced by students during their practicum. Findings revealed that lecturers rarely communicated and visited students until the last day of observations. It was further revealed that students were left on their own for a long time and usually didn't know exactly what they needed to do. The findings were a contrast to those of Ronczkowski et. al (2004) whose findings were that regular communication between the student and practicum coordinator is an essential element for a positive outcome.

5.3.5 Short Practicum Duration

The study findings have also revealed that the duration for the practicum was short. Most of the respondents were of the idea of increasing the duration for the practicum from the current three months to six months respectively. This would ensure that students acquire meaningful skills. In order for the EE trainees to have adequate exposure to the world of work, the field-based experience needs to be of sufficient duration. A recent Queensland study reported that new teachers found the amount of time devoted to practicum was too little and this impacted on

their profession development (Queensland Education, 2002). Previous research studies also show that internship periods were too short and the majority of interns think that the most appropriate internship period should be six months (Oliver, 2010). Mihail (2006) also found in his study that most of the interns preferred to have internship periods ranging from six to nine months instead of three months. This indicated that interns are willing to have a longer internship period and believe that they can learn more within a six month period. The findings concur with those in other studies (Bukaliya, 2012; Oliver, 2010; Mihail, 2006) where interns advocated for more time on practicum.

The theory was appropriate for this objective since the areas in need of improvement were identified by the attachees, attachers and training institution and consequently solutions were provided which could bring change to the practicum in terms of its effectiveness in order to foster institutional, professional and social change.

5.3.6 EE not clearly known by many institutions

The study revealed that EE was not clearly known by many institutions, and this was strongly supported by participants with a mean score of 4.67. This made it difficult for most students to be given places for their attachments. There is urgent need for UNZA to massively market this programme to the general public and various institutions; this is in order for the people to get to know what EE is all about.

5.3.7 Students were used as cheap labour

The study established that some students were seen as a source of cheap labour by attaching institutions. It was further revealed that students were used to undo the backlog of work by attaching institutions at the expense of professional activities. Furthermore, the study noted that some students perceived the attachment programme as an opportunity for the respective companies to access cheap student labour leading to very little relevant application of theory and practice. This finding is in line with Rothman (2007) who found that interns are seen by some institutions as cheap labour.

5.3.8 Heavy work load

Study findings revealed that heavy work load posed a challenge among some students. It was further revealed that students were given a lot of tasks to do and rarely had time to work on their reports. It was also revealed that the heavy work load had a negative effect on their practicum. This finding agrees with Beard (1997) whose study revealed that heavy works, can

negatively impact the amount of feedback an intern receives. There was need for attaching institutions to give reasonable work to students for them to also have enough time to work on their reports and files.

5.3.9 Financial Constraint

The study also revealed that most students faced serious challenges on the issue of finances. This was brought about as a result of UNZA and attaching institutions not giving allowances to students on attachments. Students had to put logistics in place on their own and this adversely affected the implementation of the practicum in attaching institutions. Inadequate finance prompt attachees to fail to sustain themselves during the work related learning. Lack of finance may lead to low attachee motivation, student dropouts and absenteeism. The training under these circumstances would produce half-baked graduates not ready for work. This finding concurs with Olugbenga (2009) who adds that students on industrial attachment also face financial challenges

5.3.10 Limited Attachment Places

Findings revealed that students experienced difficulties when looking for attachment places due to limited institutions that have knowledge and understanding about EE. It was further revealed that there was competition between colleges and universities sending students for attachments. Carlson (2002) agrees with the view when he says competition for attachment places from other institutions is rough and tough in the work environment.

From the findings discussed it was revealed that the UNZA's EE students face a number of challenges during their practicum. These challenges have made the practicum less beneficial. Findings show that the second research objective was answered. The research objective was to find out the challenges faced by EE UNZA students during their practicum.

5.4 The areas in need of improvement about UNZA's EE student practicum

The major areas in need of improvement included: clarity on the nature of tasks assigned by attaching institutions, poor writing skills, inadequate funding for visits by university lecturers, poor communication skills and lack of courtesy by students, ambiguous grading system for assessment and improper supervision at the attaching institution. The other areas in need of improvement were misplacement of students during the practicum, lack of computer skills, lack of motivation like allowances, uncomfortable and hectic working environment.

5.4.1 Clarity on the nature of tasks assigned by attaching institutions

The study revealed that, students were assigned tasks that were not clearly explained. Most respondents expressed concern on the tasks and acknowledged that tasks that were assigned by attaching institutions were not very clear. Shoemaker (1999) described role/task clarity as the degree to which an individual is persuaded in regards to how he/she is expected to carry out work. This level of clarity has likewise been associated with job performance whereby an employee who is clear about his/her role/task will be more easily satisfying in that specific job (Braxton, 2008). In the event that role/ task are not delineated clearly, there is always a probability of people that will take up obligations that are not certainly theirs while neglecting what they are required to do. This disparity between what one is relied upon to do and what he/she performs resulted in ambiguity and conflict among workers (Fields, 2002) Some studies found that clarity of tasks can improve internship effectiveness while the periodic lack of work or poor planning of work assignments caused frustration among interns (Rothman, 2007). In addition, unclear roles contribute to stress and poor performance of employees (Kahn et. al., 1964). It is vital that EE trainees are assigned specific tasks by attaching institutions and in so doing they would learn more.

5.4.2 Poor Writing Skills (Poor Communication skills)

Findings revealed that most students exhibited poor writing skills. This was attributed to lack of communication skills course at UNZA which could have been offered in the first year of study. The study further revealed that most officers from attaching institutions agreed that many students from UNZA had poor writing skills. This finding runs contrary to the findings of Wesley and Bickle (2005) which revealed that student intern demonstrated enhanced time management, Communication skills among others. UNZA should ensure that students are adequately prepared in the writing skills, not only for the practicum experience but for the world of work.

