

RHODES UNIVERSITY

DEPARTMENT OF EDUCATION

**AN INVESTIGATION OF HOW THE NAMIBIAN ENVIRONMENTAL
EDUCATION COURSE HAS SHAPED AND INFORMED THE PRACTICE OF NON-
FORMAL ENVIRONMENTAL EDUCATORS IN NAMIBIA**

Submitted by

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ABSTRACT

Before Namibia's independence in 1990 educational programmes and curricula gave little attention to environmental education which was detrimental to the development of environmental literacy in Namibia. The post independence education reform process paid special attention to the inclusion of environmental education in all spheres of learning. Furthermore, Namibia became a signatory to various environmental conventions thereby raising awareness about the environment and the potential challenges to a sustainable future. The initiatives of various environmental education projects since independence have responded to the growing concern of environmental education programmes, resulting in the establishment of the Namibian Environmental Education Course (NEEC). To date few studies have been conducted examining the relevance of EE programmes in relation to the professional practice of EE providers in the non-formal sector. This study focuses on the work done by two environmental education providers and four assistant environmental education tutors in Rundu, in North-Eastern Namibia.

The study adopted a qualitative approach to investigate how the NEEC has shaped and informed the practice of EE providers in the non-formal sector and also how the NEEC has responded to the Education for Sustainable Development (ESD) programme. The study employed three data collection instruments: interviews, field observations and document analysis.

The findings indicated that despite the input of the NEEC programme which provided an understanding and knowledge of environmental problems to the EE providers, there are issues that continue to hamper the effective practice of these providers. The study revealed that the NEEC programme, while within the structure of ESD, does not give explicit guidelines for identifying Namibia's environmental challenges and clear strategies of how to respond to these challenges.

The findings of the study have provided valuable insights into aspects of an EE programme that need to be addressed to support EE providers in responding to key environmental challenges in their regions and contribute to the decade of Education for Sustainable Development.

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LIST OF ACRONYMS USED IN THIS STUDY

BETD- Basic Education Teachers Diploma

CBS- Community Based training of School boards

CFED- Community Forestry Education Development

DANIDA- A Danish funding organisation

DRFN- Desert Research Foundation of Namibia

EE- Environmental Education

ESD- Education for Sustainable Development

FATPP- Forestry Awareness and Tree Planting Programme

HHYC-Hope Human Youth Clubs

Ibis- A Danish funded non-governmental organisation responsible for implementing EE activities in developing countries

IUCN- International Union for Conservation of Nature

MBEC- Ministry of Basic Education and Culture

MBESC- Ministry of Basic Education Sport and Culture

MDGs- Millennium Development Goals

MEC- Ministry of Education and Culture

MECT- Ministry of Education Culture and Training

MEE- Ministry of Environment and Energy

MET- Ministry of Environment and Tourism

MWCT- Ministry of Wildlife Conservation and Tourism

NEEC- Namibian Environmental Education Certificate course

NEEN- Namibian Environmental Education Network

NIED- National Institute of Educational Development

NNF- Namibia Nature Foundation

NPC- National Planning Commission

PELC- Pilot Environmental Learning Course

RUGF- Rhodes University Gold Fields course

SADC - Southern African Development Community

SEEN- Supporting Environmental Education in Namibia project

SIDA- Swedish International Development Agency

UNCED- United Nations Conference on Environment and Development

UNESCO- United Nations Educational, Scientific and Cultural Organisation

WSSD- World Summit on Sustainable Development

DECLARATION

I, Martina Namutenya, hereby declare that the investigation of how the NEEC has shaped and informed the practice of EE providers in the non-formal sector and how the NEEC has responded to ESD is my own work, and that it has not been submitted for any degree or examination at any other university.

Signed: _____ Date: _____

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Environmental debates in the latter part of the 20th century focused on the need for sustainable development. In the 21st century, the emphasis is on the need to implement initiatives for education for sustainable development to make sustainability a reality. There is the added need to be environmentally literate. The reformed Namibian education curriculum integrates education for sustainable development in different spheres of learning. The Namibian education philosophy recognizes education for sustainable development by adopting a policy of ‘lifelong learning’ and makes provision for learning possibilities at all age levels.

In the first section of this chapter, I outline the context in which this study is located. The second section of the chapter provides a brief overview of the research site. What follows is a presentation of the research goals and research questions that guided the study. The final section of the chapter provides an outline of the structure of this study.

1.2 CONTEXT

With independence in 1990, the government of Namibia emphasised the promotion of environmental literacy in its constitution by stating.

The state shall actively promote and maintain the welfare of the people by adopting *inter alia*, policies aimed at... maintenance of ecosystems, essential ecological process and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future. (Namibia, 1990).

The Namibian Presidential Commission at the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002 had the task of formalizing environmental learning in Namibia as a vehicle to implement sustainable development activities. In the Green Plan document which Namibia presented at the WSSD in 2002 it

was made clear that Namibia's goal is to increase the awareness of the importance of sustainability and to develop the necessary skills and attitudes amongst Namibians for 'appropriate actions towards sustainability' (Namibia. Ministry of Wildlife, Conservation and Tourism [MECT], 1992:100).

This resulted in the initiation of a project to formalize environmental education in Namibia across the entire curriculum. The Supporting Environmental Education in Namibia (SEEN) project that started in 2001 was tasked with exploring environmental learning in order to activate the existing national policy (Murray, 2005). A central focus of SEEN after 2002 was to respond to the call for implementing education for sustainable development. Many Environmental Education (EE) practitioners considered it an ideal opportunity to review existing EE approaches in Namibia in order to participate in the United Nation's call for the Decade of Education for Sustainable Development (DESD) to take place from 2005 to 2014.

Sustainable development and the need to incorporate this notion into education arose out of Agenda 21 published at the United Nations Conference on Environment and Development, 1992 (SEEN, 2005:2). Agenda 21 re-oriented education to foster new approaches that would benefit everyone through learning and adopting the values, behavior and lifestyles practices to enable 'all to live a full life without being deprived of basic needs' (UNESCO, 2004:4). Education for Sustainable Development (ESD) as identified by the World Summit on Sustainable Development in Johannesburg in 2002 broadened the earlier view of sustainable development by focusing on society, environment, culture and the economy (UNESCO, 2004:4) in an attempt to promote fundamental rights, justice, peace, development and equitable distribution of resources while conserving the natural resources. These are seen as the key areas of concern because they touch on every aspect of the life of Namibian people.

To support ESD the project, SEEN, the Ministry of Education and its partners produced the following outputs:

- National Curriculum guidelines for Environmental learning in Namibia.
- Two semi-distance courses focusing on environmental and sustainable development for educators in the non-formal and formal sectors.

- Teaching, learning and assessment materials on key environment and development issues.
- A participatory whole school development process incorporating a rich variety of school and community projects to make the school a better place in which to live learn and work (Murray, 2005).

Guiding these outputs are the key ideas of the reform process namely lifelong learning and environmental learning. The new education policy '*Toward education for all*' stresses the need for lifelong learning (Namibia. Ministry of Education and Culture [MEC], 1993:11-15) "to fulfill our responsibilities and cope with changes in a society". The promotion of environmental learning in Namibia was seen to be possible through the process of lifelong learning. Similarly, the national policy on adult learning recognises the benefits of investment in adult learning for "...better environmental management" (Namibia. MEC, 1993:31).

The Namibian Environmental Education Certificate course (NEEC) was set up in order to implement the spirit of these policies. The course seeks to develop practitioners in the environmental education arena. It does not limit itself to formal education, but extends to the non-formal sector by drawing its participants from various professions whose practitioners are willing to develop an understanding of environmental education in order to take informed decisions in the future. The Namibian Environmental Education policy strives to improve capacity, effectiveness and efficiency through continuous training and capacity building programmes to promote ESD (Namibia. National Institute for Educational Development [NIED], 1999).

In responding to the call of ESD, the NEEC course aims primarily at developing a community of active and reflective environmental education practitioners. Frohlich (2006:98) claims that, 'the course aims to enable environmental education practitioners to interpret environmental issues within their own context, to reflect critically on what they do and to work with others to respond effectively to the environmental crisis through education'. Environmental education in the context of Namibia is seen to be a vital component in resolving environmental issues, therefore the course seeks to equip and develop participants with three main competences, namely: practical, foundational and reflexive competence (Frohlich, 2006). These competences will enable them to participate in the community of environmental education and contribute to the ESD decade.

Key ESD features, which are relevant in the Namibian context with regard to the promotion of environmental literacy, include the following principles as identified by UNESCO (2004): an interdisciplinary and holistic approach, critical thinking and problem solving, different pedagogies, strategies and participatory decision-making.

These features help to contextualize ESD for Namibia. The rationale being that one achieves a high degree of awareness, discussion and debate about the values and lifestyles that support sustainable development through professional development.

Environmental education in Namibia aims at adopting a model of teaching and learning for environmental sustainability that links an understanding of biophysical, economic, social and political ideas with the skills, values, knowledge, awareness and actions required to become environmentally literate (Murray, 2005).

The current global ESD debate puts ESD at the centre of environmental education in many countries of the world. It is against the backdrop of the current global debate on ESD that I frame this study.

I am interested in how educators in the non-formal sector are able to apply the currently popularised aspects of ESD and if they are able to situate these in the broader realm of the identified Namibian environmental needs in accordance with the pedagogy of the current education reform. A key dimension of this research is to examine the NEEC in the context of ESD and the challenges faced as identified by Namibia at the WSSD. The NEEC course that has been offered since 2002 has not undergone any formalized analysis in this context. Specifically my interest is focused on to what extent the NEEC has shaped and influenced the practice of this non-formal group of educators.

Despite the limited scope of this half-thesis, I believe the findings of this study will be useful to the Polytechnic of Namibia (which is administering the course) for future course development.

1.3 RESEARCH SITE

I conducted the study in Kavango region in the North East of Namibia. As shown in Figure one, Kavango region is one of the 13 regions in Namibia, with only one main

town, Rundu. Kavango region shares a border with Cuando Cubango province of Angola in the north, and in the southeast it borders with the North-West District of Botswana.

Domestically it borders with the following regions, Caprivi in the east, Otjozondjupa in the south, Oshikoto in the west and Ohangwena in the northwest. The region comprises six constituencies: Mpungu, Kahenge, Kapako, Rundu, Mashari, and Ndiyona.

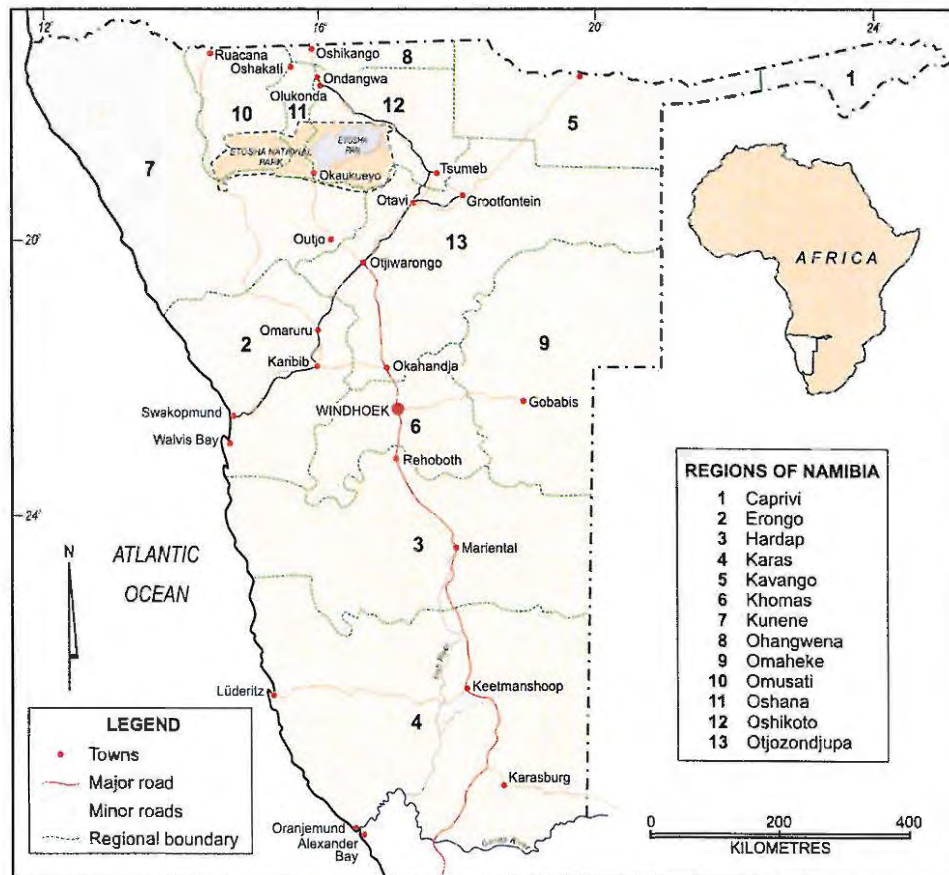


Figure 1. Map of the regions of Namibia. (Sue Abrahams (2006). Graphics Unit, Rhodes University, Grahamstown.)

The Kavango region covers an area of 43,418 km², this accounts for 5.88% of the total land area of Namibia. The population density of Kavango region is 4.2 person/km² with a recorded population of 202 000 in 2001 (Namibia. National Planning Commission [NPC], 2007).

The region comprises the following ethnic groups: Hambukushsu, Nyembas, Vakwangali, Vasambyu, Vagiriku and the San. The farmers in this region mostly practice subsistence farming. The region is known for its good rains during summer from mid-October to

February therefore, it is renowned for the harvest of maize, sorghum, groundnuts, and other crops. People of Kavango enjoy the benefit of the river. Harvesting of fish, lily plants, reeds, grass and other river resources contribute to the dense settlement along the Okavango River (Namibia. NPC, 2007).

The region has a forestry office with one District forester, a youth centre and one EE centre. There are four operational community forests and three major community gardens.

1.4 RESEARCH GOALS

- To analyse the NEEC course in the context of ESD and the challenges faced by Namibia.
- To explore experiences and practice of non-formal environmental educators in their professional contexts.
- To gain insight into the influence of the NEEC programme in the non-formal education sectors.

1.5 RESEARCH QUESTION

In order to investigate the research topic, the study needs to answer the following questions:

- How has NEEC responded to the decade of ESD?
- How has NEEC shaped and informed the practice of educators in the non-formal sector?

1.6 THE STRUCTURE OF THE THESIS

In Chapter 1, I introduced the research question, described the goals and outlined the background of the study. Chapter 1 ends by providing a brief overview of each chapter.

Chapter 2 presents an overview of the literature relevant to the research topic as well as the literature that has informed this study. This provides the theoretical framework of the research.

Chapter 3 presents my research design. It discusses the paradigm used, namely the interpretive approach, and the methods and tools used to collect data. It also highlights the procedures for analysis and interpretation of the data. This research used a case study method to investigate the research problem. I highlight validity, limitations, and the ethical procedures of the study in this chapter.

Chapter 4 presents a full analysis of the NEEC course. It does so by looking at the origin of the course, its structure, and objectives and how successful it has been in achieving its aims. The chapter ends by analysing how the NEEC has responded to ESD.

Chapter 5 analyzes the data collected from the different data collection tools arranged into patterns and categories, it then sketches the main findings reported in different themes. The chapter further discusses the findings by interpreting the views of participants in relation to my research goal and questions and links them with relevant literature about how the NEEC has shaped and informed the practice of EE educators in the non-formal sector.

Chapter 6 presents a conclusion to the study. It reflects on the research process and design. It highlights the key findings and reflects on the lessons learnt from this study. It considers the limitations of this study and provides tentative suggestions about issues that need addressing. Finally, the chapter ends with suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

“There is a need to increase people’s activity and involvement in finding solutions for environment and development problems. Education can give people the environmental and ethical awareness, values and attitudes, skills and behavior needed for sustainable development. Education needs to explain not only the physical and biological environment, but also the socio-economic environment and human development”
(UNCED, 1992:63)

2.1 INTRODUCTION

This chapter seeks to shape, support and inform the research. My argument is that if we are to develop programmes of study that will adequately prepare students to participate effectively in Education for Sustainable Development (ESD), then we need to be clear about the theories, principles and strategies of this particular approach. Secondly, I argue that we need to examine critically what ESD is and what it is trying to achieve and how best ESD can achieve its desired outcomes.

In order to consider the value of the NEEC programme in the context of enabling EE providers to address the environmental issues and risks that challenge the sustainability of their communities, I begin by presenting a brief commentary on the status of the Namibian environment. One needs to set the scene for a discussion on EE initiatives in Namibia aimed at implementing education for sustainable development. Environmental education programmes such as the NEEC evolved as the result of responses to environmental challenges and educational needs over a period. By providing an overview of EE initiatives in Namibia since independence in 1990, I present a contextual background for understanding the NEEC.

This chapter presents a brief overview of ESD. I discuss how Namibia came to adopt the ideas and ideals of ESD in the light of the Namibian participation in the WSSD in

Johannesburg, 2002. I also look at the strategies perceived to be relevant in implementing ESD in Namibia.

The chapter also explores the importance of Education for Sustainable Development by drawing from literature that provides key indicators and a theoretical framework that informed the study.

2.2 OVERVIEW OF ENVIRONMENTAL EDUCATION IN NAMIBIA

2.2.1 Namibia: climate change, and a fragile environment

Namibia is the world's thirty-fourth largest country (Wikipedia, 2009) with an area of 825.418 km². Namibia is the least densely populated country in the world with 2.5 inhabitants per square kilometer. The key environmental characteristics of Namibia are aridity. Namibia is the most arid country south of the Sahara (Brown, 1996), water is the limiting factor, and rainfall is not only low but also unpredictable and is unevenly distributed. This makes planning very difficult and means that “resource use policies and activities” (Brown, 1996:17) must take into account the variability of Namibia’s climate. This implies that the Namibian environment is fragile. (Namibia. MWCT, 1992:100) reported, “Namibia’s environment is of great beauty and potential, but also of alarming fragility”. The fragility of the Namibian environment makes it prone to different environmental problems. Namibia’s economy relies heavily on natural resources. Both renewable and non-renewable resources were severely exploited during colonial times. Long term and cross-sectoral planning for resources use have been ignored in the past and until recently “sustainability had never been an issue” (Namibia. Ministry of Environment and Tourism [MET] (2002:30).

Similarly, (Namibia. MET (2002) describes the environmental debt, its effects and its cost as follows:

Even less well known is the environmental debt Namibia inherited by the 1970s this included the partial collapse of the marine fisheries sector, steadily declining agricultural rangeland productivity and biological diversity, deforestation,

overgrazing, soil erosion and declining water and wetland quality. In today's value, this was costing well over N\$ 300 million per year in lost productivity (Namibia. MET, 2002:3).

While the effect of climate change on Namibia's fragile environment is not yet known, sustainable development would make a significant contribution to the survival of Namibia's environment. This means that Namibia needs to take into account those programme and strategies aimed at not only rehabilitating the environment, but also creating environmental awareness by making a move to an understanding of, and active participation in, resolving environmental issues.

In light of the above, Namibia identified particular environmental challenges at the World Summit on Sustainable Development in 2002. The aim for Namibia will be to develop an environmentally literate society in which citizens have the knowledge, skills, ethics and values necessary for appropriate action essential for bringing about change and to address these challenges with knowledge and understanding of the environment (Murray, 2005).

It is against this background that I discuss the initiatives that were implemented after independence in 1990 as attempts to address the environmental challenges in Namibia.

2.2.2 Environmental education initiatives in Namibia

In this section, I present the EE initiatives that have been implemented in Namibia in response to environmental issues and challenges since independence. I have grouped these initiatives into three phases.

The first phase from 1990-1996 examines the earliest initiatives immediately after independence. The second phase from 1996-2000 was characterized by small projects that were localised and located in the northern part of the country. Three of these projects focused on natural resources and conservation, and were strongly linked to community, but they had a limited life span. The third phase examines the current initiatives at the dawn of the decade for ESD.

2.2.2.1 Early-post independence initiatives 1990-1996

After independence in 1990, a number of initiatives related to environmental education in Namibia took place. Different organisations collaborated with the government and embarked on various projects that are presented below.

2.2.2.1.1 The Namibian Environmental Education Network (NEEN) 1993

The Namibian Environmental Education Network (NEEN) was established in Namibia by a number of interested Namibian environmental education practitioners as a body through which members of various private and public organizations could collaborate to establish and implement environmental education in Namibia (NEEN, 2004). NEEN sought to organize environmental activities in a more coherent way and to work towards developing a policy for EE. In addition, regular NEEN meetings provided a platform for the members to share ideas and concerns, to identify needs that would lead to new environmental education projects and to report on the progress of EE initiatives and projects. One of the communication forms that had mixed success was the initiation of a regular NEEN newsletter. NEEN was collaboration between the government and private sectors, spearheaded by the Desert Research Foundation of Namibia (DRFN), DANIDA (a Danish organization responsible funding EE projects in developing countries), Namibia Nature Foundation (NNF) and the Ministry of Environmental and Tourism (MET).

NEEN embarked on various environmental activities that included:

- Linking and promoting environmental and environmental education efforts throughout Namibia in all spheres and sectors.
 - Supporting the development of existing and new environmental projects and programmes.
 - Enhancing environmental education through the dissemination of in-house and nationally produced resources.
 - Serving as a central access point for national environmental education information of past and present activities.
 - Initiating and coordinating environmental workshops, courses, seminars and conferences.
 - Encouraging monitoring, evaluation and research of environmental practices in Namibia.
- These activities were geared towards achieving national EE objectives.

2.2.2.1.2 The Enviroteach Project 1992-1999

Enviroteach was an initiative of the Swedish International Development Agency (Sida), the Ministry of Basic Education and Culture (MBEC) and the Desert Research Foundation of Namibia (DRFN). The Enviroteach Project was established in 1992 and was founded on an agreement between these three key players. The project concentrated on producing EE materials that were specific to the Namibian context and contained relevant Namibian examples to meet the needs of Namibians (DRFN, 1998).

The focus was to aid the education reform within Namibia by concentrating on cross-curricular, learner centred and activity based teaching methods (DRFN, 1998). The Desert Research Foundation of Namibia was tasked to oversee the progress and implementation of the Enviroteach Project. Experiences and lessons learned were used to inform future and concurrent projects and projects. One of these projects, the Life Science Project, is described in the next section (Namibia. Ministry of Environment and Energy [MEE], 2001).

The Enviroteach Project consisted of four distinctive phases and each phase had its own specific aim.

The four phases included:

- The Pilot phase: This phase produced activity based EE resource materials focusing specifically on the Namibian environment and society. These resources were piloted in 25 secondary schools throughout the country.
- Investigation phase 1: This phase involved investigation of the newly developed Basic Education Teacher Diploma (BETD) curriculum and potential links with the Enviroteach project, to establish a process of implementing the Enviroteach materials in the teacher education colleges.
- Enviroteach phase 2: This phase involved implementing the Enviroteach philosophy and resources in the four colleges of education (Ongwediva College, Caprivi College, Rundu College and Windhoek College) based on the results of the investigation phase.
- Consolidation phase: This phase was aimed at ensuring ownership of EE and integration in the formal sector education.