5.3.3 Inadequate Funding for Visits by University Lecturers

Findings also revealed that there had been inadequate funding by UNZA management; this had resulted into lecturers not to have regular visits and monitor what the students had been doing during their practicum. The findings were inconsistent with those of Ronczkowski et,l (2004) who noted that it is very important to have regular visits , as it gives the site supervisor a chance to speak with the professional practice coordinator or other visiting lecturers to discuss the student's progress and resolve conflicts. There was need for the lecturers to have regular

visits to the students to check what they were doing, unlike taking things for granted that all was well with students.

5.3.4 Poor Oral Communication Skills and Lack of Courtesy

The study findings revealed that poor oral communication skills were also a common problem among most students; coupled with lack of courtesy. The findings further revealed that, most students had difficulties to communicate with other staff in the attaching institutions. This made their work in attaching institutions hard due to lack of courtesy and also resulted into poor work relationship. This findings contrasts with Beard and Morton (1999) and Lam and Ching's (2007) studies that found the internship programme successfully improved the soft skills of interns.

5.3.5 Grading System for Practicum was Ambiguous

Study findings revealed that the grading system for practicum was not clear. This was strongly supported by participants with a mean score of 4.48. The study further revealed that most students were not very clear on how the grading for the practicum was done. There was need for the university to come up with a clear grading system for the practicum in order to enhance the administration of the practicum.

5.3.6 Improper Supervision at the Attaching Institutions

The study findings revealed that there were a lot of issues concerning student supervision in attaching institutions. It was further revealed that supervisors in attaching institutions were not well-vested with their roles and consequently resulted into poor supervision of students on attachments. Furthermore, it was revealed that supervisors in attaching institutions had inadequate qualifications as such they felt challenged with students from the university. This finding is in support with Bukaliya (2012) who noted that results elsewhere had shown that in some cases some supervisors possessed inferior qualifications than the students.

5.3.7 Misplacement of Students during Practicum

The study established that most students were wrongly placed in the attaching institutions and this was strongly supported by participants with a mean score of 4.45. It further revealed that due to wrong placement students did not acquire the expected skills and experience from the practicum. Students at the end of the day were assigned irrelevant tasks, which could not benefit them.

5.3.8 Lack of Computer Skills

Findings also revealed that most students didn't have computer skills. This made some works that required the use of the computer very difficult for students. Most students lacked basic computer skills which are highly needed in this computer era, this was worsened by lack of access to computers in the attaching institutions. The interns also felt that they were not getting appropriate exposure to the latest technology used in the workplace they were attached to. This finding contrasts with the results found by Gault *et al.* (2000) where interns responded that they had experienced greater exposure to a variety of new software applications.

5.3.9 Lack of motivation

Lack of motivation like allowances was also revealed in this study. Most students felt demotivated because of lack of allowances, as they had to fend for themselves and spent more time looking for means of survival and this had a negative effect on the practicum. This finding was related to that of Collins (2002) who revealed that the most common factor that create decreased motivation of interns is being poor or having no pay.

5.3.10 Uncomfortable and hectic working environment

Findings revealed that students had rough and uncomfortable working conditions during their practicum. It was further cited that lack of working space was one of the main areas in need of improvement. Students were meant to work longer hours coupled with heavy work load and were stressed up most of the time. Stress posed a big problem to the effective implementation of the practicum.

The foregoing findings are consistent with the fact that students always face challenges during their attachment as pointed out by Carlson (2002).

From the findings discussed it was established that UNZA's EE student practicum had many areas that needed improvement, in order to make the practicum more beneficial.

Findings show that the third research objective was answered. The research objective was to establish areas in need of improvement about UNZA's EE student practicum.

5.5 Proposed measures for the way forward concerning UNZA's EE student practicum

The proposed measures for the way forward concerning UNZA's EE practicum included: need to bridge the gap between theory and practice, UNZA-EE lecturers should adequately prepare

students for the practicum, EED 9003 must be time-tabled and seriously taught and design a standardised assessment. The other proposed measures were placement for practicum should be done by UNZA in recognised institutions and for objectivity all EE lecturers must participate in students' assessment.

5.5.1 Need to bridge the gap between theory and practice

The study established that there was need to bridge the gap between theory and practice. It was strongly supported, as a measure to be put in place in order to make the practicum more effective. The overwhelming response entails that there was a serious need to bridge the gap between theory and practice. This could only be achieved through striking a balance between theory and practice. If trainee students are adequately prepared in their pre-practicum course, the practicum would be of great help to bridge the gap between theory and practice. This suggestion is supported by a related study done by Nevett (1985) whose results revealed that practicum bridged the gap between the theory of the classroom and the world of practice.

5.5.2 UNZA-EE lecturers should adequately prepare students for the practicum

The study revealed that EE lecturers should adequately prepare students for the practicum. This one also had an overwhelming response as a measure to enhance the practicum. This meant that the majority of the participants were of the view that students must be well prepared before they go for their practicum in attaching institutions. This proposed measure is related to the findings of Gault et al (2000) whose findings revealed that host institutions expect students to be well-prepared before starting the internship so that the institutions have limited additional costs in training.

5.5.3 EED 9003 must be time-tabled and seriously taught with Continuous Assessment

The study also revealed that EED 9003 (practicum course) should be time-tabled and taught seriously with Continuous Assessment. This was strongly supported as a measure to enhance the practicum, this entails that most of the participants felt that EED 9003 should be taught in order to adequately prepare students before they go for the practicum. This proposed measure is related to the finding of Clark (2003) who observed that many internship programmes require students to be well prepared in terms of completion of a certain level of course work. This would help students to know in advance what is expected of them as they go for their practicum. Some of the suggested topics to be covered would be Computer skills such as Microsoft Word, Excel, Access, Power-point, Publisher, SPSS and Geographic Information System (GIS). Students must also be seriously drilled in reporting writing skills as well as

proposal writing. These would constitute their Continuous Assessment. They should as well be taught on how to write standardised sustainability reports and samples of sustainability reports be availed to them during tutorials.