(Namibia. MEE, 2001:38)

2.2.2.1.3 The Life Science Project 1993-2000

This project represented an extensive educational intervention funded by DANIDA and implemented by Ibis (a Danish non-governmental organisation responsible for implementing EE activities in developed countries) over a ten year period (Namibia. Ministry of Basic Education, Sport and Culture [MBESC], 1997). It involved “creating and supporting the establishment of a new subject in the Namibian education system and supporting and establishing learner-centered pedagogy in this subject” (Namibia. MEE, 2001). The subject developed by this project came to be known as “Life Science” a compulsory subject for all learners from Grades 8-10. A second curriculum was developed by the project, the so-called Natural Science and Health Education subject designed for Grades 5-7. These subjects covered areas of science as well as environmental awareness. The project aimed at creating environmental awareness by dealing with all aspects of the development and implementation of these two subjects that included:

- Curriculum development
- Development of educational materials
- In-service and pre-service training of teachers
- Human and institutional capacity building
(Namibia. MEE, 2001)

This was a major project that involved a large number and variety of stakeholders from directorate level to classroom level and was implemented nationally in all regions and included all schools and teachers.

Some activities aimed at educational reform and curriculum development raised environmental awareness. These included:

- Establishing gardens, nurseries and orchards at schools.
- Improving the school grounds to become learning resources.
- Developing learning support materials that included animal husbandry, plant production and environmental awareness.

A key focus on environmental education taken by the two life sciences subjects was the identification of environmental issues and problems as well as developing environment awareness. An analysis of the implementation of the life science curricula over the period reveals that they centre primarily on education about the environment and in the environment, and were mainly focused on raising awareness (Namibia. MBESC, 1997).

The next section describes other projects that were implemented to support environmental education while the Life Science project was still being implemented. It was seen as important to involve different education sectors in both formal and informal education at different stages to sensitise all Namibians to environmental education activities (Namibia. MEE, 2001).

2.2.2.2 Initiatives in Environmental Education in Namibia from 1996-2000

A number of new projects were implemented during the period 1996 -2000 to either support the life science syllabuses or to further the development of environmental education in all sectors of the population in Namibia.

2.2.2.2.1 School-Based Forest Awareness and Tree Planting in Northern Namibia Project (FATPP) 1996-2001

The project was implemented by the MBEC and the executing body was Ibis. The scope of this project was to increase environmental awareness with specific focus on deforestation issues and to transfer sustainable forestry skills to secondary school teachers and learners and through interventions to farmers and communities in the Ondangwa West and East educational region (Namibia. MEE, 2001). This project strived to combine formal education with rich experiences from non-formal education by reaching out to communities.

The project consisted of two phases:

- Pilot phase: A model for teaching forestry concerns in schools and forestry resource materials were developed, The National Institute of Education Development (NIED) was informed of the outcomes of the projects and these experiences were integrated in the Life

Science curriculum. Through this project, Life Science teachers were introduced to forest awareness and the issue of deforestation. The project established 16 eco-schools in the two educational regions Ondangwa West and East.

- Consolidation phase: This phase of the project focused on the continuous assessment of tree planting activities as part of the Life Science and Agriculture subjects in schools. It included distribution of resource materials, establishing eco-schools in all circuits, upgrading Life Science Advisory Teachers concerning forestry, and focused on capacity building for Namibian project staff.

This project was run in conjunction with a sister programme presented in the next section. The sister programme focused entirely on non-formal education by investing in community development. This project was called the Community Forestry and Extension Project (CFED) and was aimed at raising the level of environmental education awareness in the community.

2.2.2.2.2 Community Forestry and Extension Development Project (CFED) 1996-2001

CFED focused on community development rather than schools. Ibis, collaborating with the Directorate of Forestry, implemented the project. The scope of the project was to assist the Directorate and its partners in supporting the development and implementation of approaches to manage trees and woodland resources sustainably (Namibia. MEE, 2001). This project was later echoed by the government's promotion of the goals of economic growth and development and sustainable environmental development (Namibia. MBESC, 2003a).

In order to ensure the project aims were met, the project undertook the following activities:

- Training of department of forestry staff, extension officers and farmers
- Strengthening of links between schools and community and promoting collaboration with community and other stakeholders in the same field.
- On-farm activities and farmer based trials concerning tree and seed propagation, live fencing, fruit tree promotion and woodland management. Spreading of on-farm forestry information.

- Supporting and monitoring utilization of communal woodland resources in established community forests.
- Supporting wood workers, wood sellers and small farmer based fruit tree producers to strengthen income generation capabilities and promote community forestry. (Namibia. MEE, 2001:37)

The involvement of environmental educators and staff with environmental knowledge was vital to strengthen community participation in decision-making and to increase the sense of ownership of natural resources. The learning opportunities offered increased “*participatory democratic development*” (Namibia. MBESC, 2003b:18). The following section presents a regionally based environmental awareness project.

2.2.2.2.3 The Regional Awareness Project (RAP) 1998

This project, coordinated by Desert Research Foundation of Namibia (DRFN) and funded by the German Aid Agency, kept in line with the promotion of active citizenship and participatory decision making for economic, ecological and social development (Namibia. MBESC, 2003b).

The project aimed at raising awareness concerning desertification and its ecological, economic and social consequences among regional and local decision-makers in four regions (Oshikoto, Omusati, Ohangwena and Oshana regions). The project held numerous activities for decision-makers and conducted field studies to “investigate possible alternatives to present practices causing desertification” (Namibia. MEE, 2001:39). It also served to inform future practices for and responses to desertification.

A further project was established during this period.

2.2.2.2.4 Community Based Training of School Boards in Ondangwa East and West (CBTS) 1999-2003

The aim of this project was to strengthen the capacity of school boards to support educational activities. Ibis and the MBEC implemented a pilot phase of this initiative where a number of school board members were trained. The experience and lessons learned from the pilot phase were later used during the ‘scale up’ phase.

The scale up phase included all the schools in Ondangwa West and Ondangwa East educational regions. The programme ran until 2006 and all the school boards of those regions were trained. Although the link to EE with CBTS *per se* was not direct, the underlying idea was to enhance capacity to support EE activities. The first move was to enhance EE activities at the schools by obtaining the support of the school boards and to improve the organization and management of these activities. Secondly, to develop the skills and competencies that would enable participants, as community leaders, to address environmental problems in their community.

The main areas which these programmes focused on were raising awareness and working towards environmental literacy which was intended to inform participants about environmental issues and challenges. While sustainability did feature, it leaned more towards the utilization of natural resources than on development and education.

2.2.2.3 Recent Environmental Education Initiatives (2001- 2008)

While the concern about environmental educational and environmental literacy has increased, there has also been a rise in the concern for sustainability within different sectors in Namibia since 2000. This concern emerged from an early Namibia. MEC (1993:18) report that emphasised that *“to achieve and sustain development, it is necessary to ensure the education and training...of the people so that they can participate fully and effectively in the development process”*.

The focus on sustainability in this earlier report was a reflection of the international emphasis on sustainability that was popularized by both the Bruntland Report of 1987 (*Our common future*) and the Rio Summit in 1992 and the ensuing Agenda 21 to which Namibia was a signatory. With the introduction of the notion of ESD at the World Summit on Sustainable Development in 2002 in Johannesburg, the focus on sustainability was directly linked to education. It was this notion of ESD that provided a shaping mechanism for the recent projects (Murray, 2005). Lessons learned in Namibia from past initiatives paved the way for new initiatives since 2000 with particular reference to the training and development programme that is described in the following section.

2.2.2.3.1 Supporting Environmental Education in Namibia (SEEN) Project 2001-2005

The SEEN project was established in 2001. The project was piloted in four educational regions: Kunene region, Caprivi region, Ondangwa West and Ondangwa East. The project aimed to benefit policy makers, curriculum developers, trainers/facilitators; school practitioners and learners (SEEN, 2002). The rationale on which this project was based was the Government of Namibia's decision to "prioritize EE in order to increase the awareness of environmental risks and problems and encourage communities to manage their local environment in a sustainable manner" (SEEN, 2002:3). To achieve the desired aim, education was placed at the centre of the process of project implementation.

The SEEN project coincided with the thrust of both the WSSD and Education for Sustainable Development (ESD) that was a ten-year review of the 1992 United Nation Conference on Environment and Development (UNCED) held in Rio de Janeiro. The WSSD provided the "global community with an opportunity to assess the effectiveness of the last ten years" (Namibia. MET, 2002). The presidential commission which represented Namibia at the WSSD identified pertinent challenges for Namibia that included:

- Natural resources and their management.
- Poverty and inequality.
- Society and governance.
- Development and the environment.
- Health and the environment.
- Globalisation. (SEEN, 2005:17)

This provided the platform for the SEEN project to integrate activities for sustainability into the educational arena. The SEEN project framework for Namibia was informed by the needs identified during the WSSD, following the call that Namibia should explore

how sustainability issues could be integrated into education. SEEN was further tasked with exploring environmental learning in order to activate existing national environmental policies (Murray, 2005).

A central focus of SEEN was to respond to the call for implementing ESD through reviewing and testing appropriate environmental education practices to inform curriculum development, programme development and professional development in the formal and informal educational sectors. These EE policy goals, principles and aims should then be transformed into activities and practice.

To achieve this, SEEN identified six important inter-linked outputs:

- Output 1: Networking

Strengthening and expanding the networking capacity of NEEN to share EE experiences and examples of best practice among members.

- Output 2: Informal Sector. Professional Development.

Developing and providing professional environmental education courses to educators and other relevant stakeholders in the informal sector.

- Output 3: Formal Sector. Professional Development.

Developing and providing professional environmental education courses to selected teachers in 40 schools, Advisory Teachers and Teacher Educators.

- Output 4: Formal Sector. Developing Materials.

Producing and distributing pedagogic guidelines and environmental information sheets to participants in schools, colleges and interested agencies. Evaluating and reporting on the process of developing materials and the effectiveness of the materials.

- Output 5: Formal Sector. Development of Continuous Assessment Procedures.

Drafting and trialing continuous assessment procedures for EE in the pilot schools.

- Output 6: Formal sector. Curriculum Development.

Reviewing and reporting on environmental education practices in schools in order to inform and change the curriculum. (SEEN, 2002:4)

These outputs were guided by key ideas of the reform process namely lifelong learning and environmental learning. The education policy document "*Toward education for all*" stresses the need for lifelong learning (Namibia. MEC, 1993:11-15) "to fulfill our responsibilities and cope with changes in a society". Environmental learning in Namibia was linked to the policy of lifelong learning. Similarly, the national policy on adult learning recognises the benefits of investment in adult learning for "...better environmental management". (Namibia. MBESC, 2003b:31).

A focus on education in the context of sustainable development arose out of Agenda 21 at the United Nations Conference on Environment and Development (SEEN, 2005:2). ESD re-oriented education to foster new approaches to benefit everyone through learning and adopting values, behaviour and lifestyles practices that will enable "all to live a full life without being deprived of the basic needs" (UNESCO, 2005:4). ESD aims at focusing on society, environment, culture and economy in an attempt to promote fundamental rights, justice, peace, development and equitable distribution of resources while conserving the natural resources (UNESCO, 2005). A full analysis of ESD is presented in the following section.

To support ESD, SEEN, the Ministry of Education and its partners produced the following outputs.

- National Curriculum Guidelines for Environmental Learning in Namibia.
- Two semi-distance courses focusing on environmental and sustainable development for educators in the non-formal and formal sectors.
- Teaching, learning and assessment materials on key environment and development issues.
- A participatory whole school development process incorporating a rich variety of school and community projects to make the school a better place in which to live learn and work (Murray, 2005).