5.5.4 Design a standardised assessment

The study findings revealed that participants proposed that a standardised assessment be design for effective assessment. This proposal was also strongly support by the participants with twenty-two per cent.

5.5.5 Student placement should be done by UNZA in recognised institutions.

The participants proposed that, student placement for practicum should be done by the university in recognised institutions. The majority felt that the School of Education particularly the Environmental Education Unit through the office of the EE Practicum Coordinator should work together with them for the placement. This proposed measure is in support with the finding of Tackett et al (2001), which concluded that a successful internship programme requires the faculty's involvement. Bukaliya (2012) also agreed and noted that the processing of and arranging the practicum placement should be the role of faculty and not the student.

5.5.6 For objectivity all EE lecturers must participate in students' assessment.

For objectivity, participants proposed that all EE lecturers must participate in the assessment of students. The current state of affairs is that only the EE practicum coordinator does the assessments and gives the final grade to the students after the practicum. This finding is inconsistent with that of Beard (2007) whose study revealed that, for the assessment to be as objective as possible, the student interns and academic lecturers should all participate.

From the findings discussed it was revealed that all the proposed measures were overwhelmingly supported by the participants. To this effect all the proposed measures should be implemented in order to enhance the practicum.

Findings show that the fourth research objective was answered. The research objective was to propose measures for the way forward concerning UNZA's EE student practicum.

5.6 Summary of Discussion of Findings

In summary, this chapter discussed the findings on the benefits of UNZA's EE students get during their practicum and findings on the challenges students face during their practicum in the attaching institutions respectively. The chapter further discussed findings in areas that

needed improvement about the practicum. It also discussed findings on the proposed measures for the way forward in order to enhance the EE practicum at the University of Zambia. The next chapter will conclude and provide recommendations to the study. Chapter seven will also give suggestions for further research.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Overview

In this chapter, the conclusion is drawn on the basis of the findings of the study and there after recommendations based on the findings of the study are made.

6.2 Summary of the Dissertation

The preceding chapters have so far presented the following; chapter one presented the background to the problem, statement of the problem and purpose of the study among others; chapter two presented the literature reviewed; chapter three presented the description of the study; chapter four presented the methodology used; chapter five presented the findings of the study and chapter six presented the discussion of the findings. This chapter presents the overall conclusion of the findings in this study. This chapter ends with recommendations and implications for further research.

6.3 Conclusion

The aim of this study was to examine the EE practicum offered at the University of Zambia, School of Education with respect to selected institutions of Lusaka District. The following were the major findings of the study:

The study revealed that practicum was an essential component of the EE programme because of the benefits students accrued. The benefits included: Increased knowledge in Environmental Issues, acquired new knowledge and exposure from industry, ability to work interdependently and independently and developed moral standards to the environment. The other benefits were acquired field work and practical environmental skills, developed communicative and investigative skills. The least benefit was applied theory to real environmental issues.

The study further revealed that practicum faced a lot of challenges and these included: Poor orientation to practicum work at UNZA and attaching institutions, insufficient preparation on EE practicum course work, inadequate evaluation process by UNZA and attaching institutions, lack of communication , follow ups with university lecturers and short duration for practicum. The other challenges were that EE was not clearly known to many institutions, students were used as cheap labour by attaching institutions, heavy work load assigned by attaching institutions, financial strain faced by students during the practicum and inadequacy of attachment places.

Findings revealed that the practicum also had areas in need of improvement and these included: clarity on the nature of tasks assigned by attaching institutions, poor writing skills, inadequate funding for visits by university lecturers, poor communication skills, lack of courtesy by students, ambiguous grading system for assessment and improper supervision at the attaching institution. The other areas in need of improvement is the misplacement of students during the practicum, lack of computer skills, lack of motivation such as allowances, uncomfortable and hectic working environment.

Furthermore, findings of the study revealed that students proposed among others: the need to bridge the gap between theory and practice, UNZA EE lecturers should adequately prepare students for the practicum, EED 9003 must be time-tabled and seriously taught with Continuous Assessment, a standardised assessment be designed, student placement for practicum should be done by the university in recognised institutions and for the sake of objectivity all lecturers in EE Unit must participate in the assessment of students.

The mean scores of the benefits of UNZA EE practicum were high, though not from all the themes. This meant that the practicum was an essential part of the EE course and was of value.

The mean scores of challenges of the UNZA EE practicum were higher throughout all the themes. The mean score values were constantly higher. This is a clear indication that there is urgent need to address these challenges that have been highlighted in the findings.

Throughout the themes, the mean score values for EE practicum were high in the areas of need. This is a clear indication that there is urgent need to improve the areas highlighted in the findings.

The UNZA EE practicum percentages on measures to employ in the future were equally high in almost all the themes.

This calls for immediate actions to be taken in order to make the UNZA EE practicum more beneficial.

After comparing the grand means of the benefits which was 32.50, for challenges was 47.04 and areas in need of improvement was 45.54, it was revealed that the grand mean for the benefits of the practicum was much less than the grand mean for challenges and areas in need of improvements.

In a nutshell, the challenges and areas in need of improvements out weighted the benefits, because of this the UNZA EE practicum was made not to be very beneficial.

In view of the foregoing findings, it can be deduced that the practicum was not very beneficial to the students. It therefore, requires that challenges and areas in need of improvement be addressed in order to make the practicum very beneficial.

6.4 Recommendations

In order to make the practicum more beneficial, the following recommendations may have to be taken into consideration:

1. There was insufficient preparation on EE pre-practicum course work. Arising from this, the UNZA EE Practicum Coordinator should ensure that students are adequately prepared in the pre-practicum course work before they go for their practicum experiences.
2. There was also poor orientation to practical work at UNZA and attaching institutions. To this effect, it is recommended that the course should be designed in a manner that it may cater to the practical needs of the practicum. Further, there is need for theory and practice to be made proportionate.
3. There was inadequate communication and follow ups from the university lecturers during the practicum. In view of this, it is recommended that supervision of students by lecturers and site supervisors in attaching institutions should improve with more visits to the site of attachments.
4. The evaluation process was inadequate. In view of this, there was need to put in place an effective system of monitoring and evaluation for the practicum by lecturers and attaching institutions.
5. The duration was too short for the practicum. Duration for the practicum should be increased from the current three months to six months. Students should go for practicum twice that is in the second year for three months and the fourth year another three months. In so doing this would make students acquire more practical skills and experience.
6. There was lack of clarity on the nature of tasks assigned by the attaching institutions. In view of this, there is need for an effective collaboration between UNZA and the attaching institutions offering the practicum. This would enable attaching institutions to fully understand the expectations of students and tasks to be assigned to them as they go

for their practicum. This would also enable consistency in sharing practical skills and knowledge between the industry and the higher institutions.

7. There was poor writing and communication skills, which resulted into poor quality of sustainability final reports. There is need to introduce a compulsory course in communication skills. EE Practicum Coordinator should avail samples of sustainability reports to the students in order for them to come up with standardised reports.
8. Less practicals were conducted by students due to inadequate funds to purchase equipment and reagents (chemicals) needed to carry out such practicals. Therefore, UNZA management should apportion more funds to the School of Education EE Unit in order for more practicals to be conducted by students before they go for their attachments.

6.5 Areas for Future Research

Since this study was a small academic research on the examination of the University of Zambia Environmental Education practicum and focusing on 10 selected attaching institutions in Lusaka District, Zambia, similar study could be extended to other universities offering Environmental Education in Zambia. Further research may be undertaken to investigate the impact of Environmental Education Programme at the University of Zambia from its inception to date. Lastly, there is need for further research to investigate the employability of the University of Zambia Environmental Education Graduates in Zambia.

REFERENCES

- Aldas.T.,Crispo.V.,Johnson, N. and Price, T. A (2010). Learning by doing: The Wagner plan from classroom to career. *Peer Review*, 12(4), 24-28.
- Anastasi, A and Urbina, S. (1997). *Psychological Testing*. Prentice-Hall Inc: Upper Saddle River.
- Applegate, J., and Morreale, S. (1999). Service learning in the communication discipline: A natural partnership. In D. Dorge, E. Zlotkowski, & B. Ortega Murphy (Eds.), *Voices of strong democracy: Concepts and models for service learning in communication studies* (pp. 9-14). Washington, DC: American Association for Higher Education.
- Batten, M,Griffin, M,and Ainley, J (1991) *Recently recruited teachers: Their views and experiences of preservice education. Professional development and teaching*. Department of Employment, Education and Training,Canberra AGPS.
- Bernard, H.R (1995). *Research Methods in Anthropology. Second Edition*. Sage Publications.
- Beard. V.K. (1997) *Performance appraisal of Public Accounting Interns: A qualitative analysis of self-reported deficiencies*. *Issues in Accounting Education* 12 (1). 15-26.
- Beard, F., and Morton, L. (1999). Effects of internship predictors on successful field experience. *Journalism & Mass Communication Educator*, 53, 42-53.
- Beard, D.F (2007) . Assessment of internship experiences and accounting core competencies. *Accounting Education: An International Journal*, 16(2), 207-220.
- Bhattacharjee, A (2012). *Social Science Research: Principles, Methods and Practice*. University of South Florida: Florida.
- Bless, C. & Higson-Smith, C(2000).*Fundamentals of social research methods: An African perspective*. (3rd edition) Lansdowne: Juta Education (Pty) Ltd. Botha

- Birch, C, Allen, J, McDonald, J and Tomaszczyk, E 2010, Graduate Internships—bridging the academic and vocational divide’, In S. Halley, C. Birch, D. T. Tempelaar, M. McCuddy, N. Hernández Nanclares, S. Reeb-Gruber, W. H. Gijssels, B. Rienties, and E. Nelissen (Eds.), Proceedings of the 17th EDINEB Conference: Crossing borders in education and work-based learning, London: FEBA ERD Press, pp.194–195
- Braxton, J. M. (2008). Toward a theory of faculty professional choices in teaching that foster college student success. *Higher Education*.181-207.
- Bukaliya, R. (2012). The potential benefits and challenges of internship programmes in an ODL institution: a case for the Zimbabwe Open University, *International Journal on New Trends in Education and Their Implications*, January, February, March 2012 Volume: 3 Issue: 1 Article: 13, pp 118-133.
- Brooks, L., Cornelius, A., Greenfield, E., and Joseph, R. (1995). The relation of career related work or internship experiences to the career development of college seniors. *Journal of Vocational Behaviour*, 46, 332-349.
- Bryman, A. (2008). *Social Research Methods*. Oxford: Oxford University Press
- Bushe, G.R (2007) Appreciative Inquiry is not Just about the Positive. *Organisation Development Practitioner*, Vol. 39, No. 4, 30-35
- Bushe, G.R (1998). Appreciative inquiry with teams. *Organisational Development Journal* Vol.16. 41-50.
- Cannon, J.A., and Arnold, M.J. (1998). Student expectations of collegiate internship programs in business: A 10-year update. *Journal of Education for Business*, 73, 202-205.
- Carlson, A.C (2002) *The Benefits of Work-Integrated Learning* ITE Teachers’ Conference, Malaysia.
- CDC, (2000). *Environmental Education: Teacher’s manual (Save Planet Earth from destruction)*. Lusaka, CDC.
- Central Statistical Office, (2011). *Zambia 2010 Census of Population and Housing*. Government Printers: Lusaka.
- Clark, S.C (2003). Enhancing the educational value of business internships. *Journal of Management Education*, 27(4). 472-484.