These outputs were linked to the six outputs that the SEEN project initially identified and were used as an assessment tool to check the extent to which the project achieved its

intended outputs. While all the outputs were of the utmost importance for the SEEN project and Namibia, the most relevant output in terms of this study is that of “two semi-distance courses focusing on environmental and sustainable development for educators in the non-formal and formal sectors” (Murray, 2005:9).

This output formed a platform on which the NEEC course was developed. The NEEC course was developed by SEEN to enhance participation in ESD by different EE providers from both the formal and non-formal education sectors. It is this course that will be analysed in chapter four of the study.

EE initiatives since 2001 have attempted to address the issue of sustainability. It is therefore against this background that the following section will analyse education for sustainable development since it is seen as a cornerstone of the current EE initiatives implemented in Namibia.

2.3 ANALYSIS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

ESD was defined by UNESCO “as a life-wide and lifelong endeavor which challenges individuals, institutions and societies to view tomorrow as the day that belongs to all of us or will not belong to anyone” (UNESCO, 2005:1). This definition, along with the principles and philosophy on which ESD is based, has shaped the current thinking about EE that has been adopted internationally and by Namibia.

It is acknowledged that the central notion of sustainability has been and continues to be a contested term, open to many interpretations and definitions (Jickling, 1992). However, the focus in this study is primarily on understanding ESD and its implications for education as a means to enhance and encourage a sustainable future based on justice and fairness and to meet the challenges that the planet faces in order to maintain a healthy environment. It is however useful in this section to consider the relationship between education in the context of sustainability as developed in the 1980s by the Brundtland report (*Our common future*) and Agenda 21 in 1992 and sustainable development and ESD today.

The (International Union for Conservation of Nature) IUCN as cited in McKeown (2002:8), Palmer, (1998:109) and van der Watt (2004:80) suggest that to understand the philosophy of sustainable development one needs to understand the principles of sustainable development. There are nine principles of sustainable development:

- Respect and care for the community of life.
- Improve the quality of life.
- Conserve earth's vitality and diversity.
- Minimize depletion of non-renewable resources.
- Keep within the earth's carrying capacity.
- Change personal attitudes and practices.
- Enable communities to care for their own environments.
- Provide a national framework for integrating development and conservation.
- Create a global alliance.

McKeown (2002) suggested that these principles be considered in order to understand the concept of sustainable development and to begin to implement it in a more informed and critical way.

Chikunda (2007:159) confirmed that there is an "agreement that sustainable development is built on three interdependent and mutually reinforcing pillars, which are economic development, social development and environmental protection". Similarly, McKeown, (2002:9), Robottom,(2007:94) and Gonzalez-Gaudio (2007:99) confirmed that sustainable development rests on the three pillars of ecology, economy and society.

A key principle of ecological sustainability is that developmental activity should help to sustain and not to harm natural resources and life support systems (Gumede, Lotz-Sisitka, Olvitt & Pesanayi, 2006). The main component of economic sustainability is about economic

activities that sustain people and the planet, not just sustaining economic development (Lotz-Sisitka, 2006).

Lotz-Sisitka (2006:16) concluded that “as a concern for the current state of the planet and its people shows, economic sustainability is intimately intertwined with social and ecological sustainability”. These three elements assume an ongoing and long-term process of change. Sustainable development is a dynamic concept, with the recognition that human society is in a constant state of movement (UNESCO, 2004).

An analysis of ESD in relation to the notion of sustainable development (SD) promoted by the Bruntland report and Agenda 21 would seem to reveal the following differences between the two concepts.

- The first of these differences is highlighted by Lotz-Sisitka (2006) when she recognizes ESD as a “hybrid” concept that amalgamates earlier views of EE. She sees ESD as providing a particular focus for achieving the millennium development goals identified by UNESCO as central to addressing the challenges and issues facing the planet.
- A further strength contained in the view of ESD in relation to sustainable development is the emphasis of sustainable development’s role in promoting a just society for all (UNESCO, 2005:1-5).
- McKeown’s (2002) view of ESD emphasised the integration of EE in an educational context as providing a knowledge base that includes and gives equal weight to concepts, skills and values. McKeown also emphasises the need to incorporate a critical dimension when focusing on the areas linked to ESD.
- ESD also provides a clear acknowledgement of the interdependence that exists between the social, economic, political and biophysical domains of our world. It further emphasises the need to relate all EE to local and global issues, thus emphasizing the importance of EE as relevant and meaningful to particular societies or communities.

These points revealed a shift from the previous view and understanding of sustainable development and a refocusing of sustainable development towards education for sustainable development.

2.3.1 Perceived achievement of education for sustainable development

Education is currently a central focus for sustainability. This section examines the perceived achievement of education and sustainability and that of ESD.

Our message is directed towards people whose well being is the ultimate goal of all environment and development policies. Unless we are able to translate our words into a language that can reach the minds and hearts of people young and old, we shall not be able to undertake the extensive social changes needed to correct the course of development (WCED, 1987:5).

This message together with the recommendations of '*Our common future*' (WCED,1987) indicates the need for a plan of action which aims at improving the environment across a broad front. Palmer (1998:63) listed the objectives of the Brundtland report as:

- Reviving economic growth.
- Changing the quality of growth.
- Meeting essential needs for jobs, food, energy, water and sanitation.
- Ensure a sustainable level of population.
- Conserving and enhancing the resources base.
- Reorienting technology and managing risk.
- Merging environmental and economic considerations in decision-making processes.

Education's role as it appeared in Agenda 21 had the following focus "improve basic education, reorienting education towards sustainable development, increasing public awareness and promoting training" (UNCED, 1992:63). SEEN (2005:3) reported that ESD provides a stronger focus on:

- Environmental quality, human rights and peace.
- Critical thinking to encourage reflection and questioning.
- Active participation by learners in their own education.
- Lifelong learning that links across traditional subject boundaries.

These focal points are associated with the overall goal and objectives of ESD identified at the WSSD and later developed into the (Decade of Education for Sustainable Development) DESD. The overall goal of the DESD is:

To integrate the principles, values, and practices of sustainable development into all aspects of education and learning. This education effort will encourage change in behavior that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations (Gumede et al., 2006:2)

These goals integrate with the objectives of the DESD to plan and implement ESD initiatives. These objectives are to:

- Facilitate networking, linkages, exchange and interactions among stakeholders in ESD.
- Foster an increased quality of teaching and learning in education for sustainable development
- Help countries make progress towards, and attain the Millennium Development Goals (MDGs) through ESD efforts; and
- Provide countries with new opportunities to incorporate ESD into education reform efforts. (UNESCO, 2005).

These objectives, goals and foci indicate what ESD is trying to achieve. Lotz-Sisitka (2006:2) outlined, “ESD...encourages governments to consider the inclusion... of measures to implement the decade in their respective education systems and strategies and, where appropriate, national development plan”. Similarly, Chikunda (2007:159) describes

“education as a vehicle for ESD... and a key agent for change towards sustainable development”.

UNESCO (2005:16) has identified the key roles of education as a means to implement ESD as follows:

- Education must inspire the belief that each of us has both the power and the responsibility to effect positive change on a global scale.
- Education is the primary agent of transformation towards sustainable development, increasing people’s capacities to transform their visions for society into reality.
- Education fosters the values, behavior and lifestyles required for a sustainable future.
- Education for sustainable development is a process of learning about how to make decisions that consider the long-term future of the equity, economy and ecology of all communities.
- Education builds the capacity for such futures-oriented thinking.

McKeown (2002); UNESCO (2005); SEEN (2005) and Lotz-Sisitka (2006) showed that education should be re-oriented to integrate those strategies and approaches that address learning skills, perspectives, and values that guide and motivate people to seek sustainable livelihoods, participate in a democratic society and live in a sustainable manner.

McKeown (2002), SEEN (2005) and Lotz-Sisitka (2006) have identified what it means to educate for sustainability. In looking at how EE should be conducted, they suggested that:

- ESD processes should be active, participatory and learner centered.
- ESD should provide a stronger focus on critical thinking to encourage reflection, questioning and creativity.
- ESD should be inclusive and promote the importance of examining society-environmental relationship to ensure cultural, linguistic, physical, social and economic inclusivity.
- ESD should enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting the consequences.

- ESD should promote localizing global initiatives.
- Professional development should be promoted to ensure the continuing re-orientation of education, strengthening knowledge and capacity for ESD programme development.

2.4 EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE CONTEXT OF NAMIBIA

Murray (2005) suggested that EE in ESD should be a cross-curriculum endeavor. When the curriculum revision was done in Namibia, EE was included in all school subjects. Firstly, EE was incorporated in every syllabus for each subject, through statements that encourage the introduction and an incorporation of EE within the context of each subject.

In this way the six main challenges: natural resources and their management; poverty and inequality; society and governance; development and the environment; health and the environment and globalisation as identified by Namibia will be addressed through the appropriate subject areas. Furthermore, the approach to EE that was encouraged in all syllabuses was a problem-orientated and a critical one (SEEN, 2005).

Secondly, ESD in the Namibian context was promoted through the adoption of the whole school approach. Taking a whole school approach to EE is seen as a way to link schools and community in working towards creating a more sustainable and just community. Through a whole school approach schools and community engage in “school- community based projects enabling different stakeholders to work together to achieve education for sustainable development” (SEEN, 2005:3).

Thirdly, ESD in the Namibian context was promoted as a lifelong endeavour. This resulted in the development of the NEEC course and the Pilot Environmental Learning Course (PELC) for teachers and community members at all levels (Murray, 2005). The educators who attended these courses have been encouraged to extend their understanding of EE through further studies.

Recent EE national development after the SEEN project is linked to the need for government to bring on board the national development policy referred to as Vision 2030.

A key aspect of this policy is the recognition of the importance of EE and ESD in the curriculum.

The Vision 2030 policy framework for long-term national development states that:

... Our environment is clean and we will continue to keep it so. We fully embrace the idea of sustainable development, the type of development that meets the needs of the present without limiting the ability of future generations to meet their own needs. To this end, we encourage people to take responsibility for their own development activities that address the actual needs of the people and require increasing community contributions to development services and infrastructures... (Namibia. National Planning Commission [NPC], 2007:34).

However, the document did not list specific strategies to incorporate ESD in its current operational systems, especially in the education system

2.5 CONCLUSION

This chapter explored the concept of ESD. It gives an overview of the fragility of the Namibian environment and sketched the background of how ESD is to be made relevant and adapted to the Namibian context given the current situation of climate change. Related literature has been analysed and reviewed to inform this research and to provide an important foundation and framework for the study.

The literature discusses the perceived values of ESD and places it within the context of being a global initiative. While there is recognition that Namibia is involved in the ESD approach, it would seem that links with other organisations in Namibia to create a strong synergy are essential to execute ESD strategies more effectively. In the next chapter I discuss the research methodology and methods that I used to investigate how the “NEEC course shapes and informs the practice of EE educators in non-formal education”.

CHAPTER 3

METHODOLOGY CHAPTER

3.1 INTRODUCTION

In order to answer my research question 'How has the NEEC responded to DESD and has the Namibian Environmental Education Course (NEEC) shaped and informed the practice of environmental educators in the non-formal sector', I used the research approach and methodology described and analyzed in this chapter.

The structure of the chapter is as follows:

- Introduction
- Research orientation (paradigm)
- Research approach
- Selection of the samples
- Data collection instruments
- Data analysis
- Validity
- Ethical responsibilities
- Research issues, problems and limitations
- Conclusion

3.2 RESEARCH ORIENTATION

I wanted to understand the NEEC in the context of ESD and to research in what ways the course contributed to the professional practice of the non-formal participants. My research

therefore needed to understand the principles of the NEEC, make meaning of them, gain insight into, and interpret whether the NEEC had an impact on the professional practice of the non-formal environmental education providers (Connole, 1998). I located my research in the interpretive paradigm, because I believed that it would be an appropriate orientation given my research goals.

As Chilisa and Preece (2005:228) explain, “the central purpose of the interpretive paradigm is to understand people’s experience in natural settings where participants make their living”. I am interested in understanding how students from the non-formal sector make sense of and apply the ideas and competencies promoted by the NEEC in their professional practice. The interpretive paradigm stresses the process of understanding and defining the situation being studied (Connole, 1998:14). I have chosen this paradigm because it marries the theoretical understanding with practice as a means to make meaning of the participants’ context. In interpretive research, the role of the researcher is to gain understanding of how the participants view theories, make meaning of them and how they apply them in their daily practices (Gerber, 1996; Cohen & Manion, 1994).

There is currently little information about how the NEEC has supported participants in the non-formal sector. It is particularly difficult to research this area as each of these participants’ works in different contexts under different circumstances. I hope that the understanding gained from this study will be used to better support participants in the non-formal sector.

The subjective characteristics of this paradigm approach is a limitation to my study, because I cannot generalize findings. The study focuses on “individual’s meaning in context” and is thus interpretive (Gerber, 1996:13). The subjectivity of the paradigm is linked to Mackellal’s (n.d., unpagged) claim that “there is no empirical way to get at what is going on inside someone's head, or in the heads of a group of individuals” a study of this nature relies on experience, culture and language to interpret the data.

3.3 RESEARCH APPROACH

I applied the interpretive orientation to a qualitative case study. Patton (1990) highlights the importance of a case study in reaching an understanding of a particular situation through the

generation of rich information. A case study therefore enables a researcher to describe a particular case “in depth, in detail, in context, and holistically” (Patton, 1990:124).

According to Denzin & Lincoln (2000:436), a case study has “purposive and particular features forming the boundaries of the study”. I chose a purposive qualitative case study because I wanted to understand the participants’ views or perspectives about the influence of the NEEC on their professional practice.

Furthermore, the use of a qualitative case study proved suitable for the current research because the perspectives, views, behaviour, actions, knowledge and experiences of the participants are conveyed in words that are best captured by qualitative data gathering. According to Bassey (1990:43), “The term qualitative can be used to describe the data collected by interpretive researchers” and that it consists of detailed observations, field notes, reports and extracts from different types of documents and interviews. The uses of a case study in this particular context gave me a firsthand understanding of the NEEC participants in the non-formal sector. I was able to investigate the relevance of the course and its applications in their professional practice.

3.4 SELECTION OF THE SAMPLE

I conducted the research in the Kavango region. I selected six candidates from this region to participate in the study. The sampling was determined by two factors, the nature and role of their work as NEEC participants and the fact that they worked in different fields.

Four of the six participants I selected are currently NEEC students who assist as EE educators at an EE centre with one other participant being a community member. The fifth participant is a forest district officer and the sixth participant is a programme coordinator. The latter two have already completed the course. The sampling was a convenience sample, (Merriam, 2001:63) stated that, “convenience sampling is used to select a sample based on time, money, location, availability of sites or respondents”. It was expedient to draw the sample from the Kavango region, because many of the non-formal participants, who have participated in the NEEC course to date, come from this region. It was also convenient as the forest district officer and the programme coordinator live in the same town, which simplified the arrangement of appointments.

In line with Patton’s recommendation (1990), I chose my participants based on their ability to contribute meaningfully to the study given that they are actively engaged in providing environmental programmes in the non-formal sector. The sample is thus based on a purposeful approach. The anonymity of the participants was guaranteed by the use of pseudonyms as seen on the table below.

Table. 1 Research participants

Forest officer	District	Programme Coordinator	Assistant Environmental Educators	Community member
Jake		Erna	Frieda	Dan
			Manu	
			Sibongo	
			Mike	

3.5 DATA COLLECTION INSTRUMENTS

For the interpretive qualitative case study, I realized that I needed multiple sources of information to increase the validity of my data (Cohen & Manion, 1994). In this study I collected data through semi-structured interviews, a semi-structured focus group interview, document analysis and field observation. I describe these instruments and their application in the study in detail later in this chapter.

3.5.1 Pilot semi-structured interviews

Denzin and Lincoln (1994:213) pointed out that: “before devoting oneself to the arduous and significant time of the qualitative study, it is a good idea to do a pilot study”. A pilot study is what De Vos (1998:179) views as a rehearsal of the main investigation.

I conducted my pilot interview to determine the length and relevance of the interview questions and acquaint my self with ethical issues. The main reason was to discover what areas would need adjustment before I actually carried out the main tasks of the study. My pilot interview involved a former participant of NEEC who currently is employed by the Ministry of Information and Broadcasting as a journalist

Because of this pilot interview, I learned that I need to ask more probing questions to get in-depth relevant information. I needed to take notes as well as tape the interview to show the participants that their contribution was meaningful and worthwhile for my study. This way I could both refer back to their answers and acknowledge their responses to my questions during the data collection process.

I made adjustments to my interview questions by rephrasing some of the questions and changing their order (Appendix 1). Through this pilot interview, I learned how to transcribe the interviews and how to apply the ethical considerations of conducting interviews. It also gave me insight into what type of data I could expect to gather.

3.5.2 Semi-structured interviews

Cohen, Manion and Morrison (2000:115) see interviews not as “a dispassionate and technical instruments of data generation but as an emotionally engaged social interaction involving people’s real experiences in constructing their personal accounts on a particular area of interest”. Put simply, it is a way of “collecting talk” (Powney & Watts cited in Weigand, 1996:112), however with the acknowledgement that as soon as it is collected, it loses some of its essence when interpreted in a different context.

In this study, I conducted semi-structured interviews with three participants from the sample. Semi-structured interviews contain open-ended questions and allow in-depth probing (Cohen & Manion, 1994); Gillham (2002:65) supports the use of semi-structured interview as “a productive research tool for its flexibility and naturalness”. I contacted two participants personally, a district forest officer and a community programme coordinator, via email and telephonically. I also included a community member on my interview list who had attended an EE programme on fire fighting conducted by the district forest officer. I treated the interviews as informal discussions in order to more

fully engage the participants. I did not follow any particular order in the questions, but kept track of questions to allow a smooth and focused discussion. The interviews were between 40 minutes to 60 minutes in duration.

I confirmed the venue and time for each interview a day prior to the interview. With the informed consent of each participant, the interviews were tape-recorded. I interviewed the district forest officer at his house on a Saturday afternoon, because he felt more comfortable in his home. The interview with the community programme coordinator was conducted in her office after work as she thought the office was an appropriate venue for the interview. I conducted the interview with the community member at the community forest office where he works during the morning. This interview was conducted through an interpreter, because I do not speak the local language. I allowed for participation and decision-making concerning the venue, date and time in each case because I wanted the participants to feel at ease during the interview.

3.5.3 Semi-structured focus group interview

A focus group interview enabled me to experience the interactions between the participants, their agreements and disagreements on points made, in other words their “inter-subjective experiences” (Frohlich, 2004:60). Le Roux (1999:9) suggests, “focus group interviews help the researcher to gain valuable insights that can emerge from group discussion...group interaction can lead to sharing and developing of useful understanding”. Paulick as cited in Frohlich (2004:60) indicated that focus group interviews have the advantage of allowing discussions to develop amongst people who are working together for a common purpose, in this case the NEEC. Using a focus group interview, the researcher is able to obtain a number of responses from many people in a short period.

I first wrote a letter to the supervisor of the local EE centre to explain my research project. I then personally contacted each educator via telephone to get their consent and arranged the date, venue and time.

I conducted a semi-structured focus group interview with four assistant environmental educators at the centre. The interview took place at the EE Centre in the afternoon. With

the participants' consent, the interview was tape-recorded and I verified the recorded interview in their presence.

The tape recording helped me to capture individual responses, which were necessary for direct quotations. I used an interview schedule and data list as a guide during the interview.

The interview schedule was circulated beforehand to enable the participants to reflect on the questions and prepare their answers. I learned this tip from Molese's research as cited in Frohlich's study (2004:60), which revealed, "such an approach minimises the risk of participants' failure to recall events or course processes relevant to the research focus". I made the interview schedule available to participants during the interview so that they could refer to it when necessary and could see the general flow of questions. I explained that the interview schedule was only a 'guide' so that participants did not feel constrained by the questions. The actual interview was treated as a discussion.

Because of the flexibility of interviews and the amount of relevant data generated from them, interviews were the main source of primary data for this study.

3.5.4 Field observations

I used non-participant observation to generate data in this study. O'Leary (2004:172) describes non-participant observation as 'a process of a one way mirror' where the observer just watches without taking part in the activities that he is observing.

I wanted to understand the natural situation under review. I followed Patton's (1990) assertion that observation allows the researcher access to understand and interpret the phenomena being studied.

In this study, I observed three different contexts:

- I attended a one day community meeting held by a community programme coordinator.
- I attended a presentation of the year plan and achievements of 2008 of the Directorate of Forestry, North-Eastern region presented by the district forestry officer at the regional council quarterly meeting and spent time in discussion with him in his office.

- I attended a morning class session, where all four assistant environmental educators were co-tutoring. The session lasted from 08:00- 12h30.

For each observation, I used field notes to record the data that was later analysed and interpreted. I did not capture the events in any particular order.

Hodgskiss (2007:37) draws attention to the fact that observations are “inevitably filtered through the interpretive lens of the observer”. This could increase bias and inaccuracy in the data collected. Patton (1990) and Hodgskiss (2007) pointed out the problem with observation is that the” observer may affect the situation being observed”, in the sense that participants may behave in a certain way when they know they are being observed. I was worried about this aspect in my study so I made sure that when I was observing any activities, I was as unobtrusive as possible.

3.5.5 Document analysis

Documents relevant to the study that were analysed included: planning notes, minutes of meetings, reports, year plans, schemes of work and students’ written work. Merriam as cited in Hodgskiss (2007:38) pointed out that a specific purpose for generating documents is to learn more about the situation, person or event under investigation.

The data generated in these documents were used to complement the interview and observation, by providing evidence of what had been observed during field observation and what emerged during interviews.

Limitations of document analysis can be attributed to problems with authenticity, sampling and inference and interpretation (Cohen & Manion 1994:51). As a researcher, I was aware of these limitations and tried to reduce their effects by employing the documents analysis mainly as a way of triangulating results, rather than as the primary source of data.

3.6 DATA MANAGEMENT AND DATA ANALYSIS

Data management is seen as the first step in data analysis away from the site of data collection (De Vos, 1998:343). I collected all my data from interviews, field observations and

document analysis I listened to each interview at least three times to familiarise myself with the raw data; I then transcribed each interview verbatim. I placed my raw data on the table and used the interview schedule as a guide to compile a case history for each set of participants.

The case record of the focus group and district forestry officer contained:

- Interview transcripts
- Field observation case history
- Documents case history

The community programme coordinator's case record consisted only of an interview transcript.

Processing the data into case records enabled me to identify possible patterns necessary for data analysis (Appendix 2). The following section describes the process of data analysis that involves the science of organising, analysing and interpreting data.

McMillan and Schumacher (2001:462) define qualitative data analysis as “a relatively systematic process of selecting, categorising, comparing, synthesising and interpreting to provide explanations of the single phenomenon of interest”. Following the “continuous familiarisation of raw data during data management and after by repeatedly reading case records” (Terre Blanche & Durrheim, 1999:141), an outline of what I termed core themes emerged, some naturally and some were predetermined by interview questions and research goals. Tilbury and Walford (1996:57) describe a core theme as one that re-occurs frequently in the data, links data together and explains much of the variation.