- Cochran-Smith, M., and Lytl, S.L (1999). The Teacher research movement: A decade later. *Educational Researcher*, 28(3), 15-25
- Council for Accreditation of Counseling and Related Educational Programs (CACREP). (1988). *Accreditation procedures manual and application*. Alexandria, VA: Author.
- Collins, A. B. (2002). Gateway to the real world, industrial training: Dilemmas and problems. *Tourism Management*, 23(1), 93-96
- Cooperrider and Whitney (2011) *Appreciative Inquiry: A Positive Revolution in Change*. Berrett-Koehler Publishers, Inc: San Francisco.
- Cook,S.J., Parker, R.S and Pettijohn, C.E. (2004). The Perceptions of Interns: A Longitudinal Case Study, *Journal of Education for Business*,79(3), 179-185.
- Creswell, J. W., and Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Crewswell, J.W. (2012). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*: Sage :Thousand Oaks.
- Crumbley, D. and Sumners, G. C. (1998). How businesses profit from internships: *Internal Auditor*, 55, 54-59.
- De Vaus, D. (2001). *Research Design in Social Research*. London: Sage Publications.
- ECZ (2008), *Zambia Environment Outlook Report 3*. Lusaka: UNEP. Encyclopaedia of Life Support Systems
- Denzin, N. K. and Lincoln, Y. S. (eds). (2000). *Handbook of Qualitative Research* (2nded.) Sage Publications: London.
- DuBey D.L., DuBey, O.C. and Ndagi, J.O. (1985). *Teaching in the Primary School: A Course for Active Learning*. London: Longman.
- D'abate, CP, Youndt, MA and Wenzel, KE 2009, „Making the most of an internship: An empirical study of internship satisfaction“, *Academy of Management Learning & Education*, Vol. 8, No. 4, pp. 527–539.
- Editorial (2008) *International Journal of Educational Research*, 47: 208-212.
- English, D.M. and Koeppen, D.R. (1993). The relationship of accounting internship and subsequent academic performance. *Issues in Accounting Education*, Fall, 292-299.
- Furco, A. (1996). Service Learning and School-to-Work. *Journal of Cooperative Education* , 1, 7-14. *International Education Studies* November, 2009, 53.

- Fields, D. L. (2002). *Taking the measure of work: A guide to validated scales for organizational research and diagnosis*. SAGE.
- Gall, M.D., Renchler, R.S.(2000). *Effective staff development for teachers: A research-based model*. College of Education, University of Oregon.
- Gault, J., Redington, J., & Schlager, T. (2000). Undergraduate business internships and career success: Are they related? *Journal of Marketing Education*, 22, 45-53
- Gavigan, L. (2010). Connecting the Classroom with real-world experiences through Summer internships. *Peer Review*, 12(4), 15-19.
- Gold, Y. (1996). In Sikula, J., Buttery, T.J., & Guyton, E. (Eds.), *Handbook of research on teacher education: A project of the Association of Teacher Educators*, (pp. 548-593)
- Guba, D and Lincolinn, C (1989). *Handbook of Qualitative Research*. Sage Publisher: London.
- Guidry, T. D. and Cohen, P. A. (2001). A practical examination for student assessment in an externship program. *American Journal of Pharmaceutical Education*, 51, 280-284.
- Haimson, J and Bellotti, J 2001, „Schooling in the workplace: Increasing the scale and quality of work-based learning“, Washington, DC: Education Resources Information Center (ERIC Document Reproduction Service No. ED455444).
- Hall, M., Stiles, G., Kuzma, J. and Elliot, K. (1995). A comparison of student and employer expectation with regard to business internship. *Marketing Education Review* , 5, 3.
- Henry, J. (1989). Meaning and practice in experiential learning. In S. W. Weil & I. McGill (Eds.), *Making sense of experiential learning* (pp. 25–37). Buckingham, U.K.: The Society for Research into Higher Education and Open University Press.
- Helmut. B, and Rittberger. V(2000). “Environmental NGOs in an Emerging Global Civil Society.” *In The Global Environment in the Twenty-First Century: Prospects for International Cooperation* .Tokyo: United Nations University
- Herr, S. R. (2000). Academic yearnings--cooperative responses. *Journal of Cooperative Education*, 35(1), 35. Retrieved from <http://www.search.proquest.com/docview/212708743?accountid=14872>
- Howey, K (1983) Teacher education An overview. In K.R. Howey & W E Gardner(Eds.) *The education of teachers* (pp 6-37) New York: Longman

- Hoy, W. & Rees, R. (1977). The bureaucratic socialisation of student teachers. *Journal of Teacher Education*, 18(1), 23-26.
- Hymon-Parker, S. (1998). Benefits and limitations of internships as viewed by educators and retailers/commentary. *Journal of Family and Consumer Sciences*, 90, 76-81.
- Joyce, B.R., Howey, K. and Yarger, S (1976). I.S.T.E. Report I. Palo Alto. California: *Stanford Center for Research and Development in Teaching*.
- Kazis, R. and Goldberger, S (1995). *The Challenges of Implementing Curriculum Integration*. New York: Teachers' College Press.
- Kasonde-Ngandu, S. (2013). *Writing a Research Proposal in Educational Research*. Lusaka: UNZA Press.
- Kombo, D. and Tromp, D (2006). *Proposal and Thesis Writing*. Nairobi: Don Bosco.
- Kombo, D.K and Tromp, D.L (2011). *A Proposal and Thesis writing: An introduction*: Pauline Publications Africa.
- Korthagen, F.A. J. (2006). Levels in reflection: Core reflection as a means to enhance professional development. *Teachers and Teaching: Theory and Practice*, 11(1), 47-71
- Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Knechel, W.R., and Snowball, D. (1987). Accounting internship and subsequent academic performance: An empirical study. *The Accounting Review*, October, 799-807.
- Kruger, A (2000). *Qualitative Research in Health Care*. BMJ Books: London.
- Lonergan, N., and L. W. Andersen. (1988). Field-based education: Some theoretical considerations. *Higher Education Research and Development*, 7(1), 63-77
- Lam, T., and Ching, L. (2007). An exploratory study of an internship program: The case of Hong Kong students. *Hospitality Management*, 26, 336-351.
- Lubbers, C.A., 2000. What is service learning? Paper presented to the association for education in journalism and mass communication. Phoenix.
- Maskooki, K., Rama, D.V. and Raghunanandan, K. (1998). Internships in undergraduate finance programs. *Financial Practice & Education*, 20, 94-102.