I linked these themes to the main questions on the interview schedule while keeping the focus of the study in mind; this enabled me to come up with subthemes. I analysed the data from observation and documents analysis, placing them under subthemes and looking at areas of commonalties and patterns in order to make links. The interviews, observation and document findings relation enabled me to make further meaning of the data. I highlighted these links by using colour coding. This coding involved the notation of interview transcripts, observation findings and document findings. At this stage, the core themes had been interpreted and analysed. The written account of these interpretations is given in chapter four.

3.7 VALIDITY

To ensure trustworthiness and to increase the validity of the study, I applied the strategies suggested by Merriam (2001): triangulation, member checking, primary data and case records.

McMillan & Schumacher (2001:478) describe triangulation as “a system of cross validation among the data sources, data collection strategies, time periods and theoretical schemes applied to the research study in order to ensure reliability and validity of the research study”. Cohen, et al. (2000:112) explain triangulation as the process whereby multiple data sources help the researcher to “map out, or explain more fully, the richness and complexity of human behavior by studying it from more than one standpoint”. Anderson (1998:11) supported the application of triangulation saying that it “helps to eliminate bias and can help detect errors in your discoveries”. Denzin and Lincoln (2000) highlight the usefulness of triangulation as a means to increase data accuracy and validity.

To apply triangulation I interviewed seven participants, conducted field observation and made an analysis of documents by reviewing their year plans, minutes of meetings, students work and planning notes. I then compared and contrasted the data gained from different sources.

As mentioned earlier, one of the perceived limitations of research of this nature is the notion of subjectivity. By using triangulation I followed Denzin and Lincoln’s (2000) suggestion that triangulation is a means to increase data accuracy and validity

To ensure validity I took the interview transcription back to the participants for verification and approval. It afforded the participants the opportunity to make any additions they felt were necessary in case they had omitted useful data. This not only increased trustworthiness but also enhanced the richness of the data gathered for the research.

I reflect the voice of the participants by using actual direct quotes in my report to substantiate argument and support claims.

As indicated, I compiled a case record for each set of participants containing an interview transcript, field observation findings and document analysis findings, except for one participant where the case record consisted of an interview only, because there were no documents in his possession with regard to his practice as a community forest chairperson.

3.8 ETHICAL RESPONSIBILITIES

De Vos (1998:65) suggests that ethical concerns should be an integral part of the planning and implementation of a study saying, “the essential purpose of the ethical research planning is to protect the welfare and the rights of research participants”. Before I started my research, I wrote a letter to the Permanent Secretary of the Ministry of Education requesting permission to conduct research. Once permission was granted (Appendix 3), I provided the district forestry officer, the supervisor of the EE centre and the community programme coordinator with both this letter as well as the one from the University.

The district forestry officer took on the responsibility of explaining the ethical issues of informed consent to the community member whom he suggested for an interview, as McMillan and Schumacher (2001:197) stated that “informed consent implies that the subjects have the choice about whether to participate in the research or not”. It is what Cohen, et al. (2000:51) describe as right to freedom and self-determination.

I did not ask any participant to sign a letter of consent, since signing might make participants feel obliged to participate in the study. In each letter, participants were informed about anonymity, confidentiality, and their right to participate or withdraw from the study at any time (Bassey, 1990).

In order to avoid the violation of privacy, anonymity and confidentiality, it is legitimate and appropriate to obtain prior permission to use recording devices. I explained to each participant which tools I would use to collect data. I also assured them that each participant would be informed about the research findings.

3.9 RESEARCH ISSUES, PROBLEMS, AND LIMITATIONS

The following issues, problems and limitations affected my research study.

- **Withdrawal**

My initial design was to work with three non-formal participants (my former NEEC students) who directly work with communities. One participant gave excuses all the time, and I got an impression that he wished to withdraw. I finally worked with two (the forest district officer and community programme coordinator) and resorted to the plan of adding the focus group which consisted of four participants and one community member to the number of participants.

- **Size of sample and sampling procedures**

The period to conduct the study was limited to three weeks and I felt this might have been a limitation. Ideally, I would have selected four participants who were both qualified in the job they are doing and had completed the NEEC and work with them throughout the year.

The last limitation crucial to my study is that I conducted the research as an inexperienced researcher. Despite these limitations, I believe that the information gained from this case study has achieved the objective of answering the research question.

3.10 CONCLUSION

This chapter has shown my attempt to answer the questions 'How the NEEC has shaped and informed the practice of environmental educators in the non-formal sector and how the NEEC has responded to ESD'. I discussed the approach and orientation that I used that were relevant to the research

I discussed the sample selection process and the data collection tools I used and highlighted some possible limitations as well as outlining the problem of validity and ethical issues. Despite careful planning, mistakes do occur; hence, a discussion of the research issues, problems and limitations is outlined.

CHAPTER 4

THE ANALYSIS OF THE NEEC COURSE

4.1 INTRODUCTION

In this chapter, I present an analysis of the NEEC course. The analysis gives a critical overview of the NEEC course and locates it in the context of the principles and approaches of ESD as examined in chapter two. This chapter provides the framework for the analysis of how the course influences the professional practice of the EE providers in the non-formal sector.

The first part of the discussion presents a contextual analysis of the course structure and its underlying philosophy. The second part of the discussion analyses the NEEC programme in the context of ESD with particular reference to the environmental challenges identified by Namibia at the WSSD in Johannesburg in 2002.

The first part of the chapter is structured as follows:

- From the Rhodes University/Goldfields Environmental Education Participatory course to the Namibian Environmental Education Course
- The background and the context of the NEEC course development
- Locating the NEEC within Namibian educational philosophy
- The philosophical approach of NEEC
- The NEEC as a professional development course
- Implementation of the NEEC, pedagogical processes and strategies

The structure of the second part of the chapter is as follows:

- The principles of ESD in relation to the NEEC principles

- The aims of the NEEC in relation to ESD
- The pedagogy and implementation of the NEEC programme in relation to the ESD pedagogy
- The NEEC programme in relation to the Namibian challenges identified at WSSD

4.2 NAMIBIAN ENVIRONMENTAL EDUCATION COURSE (NEEC)

In order to provide a focus for the NEEC it is necessary to briefly to trace its origin. This section therefore locates NEEC in the family of participatory EE courses that have evolved in the Southern African Development Community (SADC) since the establishment of the Rhodes University/Goldfields Participatory course (RUGF) in 1992.

4.2.1 From the Rhodes Goldfields Environmental Education Participatory Course to the Namibian Environmental Education Course

The RUGF is a part-time course that focuses primarily on environmental education within a work environment (Le Roux, 1999). The course runs for a period of one year. The participants continue contributing to the development of the course each year through their critical reflections and ongoing evaluation of the course. A feature of the course is that it draws on participants' professional experiences. This course is in line with the general trend in education in Southern Africa that is transforming from a teacher-centered to a learner-centered approach (Frohlich, 2004).

The participants are encouraged to reflect on their work and relate it to the course with the aim of improving their practice, this notion is what later course participants started referring to as "professional development" (Le Roux, 1999). The RUGF course has developed to meet the needs of not only South African EE practitioners, but also EE practitioners from other Southern African countries.

Rather than re-invent the wheel in environmental education terms the Supporting Environmental Education in Namibia (SEEN) project was guided by a suggestion to adapt the existing Rhodes University Gold Fields Participatory Course in Environmental Education (Frohlich, 2004). The expectation was that this course would bring environmental policy

especially the Namibian Environmental Education Policy (Namibia. NIED, 1999) and practice closer together and increase the learning opportunities of environmental education in Namibia. Until the development of the NEEC, there were limited environmental learning opportunities for practitioners in both the formal and non-formal sectors in Namibia.

The NEEC therefore initially adopted the RUGF model and structure as well as the pedagogical approach and overall philosophy. The content of the NEEC programme, however, is shaped and informed by the Namibian context and situation.

In the following sections, I present the background of the NEEC course and its contextualization to meet Namibian needs, especially those of non-formal participants.

4.2.2 The background and the context of the NEEC course development

For Namibia the design of the NEEC course was

A professional development course aiming to provide support for practitioners who either qualify or do not qualify for degree or other formal programmes in the education system, or for those who while qualified in other areas wish to become environmental education providers (Van Harmelen, 2005:6).

Because of the number of Namibian applications to attend the Rhodes Gold Fields course run in South Africa, the need was identified to establish an Environmental Education Course in Namibia. As a result, the Namibian Environmental Education Network (NEEN) was invited to Rhodes University in Grahamstown, South Africa to see whether they could run a similar course in Namibia (G. Frohlich, personal communication, 28 March 2008).

The establishment of the SEEN project facilitated the initiative for a course run in Namibia for Namibians. One of the outputs incorporated by the funding agency DANCED (2001:8) was the suggestion that 'the certification of EE training courses which will be designed to accommodate the needs in both the informal and non-formal sector should be instituted so as to facilitate the implementation of EE'. From its inception in 2002, the NEEC course included practitioners from both the formal and informal sectors.

Since 2002, the course development has focused on improving the relevance of the programme with regard to meeting the Namibian environmental challenges and needs.

Botma (2005:4) reported that the “course organisers and tutors made significant progress to make the course more relevant to Namibian participants”.

The NEEC adopted the tutoring system initiated by the RUGF course. Course tutors were selected from previously successful participants of the course. Botma and Chadwick (2003:5) further remarked that tutors not only “invest much hard work and time into the course but also make a significant contribution to the professional development of participants”. Through the tutoring system which was introduced as a central strategy (Frohlich, 2004) the course development was enhanced through the rich experiences brought to the programme by both tutors and participants from different contexts in Namibia and driven by the course principle ‘we are all learners and educators’ (NEEC,2007).

The SEEN project had the task of overseeing the development of the NEEC course. The project was responsible for administering the course, initially based at the Namibian National Institute for Educational Development (NIED) in Okahandja. The philosophy that guided the development of the NEEC course is discussed in the next section.

4.2.3 The NEEC as a Professional Development Course

In its original form, the intention of the NEEC course was to train environmental education practitioners already working in both formal education and non-formal education. Professional development can be interpreted as individual or group activities that intentionally develop professional practice. Van Rensburg and le Roux as cited in the (NEEC, 2008:11) comment “It is good to remember that we develop professionally in order to contribute to the work of a professional community”.

NEEC is a professional development course. Following Robottom as cited in Palmer (1998) the principles that underpin professional development should be as follows:

- Professional development in environmental education should be inquiry based (encouraging participation at all levels).
- Professional development in environmental education should be participatory and practice-based.
- Professional development in environmental education should be critical.

- Professional development in environmental education should be community based.
- Professional development in environmental education should be collaborative.

(Palmer, 1998:259)

Professional development aims to encourage, motivate, equip and empower environmental education providers with new skills and techniques that are appropriate to their context. Following Palmer (1998), the table below identifies key features of professional development that have informed the development of the NEEC programme.

<p>Cyclical, with ongoing regular resourced support</p> <p>Participatory, modeling the approaches to be adopted</p> <p>Based on foundational, practical and reflective competences</p> <p>Responsive to local settings and changing circumstances</p> <p>Implemented by committed and experienced facilitators</p> <p>Accompanied by visits, meetings and workshops at the workplace</p> <p>Provided at multiple levels to create synergy between educators</p> <p>Accompanied by institutional support for new practices.</p>
--

(Murray, 2005:13)

Table 2. Features of professional development

The involvement of participants from the non-formal sector in NEEC was designed to enable them to participate in socio-economic development in their respective communities (Namibia. MBESC, 2003b).

4.2.4 Locating the NEEC Course within the Namibian Educational Philosophy

After independence, the newly formed Namibian government agreed that in order to redress the inequalities of the past, education reform would be a priority. The policy-guiding document “*Toward education for all*” (Namibia. MEC, 1993) outlines the vision for a new philosophy of education. This document puts forwards national educational goals of access, quality, equity and democracy with the provision of security in the learning environment. Lifelong learning is now a fifth goal of education, with the hope that “breaking down boundaries between formal and non-formal education and in and out-of school divisions will enable a learning society” (Namibia. MBESC, 2003b:6).

Related to these insights, is the perception of learner-centered education. Underpinning learner-centered education in the Namibian context are critical theories of education and social constructivism (Namibia. MBESC, 2003a). The features indicated in Table 1 characterize learner-centered education:

Table 3. The perceived features of the learner-centered education in Namibia

<ul style="list-style-type: none">• Critical thinking• Knowledge is dynamic and not static• Learning with understanding• It encourages trial and error• Critical reflection and reflexivity• It relates new knowledge to the reality• Prior learning <p style="text-align: right;">(Namibia. MBESC, 2003a)</p>
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The NEEC course was developed within the philosophy and pedagogy of learner-centred education as adopted by Namibia (SEEN, 2005).

4.2.5 The Philosophical Approach of the NEEC

The purpose of the NEEC is to develop a community of active and reflective environmental education practitioners. The course aims to enable participants to interpret environmental issues within their own context, to reflect critically on what they do and work with others to respond to the environmental crisis through education NEEC (2008). The course expects participants to reflect critically on trends and patterns of environmental education, to develop a better understanding of how key ideas in education have shaped the environmental education process.

Social constructivism refers to the knowledge construction within social settings (NEEC, 2008). Through social interactions, participants construct meaning of their understanding of the environment around them, within their life experiences and everyday interactions with others. Similarly, participants are encouraged to look critically at social systems and practices. Keeping the environmental crisis in mind, participants are encouraged to recognize the need to change their own practices (Frohlich, 2004).

The course is run on the principle of “we are all learners and educators” (NEEC, 2008:2) by recognizing that participants and tutors of the course can learn from one another and that they can “construct new meaning” (NEEC, 2005) in their interactions with one another. This principle emphasises participation during the course in different ways that include:

- Attending workshops.
- Attending study group meetings.
- Participation in group assignments.
- Negotiating and interacting with others and tutors during the course.
- Doing presentations.

(NEEC, 2008)

4.2.6 Locating the NEEC Course within Professional Development

4.2.6.1 The aims of the NEEC course

The aim of the course is underpinned by what is termed “applied competency” (NEEC, 2008:9). The course aims to equip students with three applied competencies, indicated by the figure below.

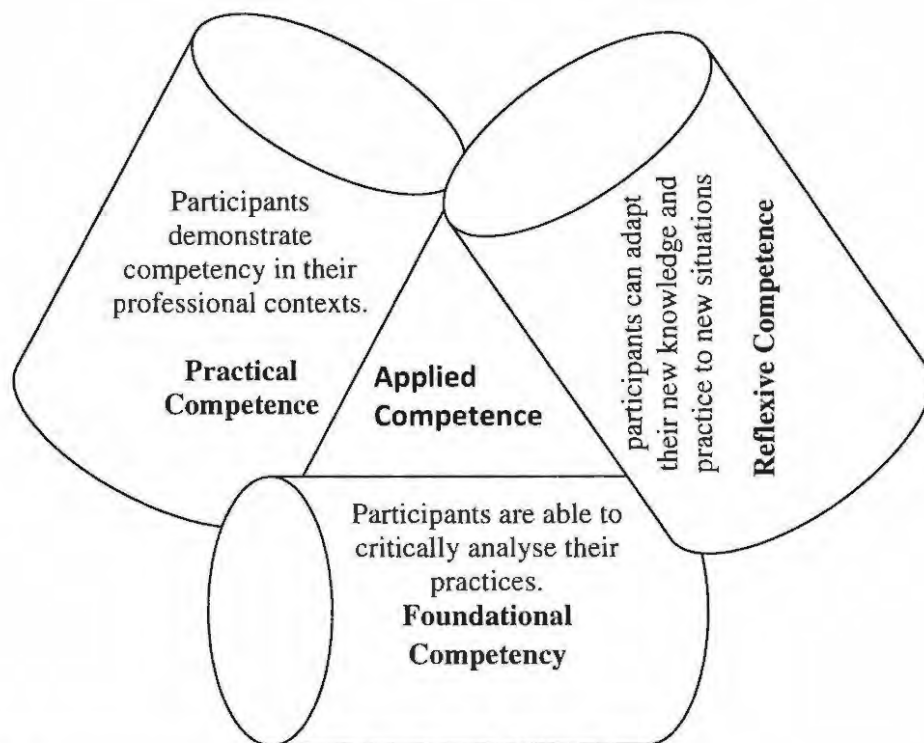


Figure 2: Applied competence (Cited in Frohlich, 2004:53)

The participant-applied competencies are assessed through their ability to develop learning support materials, a learning programme or a curriculum aiming at responding to environmental issues in a professional context. Through the process of planning, developing and evaluating a response to an issue of their choice, participants develop knowledge with understanding, new ways of understanding in an interactive and productive process. (Namibia, MBSEC (2003a).

4.2.6.2 The NEEC Course Outcomes and Learning Modules

At the beginning of the course, participants are required to review the outcomes with their tutors and they can add additional outcomes or change the existing outcomes to suit their learning. Therefore, the course adopts an open-ended approach to outcomes. In the context of NEEC: “An outcome is a demonstration of learning at the end of a learning process” (NEEC, 2008:6). A list of suggested outcomes follows:

- Participate fully in an educational programme (the NEEC course).
- Demonstrate professional development and growth.
- Critically reflect on and/or reflexively review own and other’s practice.
- Work alone or with others to develop, implement and evaluate environmental education processes in the context of your community or workplace.

(NEEC, 2008)

Each of these outcomes serves a purpose for each learning module and each learning module will provide opportunities that will enable participants to work towards achieving the outcomes. The programme is located within the three modules shown in figure 3 below.

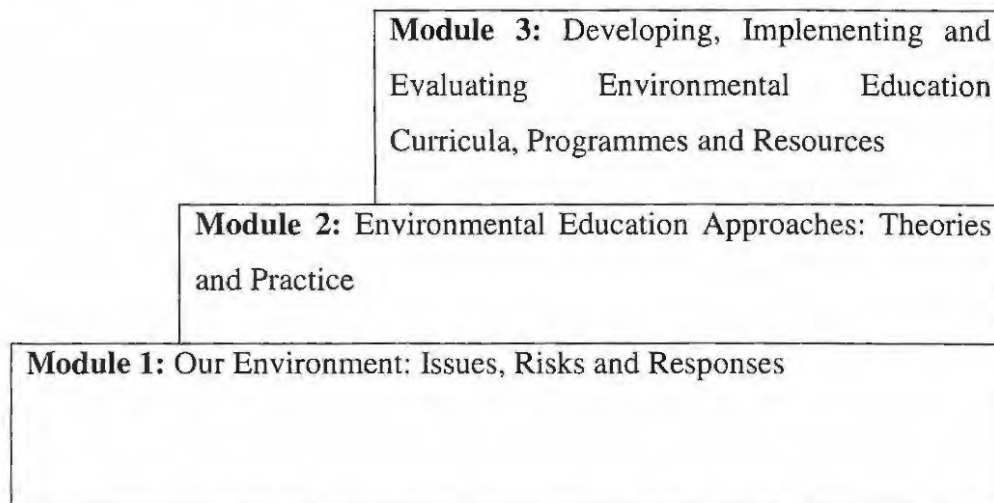


Figure 3: The modular staircase structure of the Namibian Environmental Education Certificate Course (NEEC 2008)

The brief overview of the modules below reflects how the design and development of the modules is an attempt to translate the underlying principles guiding professional development, (as shown above) into a practical application. Further to this, the modules are an attempt to be true to the philosophy of the reform process in Namibia as well as to the philosophy underpinning NEEC.

4.2.6.3 The NEEC module analysis

The modules identified in Diagram 1 cover particular themes and although each theme builds on the other, they each have a particular focus.

Module One: Our environment: Issues, risks and responses

The first module focuses on the notion of environment and the issues, risks and problems that exist nationally, regionally and globally. A further focus of this module is the exploration of responses to the environmental risks and issues. The module outline is indicated below.

- Understanding of the environment with regard to the four dimensions (economic, social, political and biophysical). Participants should link the holistic integration of the environment in all four domains.
- Knowledge and skills of identifying local environmental issues and link these issues to the four dimensions to create an understanding of a holistic approach. These skills are therefore useful to understand regional and global issues. The participants will learn how they apply to the local immediate environment.
- Understanding of trends in responses to local, national and global environmental issues and risks. Participants recognize the action taken with similar issues and to select what is appropriate to apply to their context.

Module Two: Environmental Education Approaches: Theories and Practice

The purpose of this module is to give students an opportunity to use the theories and strategies in order for them to respond to the issues and risks identified in module one. Only when students understand the bigger picture of theories and strategies that guide

environmental responses, will they be able to choose appropriate approaches towards environmental challenges and issues.

- Understanding trends and patterns in environmental education approaches. Participants understand the need for different approaches to different environmental issues.
- Understanding theories of education and associated methods used in EE programmes, curriculum or learning support materials as responses to environmental challenges, issues and risks.

Module Three: Developing, Implementing and Evaluating Environmental Education Curricula, Programmes and Resources

The focus of this module is a combination of how to translate the beliefs and the philosophy into practice. A central focus in this module is on critical reflection and reflexivity. This module consolidates module one and module two.

- Work with others to develop an environmental education programme, curriculum or learning support materials to respond to a local issue in their context which they have identified in module one and, after completing module two use this information to examine their beliefs.
- Work with others to implement and evaluate an EE programme, curriculum or learning support materials. This requires participants to reflect on their responses in a critical way and to assess the impact on the issue concerned.

The modules build on one another and give a participant the opportunity to complete one module and reflect on it before proceeding to the next module. Each module focuses on developing conceptual understanding and seeks to develop the necessary skills and values, which will enable participants to understand the aspects covered in the course. This is an attempt to provide an enabling framework for their professional practice in their particular contexts.

4.2.7 The Implementation of the NEEC Course, Pedagogical Processes and Strategies



4.2.7.1 Pedagogical Process of the NEEC course

The pedagogical approach adopted by NEEC is in line with the reform process of learner-centered education. Applied competency, mentioned above, is in line with the reform and transformation process for learner-centered education. Van Harmelen cited by Frohlich (2004:52) proposes that “a professional development model for reform and transformation should include:

- Grounding practice in a theoretical framework that is explicit.
- Modeling practice within the selected theoretical framework.
- A process of reflection.
- Meta-cognition situated in reflexive practice.

This pedagogical approach is based on a spiral model of curriculum development and as Frohlich (2004:52) claims “this will enable participants in their developmental process, as their prior learning and cultural capital will be considered valuable whilst still encouraging them to engage critically with, as in this case, environmental learning”. This model should also explicitly mediate the learning processes and provide scaffolding for participants to understand their own practice better and understand the origin and rationale of new thinking. In the case of the NEEC, the key influences on the curriculum development of the NEEC are modeling, practice, reflexivity and meta-cognition.