- Matthew, S. M., Taylor, R. M., and Ellis, R. A. (2012). Relationships between students' experiences of learning in an undergraduate internship programme and new graduates' experiences of professional practice. *Higher Education*, 64(4), 529-542.
- Mihail, D.M., (2006). Internship at Greek Universities: An exploratory study. *Journal of Workplace Learning*, 18, 28-41.
- Macnee, C and McCabe. (2008). *Understanding Nursing Research; Reading and Using Research in Evidence-Based Practice*. Philadelphia: Uppincott Williams and Wilkins.
- McCrea, E. J. (2006). *The Roots of Environmental Education: How the Past Supports the Future*. New York, Routledge.
- McKeown, R. (2002). *Education for Sustainable Development Toolkit*. Energy, Environment and Resources Centre, Tennessee, University of Tennessee.
- McMahon, U., and Quinn, U. (1995). Maximising the hospitality management student work placement experience: a case study. *Education and Training*, 37(4), 13-17
- Miles, M.B and Huberman, A.M (1994). *Qualitative Data Analysis*. Sage Publishers: Thousand Oaks.
- Marriam, S. B. (2001). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Publishers.
- Mukherjee, A., and Malhotra, N. (2006). Does role clarity explain employee-perceived service quality?: a study of antecedents and consequences in call centres. *International Journal of Service Industry Management*, 17(5), 444-473.
- Namafe, C.M. (2006). *Environmental Education in Zambia: A critical Approach to Change and Transformation*. Lusaka: New Horizon Printers.
- Nevett, T. (1985). Work experience: The essential ingredient in British programs. *Journal of Marketing Education*, 7, 13-18.
- Nkwi, P. Nyamongo, I. Ryan, g. (2001) *Field Research into Social Issues: Methodological Guidelines*. Washington, D C: UNESCO.
- Njoroge, R. J. and Bennars, G. A. (2000) *Philosophy and Education in Africa. An Introductory Text for Students of Education*. Kolbe Press, Kenya.
- Oduro-Mensah, D. (1992), "Environmental education and awareness creation through adult education: Suggestions from Ghana. *Adult Education and Development*, 39, 251-264.

- Olugbenga, A.F(2009) ‘Towards Effective SIWES Curriculum Development in Applied Sciences for Adequate Skills Utilization: A Case Study of the School of Applied Science, Nuhu Bamali Polytechnic, Zaria’ *Pacific Journal of Science and Technology*, Vol.10(1) pp234-239.
- Oppenheim, A.N (1996). *Questionnaire Design and Attitude Measurement*. Basic Books : New York.
- Orodho, A. J. (2003). *Essentials of Educational and Social Science Research Methods* Nairobi. Mazola Publishers.
- Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods*. Thousand Oaks, CA: Sage
- Poole, D. (2004) Practicum II and Seminar. <http://arapaho.nsuok.edu/npoole/practicum.html>
Accessed 11/15/2013.
- Price, D. A. (1987). The practicum and its supervision. In K. J. Eltis (Ed.), *Australian Teacher Education in Review*, Bedford Park, South Australia, Australia: South Pacific Association for Teacher Education Inc.
- Phiri. T.K (2016). *EED 9003: School/Community experience*. UNZA Press: Lusaka.
- Phiri T.K. (2016) “Engaging Zambian Institutions through Environmental Education Students Attachments”...in Namafe, C.M. (Ed) “*Learning Sustainable Development Goals in Zambia through Environmental Education*” Ndola Mission Press, Ndola.
- Queensland Education (2002) *Teachers’ pre-service tertiary education preparation: A summary report of the quantitative data*. Queensland. Performance Measurement and Review Branch Office of Strategic Planning and Portfolio Services.
- Reichel, M., and Ramey, M.A (1987). *Conceptual frameworks for bibliographic education: theory into practice*. Littleton, Colo: Libraries Unlimited
- Roksa, J. (2005). Double disadvantage or blessing in disguise? Understanding the 108 relationship between college major and employment sector. *Sociology of Education*, 78(3), 207-232.

- Ronczkowski, P. J., LaFollette, S., and Bellingar, T. (2004). The role of an environmental health professional-practice (internship) coordinator in mentoring the student intern. *Journal of Environmental Health*, 66(10), 22.
- Rothman, M. (2007). Lessons Learned: Advice to Employers from Interns. *Journal of Education for Business*. 82, (3), 140.
- Ryan, G., Toohey, S., and Hughes, C. (1996). The purpose, value and structure of the practicum in higher education: A literature review. *Higher Education*, 31, 355- 377.
- Sambili, H. (2000). "Characteristics of Quantitative Research Methodology", Egerton University Journal of Humanities, Social Sciences and Education Series, Vol. 3, 1: 157-165
- Sawyer, J. E (1992). Goal and Process clarity: Specification of multiple constructs of role ambiguity and a structural equation model of their antecedents and consequences. *Journal of Applied Psychology*, 77, 130-142.
- Schön, D.A. (1987). *Educating the reflective practitioner*. CA: Jossey-Bass : San Francisco.
- Shoemaker, M. E. (1999). Leadership in sales managers associated with the self-efficacy, role clarity and job satisfaction of individual industrial sales people. *Journal of Personal Selling and Sales Management*, 19(4)
- Smith, K.K, and Berg .D.N. (1987). *Paradoxes of group life*. Jossy-Boss: San Francisco.
- Simuyaba. E, Banda, D, Mweemba, L and Muleya, G (2015). "Theory against Practice: Training of Teachers in a Vacuum" *Journal of Education & Social Policy*, Vol.2 No. 2.
- Sim, C (2006). Preparing for Professional experiences-incorporating pre-service teachers as 'Communities of practice,' *Teaching and Teacher Education* 22, 77-83.
- Staton, T.K and Giles, D.E (1989). Curriculum Development for Long-distance Internships.

- Swason, A. R. (2013) *Theory Building in Applied Disciplines*. San-Francisco: Berietkoehler Publishers.
- Takett, J., Wol, R and Law, D. (2001). Accounting interns and their employers: Conflicting perspectives. *Ohio CPA Journal*, 60, 54-56.
- Taylor, M.S. (1998). Effects of college internship in individual participants. *Journal of Applied Psychology*, 73, 393-492.
- Tembo, P. (2014). Financial and Administrative Investment: Examining Sources, Institutional Budgets and Outcomes. Unpublished Master's Dissertation. University of Zambia.
- Trivedy, P.R. and Singh, U.K. (1993) *Global Environmental Education visions of 2001*. Institute of Ecology and Environment. New Delhi.
- United Nations, (1972). *United Nations Conference on the Human Environment (UNCHE)*. Stockholm, Sweden.
- Wesley, S., and Bickle, M.(2005). Examination of a paradigm for preparation undergraduates for a career in the retailing industry: Mentors curriculum and internship. *College Student Journal*, 39(4), 680-691.
- White, C. J (2013). *Research Methods and Techniques*, Pretoria: White Mustang.
- Williams, J. (2009). Beyond the practicum experience. *English Language Teachers Journal*, 63(1), 68-77.
- Wynne, B., and Stringer, D. (1997). *A Competency Based Approach to Training and Development*. London: Pitman Publishing.
- Yan, C. and He, C. (2010). Transforming the existing model of teaching practicum: A study of Chinese EFL student teachers' perceptions. *Journal of Education for Teaching*, 36(1), 57-73.
- ZEMA (2011). *The Enviro-Line*. ZEMA: Lusaka.
Retrieved from www.zema.org.zm/zaneep
- Zeichner K. & Tabachnick. B. (1981). Are the effects of university teacher education "washed out" by school experience? *Journal of Teacher Education*. 32(3), 7-11

APPENDICES

Appendix 1: Letter of Consent

THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

Dear Participant,

My name is Kafula Chimba (ID: 2016145351) a post graduate student of Environmental Education at the University of Zambia. I'm carrying out a study on the Examination of Environmental Education practicum on students and selected attaching institutions in Lusaka District of Zambia. I'm requesting you to participate in this study by providing the necessary information to the study. Be assured that the information will be used for academic purpose only and will not be divulged to any person.

Your views will be treated with a high degree of respect, confidentiality and anonymity. Please give honest responses. Appending your signature means authorisation of your consent. However, you are also at liberty not to append the signature.

Participant's Signature:.....

Appendix 2: Authorisation Letter-UNZA School of Education



**THE UNIVERSITY OF ZAMBIA
SCHOOL OF EDUCATION**

Telephone: 291381
Telegram: UNZA, LUSAKA
Telex: UNZALU ZA 44370

PO Box 32379
Lusaka, Zambia
Fax: +260-1-292702

Date: 27/02/2018

TO WHOM IT MAY CONCERN

Dear Sir/Madam

RE: FIELD WORK FOR MASTERS/ PhD STUDENTS

The bearer of this letter Mr./~~Ms~~..... **KAFULA CHIMBA**..... Computer number **2016145351**..... is a duly registered student at the University of Zambia, School of Education.

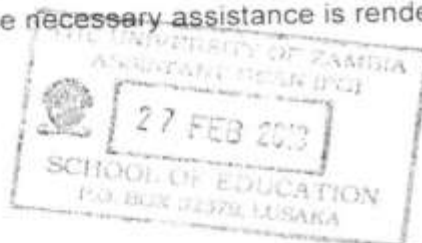
He/~~She~~ is taking a Masters/~~PhD~~ programme in Education. The programme has a fieldwork component which he/~~she~~ has to complete.

We shall greatly appreciate if the necessary assistance is rendered to him/~~her~~.

Yours faithfully

Emmy Mbozi

Emmy Mbozi (Dr)
ASSISTANT DEAN POSTGRADUATE STUDIES- SCHOOL OF EDUCATION



cc: Dean-Education
Director-DRGS

Appendix 3: Semi-structured interview schedule for both Current 4th Year EE Students and EE Graduates.

Dear Participant,

I'm a post graduate student of Environmental Education at the University of Zambia.

You have been purposely selected as one of the participants to this study whose main purpose is to examine the University of Zambia Environmental Education Practicum in Lusaka District of Zambia. Your views, experiences and difficulties (if any) during the practicum will provide relevant information for effective conducting of the practicum at the University of Zambia and the attaching institutions.

To ensure confidentiality, anonymity of the respondent is assured and all response shall solely be for academic and research purposes only and shall be treated with the strictest confidence they deserve.

Part One: Background Information

- 1. What is your sex? (a) Male (b) Female
- 2. What is your age?
- 3. What is your year of study?.....

Part Two: Benefits of UNZA's EE Practicum

- 4. What are some of the benefits that you acquired during your EE practicum and why?

.....
.....
.....
.....
.....

Part Three: Challenges of UNZA's EE Practicum

- 5. What are some of the challenges you faced during your EE practicum?

.....
.....
.....
.....
.....

Part Four: Areas in need of improvement about UNZA’S EE Practicum

6. (a) In your opinion, what areas of the UNZA EE practicum need to be improved?

.....
.....
.....
.....
.....

(b) Why did you give such responses in 5(a)?

.....
.....
.....
.....
.....

Part Five: Proposed measures for the way forward concerning UNZA’S EE Practicum

6. What are some of the measures that should be put in place in order to enhance the EE practicum at UNZA?

.....
.....
.....
.....
.....

Thank you very much for your participation.

Appendix 4: Semi-structured interview schedule for UNZA-EE lecturers.

Dear Participant,

I'm a post graduate student of Environmental Education at the University of Zambia.

You have been purposely selected as one of the respondents to this study whose main purpose is to evaluate the University of Zambia Environmental Education Practicum in Lusaka District of Zambia. Your views, experiences and difficulties (if any) during the practicum will provide relevant information for effective conducting of the practicum at the University of Zambia and the attaching institutions.

To ensure confidentiality, anonymity of the respondent is assured and all response shall solely be for academic and research purposes only and shall be treated with the strictest confidence they deserve.

Part One: Background Information

- 1. Name of Institution:.....
- 2. Position in Institution:.....
- 3. Professional Qualification:.....
- 4. Gender (a) Male (b) Female

Part Two: Benefits of UNZA's EE Practicum

- 5. What are some of the benefits that EE students acquire during their practicum and why?

.....
.....
.....
.....
.....

Part Three: Challenges of UNZA's EE Practicum

- 6. What are some of the challenges that EE students face during their practicum?

.....
.....
.....
.....
.....

Part Four: Areas in need of improvement about UNZA’S EE Practicum

6. What areas of UNZA EE practicum need improvement, and why?

.....
.....
.....
.....
.....

Part Five: Proposed measures for the way forward concerning UNZA’S EE Practicum

7. What are some of the measures that should be put in place in order to enhance the EE practicum at UNZA?

.....
.....
.....
.....
.....

Thank you very much for your participation.

Appendix 5: Semi-structured interview schedule for Officials in the Attaching Institutions

Dear Participant,

I'm a post graduate student of Environmental Education at the University of Zambia.

You have been purposely selected as one of the respondents to this study whose purpose is to examine the University of Zambia Environmental Education Practicum in Lusaka District of Zambia. Your views, experiences and difficulties (if any) during the practicum will provide relevant information for effective conducting of the practicum at the University of Zambia and the attaching institutions.

To ensure confidentiality, anonymity of the respondent is assured and all response shall solely be for academic and research purposes only and shall be treated with the strictest confidence they deserve.

Part One: Background Information

- 1. Name of Institution:.....
- 2. Position in Institution:.....
- 3. Professional Qualification:.....
- 4. Gender (a) Male (b) Female

Part Two: Benefits of UNZA's EE Practicum

- 5. What are some of the benefits that you get from the student practicum in your institution?
.....
.....
.....
.....
.....

Part Three: Challenges of UNZA's EE Practicum

- 6. Based on your experience, what are some of the challenges of the UNZA EE practicum?
.....
.....
.....
.....
.....

Part Four: Areas in need of improvement about UNZA’S EE Practicum

6.(a) Based on your experience, what areas need improvement in the UNZA EE practicum?

.....
.....
.....
.....
.....

(b) Why are the areas you mentioned in 6 (a) in need of improvement?

.....
.....
.....
.....
.....

Part Five: Proposed measures for the way forward concerning UNZA’S EE Practicum

7. What are some of the measures that should be put in place in order to enhance the EE practicum at UNZA and in your institution?

.....
.....
.....
.....
.....

Thank you very much for your participation.

Appendix 6: Questionnaire for UNZA-EE 2018 fourth year students

Dear Participant,

I'm a post graduate student of Environmental Education at the University of Zambia.

You have been purposely selected as one of the respondents to this study whose purpose is to examine the University of Zambia Environmental Education Practicum in Lusaka District. Your views, experiences and difficulties (if any) during the practicum will provide relevant information for effective conducting of the practicum at the University of Zambia and the attaching institutions.

To ensure confidentiality, anonymity of the respondent is assured and all response shall solely be for academic and research purposes only and shall be treated with the strictest confidence they deserve.

Part I: Socio-Demographic Characteristics

INSTRUCTIONS

Please tick where appropriate.

1. What is your sex?

Male Female

2. What is your age group?

20 -25years 25-30years 30- 35years
35- 40years 40 -45years 45 and above

3. What is your marital status?

Married Single Separated Divorced

4. What is the level of education?

Primary Secondary

Use the rating scale given beside each statement. Please **tick** only the most appropriate rating in the box against the statement that represents your view.

KEY

Letters found in the boxes of the table below means:

SD: Strongly Disagree **D:** Disagree **M:** Moderate **SA:** Strongly Agree **A:** Agree

Part II: Benefits of UNZA's EE Practicum						
SN	THEMES	Ranking				
		SD	D	M	SA	A
		1	2	3	4	5
	Knowledge					
1	It has increased my knowledge based on environmental issues					
2	Application of theory to actual environmental practice					
3	Acquired new knowledge from the industry					
	Skills					
4	I have developed communication skills with colleagues					
5	I have acquired fieldwork skills on environmental issues					
6	I have developed investigative skills on environmental issues					
7	I have developed practical environmental skills					
	Values/Attitudes					
8	I have developed a sense of responsibility in addressing environmental issues.					
9	I was helped to develop my moral standards towards the environment					
10	I have developed the ability to work independently and interdependently					
Part III: Challenges of UNZA'S EE Practicum						
1	Insufficient preparation on EE pre-practicum course work					
2	Students used as cheap labour by attaching institution					
3	Heavy workloads assigned by attaching institution.					
4	Students' financial constraints					
5	Poor orientation to practical work at UNZA and attaching institutions					
6	Inadequate evaluation process					
7	Lack of communication and follow ups with university lecturers during the practicum					

8	Inadequacy of attachment places					
SN	THEMES	SD	D	M	SA	A
		1	2	3	4	5
9	Practicum duration was short and poor timing					
10	Assignment of unproductive tasks by attaching institutions					

Part IV: Areas in need of improvement about UNZA's EE Practicum

1	Clarity on the nature of tasks assigned by attaching institutions					
2	Poor writing skills and standardised of final attachment preparation report					
3	Poor communication skills and courtesy					
4	Improper supervision at attaching institutions					
5	Lack of computer skills for some works					
6	Misplacements of students during practicum					
7	Grading system for assessment is ambiguous					
8	Inadequate funding for visits					
9	Lack of motivation like allowances					
10	Uncomfortable and hectic working environment					

Part V: What are some of the measures proposed for the way forward concerning UNZA's EE

Practicum?

.....

.....

.....