4.2.7.2 The Implementation of the NEEC Course

In the Namibian “National policy on Adult Learning” (Namibia. MBESC, 2003b:6), adult learning is defined as: “...the entire range of formal, non-formal and informal learning activities undertaken by adults and out-of-school youth, which results in the acquisitions of new knowledge, skills and attitudes in order to enhance the quality of life”.

The NEEC course subscribes to this view of adult learning rather than adult education in acknowledgement of the fact that ‘we are all learners and educators’, all participants bring a rich experience to the course and socially construct meaning on new learning; that learning is a lifelong learning process.

In the case of the NEEC course, semi-distance refers to the mode of implementation. The NEEC is presented in both distance and face-to-face modes. The course therefore envisions learning occurring both during contact sessions and when the participant is engaged in his/her normal professional duty. The guidelines for the course strongly encourage the participant to learn in their home environments through working on the course texts, readings, activities, assignments and study groups as stipulated in the course file or as agreed to with the tutor (NEEC, 2005). This learning away from the contact sessions is therefore the 'distance learning' component of the NEEC course.

The course is a one-year programme that requires participants to attend four 4-day sessions distributed throughout the year. Therefore one third of the time would be spent on contact sessions and one third on readings and one third on assignments. The expectation is that participants will spend approximately 5 hours per week on their course work.

4.2.7.3 Strategies for Implementing the NEEC Course

Since its inception in 2002, the NEEC is monitored and revised to continue to meet Namibian needs (SEEN, 2005:9). The focus on participation has informed the course design which is structured on an interactive workshop approach used in the contact sessions.

The national workshops are followed up with regional tutorials. Therefore, the participants are able to work from their home base with their tutors. This enables them to consolidate the work done in the national workshop as well as to get support for the course readings and assignments.

The structure of the interactive national workshops ensures that there is a balance between the development of new knowledge and skills and time allowed for feedback from the students on the work done between the contact sessions.

Participation is encouraged through the involvement of the participants in group work, role-play, simulations, games and individual and group presentations. Le Roux (1999) refers to these forms of participation as a strategy that facilitates knowledge development in the context of shared learning.

4.2.7.4 Assessment and Evaluation of the NEEC Course

Assessment during the course provides insights into how well the participants have achieved the outcomes described in 4.1.4. The assessment process on the course is a learning process, “not a process of judgment” (Murray, 2005:20). The NEEC is outcomes based, therefore the outcomes shape and inform what is assessed. Assessment is therefore both continuous and summative. The continuous assessment components consist of assignments, participation, and presentation of both individual and group activities. The summative assessment consists of the professional development evidence contained in the portfolio compiled and submitted at the end of the course.

The course has explicit features to guide the process of continuous, outcomes based assessment these include the development of:

- Assessment criteria designed as a guide to inform participants on how well they have achieved specific outcomes.
- Assessment questions developed to guide the participants in reflecting on their own work as well as to help them in peer assessment and the assessment by the tutor.
- Suggestions made to the participants on how to collect evidence of their own learning.

(NEEC, 2008)

Assessment occurs through participation and attendance, assignments and the use of portfolios.

Evaluation takes place at three levels:

- By participants and tutors filling in the evaluation forms designed with specific questions to address certain areas for improvement.
- By an internal moderator. The internal moderator presents a written report. The internal moderator attends course workshops both nationally and regionally to gain insights for evaluation.
- By an external evaluator. This is an educator not involved in the course, but has knowledge about and experience in environmental education. The external evaluation is

based on the evidence from the portfolio. External moderator also looks at the internal moderators reports

The evidence, suggestions and comments from evaluation and assessments are used to inform the future course development.

The following section will analyse the NEEC in relation to ESD and the environmental challenges identified at the WSSD in Johannesburg in 2002.

4.3 THE ANALYSIS OF THE NEEC IN RELATION TO ESD AND THE ENVIRONMENTAL CHALLENGES IDENTIFIED AT WSSD (JOHANNESBURG, 2002)

In section one; I attempted to place the NEEC course in context by looking specifically at three main areas, namely the philosophy of the NEEC, its aims and implementation. This contextual analysis provides the basis for discussion in this section. This discussion focuses on how the NEEC relates to and addresses the expectations of ESD with particular references to the challenges to sustainability identified by Namibia in 2002 at the WSSD in Johannesburg, South Africa.

I base this discussion on the premise that if sustainability and ESD are accepted as important by Namibia, then professional courses for EE providers such as NEEC ought to support the ideals of ESD. I refer in particular to those related to addressing the challenges and issues faced by Namibia. This section focuses on analysing the three main dimensions of the NEEC programme. That is the philosophy, the aims and the implementation in relation to ESD and in particular, to how well the NEEC prepares participants to meet the environmental challenges in their own community and regions.

4.3.1 The principles of ESD in relation to the NEEC principles

The principles of ESD as indicated in chapter two (in text box below) are an attempt to translate the ideals of sustainability into a set of guidelines that could be applied to ESD programmes, learning support material and curriculum development for ESD.

These guidelines while not explicitly articulated by NEEC do have a bearing on the basic tenets that shape the NEEC. The table below indicates ESD principles as stated by UNESCO (2005); SEEN (2005) and McKeown (2002).

<ul style="list-style-type: none">• Developmental activity should help to sustain and not harm natural resources.• ESD promotes the improvement of quality of life in which human needs and aspirations can be satisfied without destroying ecological integrity.• Meeting essential needs for jobs, food, energy, water and sanitation.• Merging of environment and economics in the decision-making process.• ESD should aims for human equality, human rights and peace.• ESD should promote justice and a healthy society.

Table 4. ESD principles

An analysis of the organising principles that have shaped the NEEC reveal that while these principles are not explicitly identified by the NEEC, there is a relationship between the guidelines identified for ESD and those that underpin the NEEC. Thus, it is worth noting that:

- A central focus for NEEC is to sustain the biophysical environment while promoting development that benefits community. In order to achieve this, it is necessary to strengthen the existing programmes and empower participants to develop the necessary knowledge, skills and understanding at all levels of society. There is therefore recognition that development, while an essential dimension of all societies, needs to be located in sound and sustainable principles that will not be detrimental to the natural resources.
- The NEEC places a strong emphasis on providing access to all sectors of society to participate in the programme. The programme participants are expected to discover their personal responsibility towards the environment and how they can engage in activities that, while not disturbing the ecological integrity of their regions, will improve their well-being and continue to protect and sustain the natural resources.

- Furthermore, the NEEC focuses on the existing interdependence found between the biophysical, social, economic and political domains of the environment. It is inferred in ESD that, through environmental education, it is possible to enhance quality of life.
- The NEEC promotes understanding and knowledge that helps participants to make informed choices for those activities that integrate environmental sustainability while ensuring income generation to secure jobs, alleviate poverty and help people meet their basic needs.
- The focus for NEEC is to empower and raise awareness for participants from all sectors, to work together and collaborate with individuals or organisations to challenge and question the authority with regard to unequal distribution of natural resources, environmental issues and challenges facing communities and come up with creative ways of finding a mutual solution inferred by ESD.
- The NEEC is concerned about the central value and ethics of human responsibility towards the environment. The content of the modules reflects the NEEC's awareness of ethical values and emphasises cultivating a just and healthy environment for all.
- Although the content of the NEEC modules do not explicitly indicate the link to the environmental challenges identified at WSSD, various modules' outcomes show that the programme is responding to these challenges.

There is a strong focus in the NEEC on the ESD principles but the NEEC philosophy and underlying principles do not articulate specific outcomes related to equal justice, human rights and peace. If the NEEC is to contribute to the decade of ESD, it should consider these values and integrate them into the course.

4.3.2 The aims of the NEEC in relation to the ESD

In this section, I analyse the NEEC aims in relation to ESD. The NEEC competencies are translated into outcomes that participants need to achieve. It is therefore important to note how closely these outcomes and competencies compare to ESD purposes. Frohlich (2004) and NEEC (2008) noted these competencies as:

- Participants need to demonstrate competency in their professional context. Participants should improve the way they practice their profession using the knowledge, skills and understanding developed from the programme.
- Participants should be able to analyse their practices critically. NEEC provides an opportunity for this through self-evaluation and reflection.
- Participants should be able to adapt their new knowledge and practice to new situations. The NEEC empowers students with the relevant knowledge that will enable them to be flexible in their practice.

By looking at these competencies, it is apparent that the purpose served by the NEEC programme is to achieve the outcomes below. Through these competencies, participants should be able to:

- Apply the theories of critical thinking to reflect on their own practice and make the necessary changes to improve and create innovative ways of engaging in new activities within their practice.
- Develop critical thinking skills in order to be able to look at their practice from different perspectives.
- Acquire knowledge with understanding to enhance their conceptual development.
- Work with others to plan, implement and evaluate appropriate environmental programmes.
- Work with others in their community to identify environmental issues and challenges and plan environmental programmes, environmental curricula or learning resources to respond to these issues and challenges.

Looking at these aims and competencies in relation to the ESD identified by UNESCO (2005); Murray (2005) and Gumede, et al. (2006), the point is to what extent these ESD aims are applicable to those of the NEEC and how achievable are they. I consider this in the following chapter.

- New opportunities and knowledge should be adapted in differing situations to incorporate ESD into education reforms
- ESD should encourage critical thinking to stimulate reflection and questioning of own practices and finds alternative ways of improvement
- ESD to foster an increase in the quality of teaching and learning in education for sustainable development.
- ESD encourages the re-orientation of technology and managing environmental risk posed by technology
- Life-long learning that links across traditional subject boundaries
- ESD should facilitate networking, linkages, exchange and interactions among stakeholders in ESD

Table 5. UNESCO ESD aims

An aspect not clearly articulated by the current NEEC programme is the need to clarify the relationship between technology and the environment. A further aim would be to develop an understanding of Namibia's fragile environment and the uncertain effect of climate change,

4.3.3 The Pedagogy and Implementation of the Programme in Relation to the ESD Pedagogy.

This section analyses the pedagogical processes and implementation of NEEC in relation to those encouraged by ESD.

4.3.3.1 Pedagogical process

McKeown (2002); SEEN (2005) and Lotz-Sisitka (2006) have identified what pedagogical processes should guide an EE programme within an ESD framework.

Table 6. ESD pedagogical processes

- Firstly, EE programmes processes should not just be participatory but active and learner-centered.
- Secondly, EE programmes should enable participants to have a role in planning their experiences and provide an opportunity for making decisions and accepting the consequences.
- Thirdly, they should encourage not just reflectivity, but creativity as well.
- Fourthly, EE programmes should be inclusive and promote the importance of examining society-environmental relationship to ensure cultural, linguistic, physical, social and economic inclusivity. (Integrity and respect for different cultures and languages).

The NEEC programme study reveals that the NEEC, through its series of tutorial workshops, study group meetings and contact sessions follows these ideas and is therefore influenced by them through its process of implementation.

4.3.4 The NEEC Programme in Relation to the Namibian Challenges Identified at WSSD.

If one looks at the content of the NEEC analysed in this chapter, it is clear that it does not specifically focus on the environmental challenges as identified at WSSD in 2002. This may limit the real understanding of these challenges. Although module one of the course focuses on general environmental issues, risks and challenges, nationally and globally. SEEN (2005) outlines the challenges identified by Namibia at WSSD as embedded in the following themes:

- Natural resources and their management
- Poverty and inequality
- Society and governance
- Development and the environment

- Health and the environment
- Globalisation

In Namibia, any EE initiatives striving to contribute to DESD should use these themes as a framework for their activities. The study reveals that the current NEEC curriculum emphasised natural resources, their management, poverty, inequality, health, the environment, development, and the environment. This indicates that the NEEC programme works on assumptions that participants will identify those issues and challenges located within these six themes.

4.4 CONCLUSION

In this chapter, I presented the detailed analysis of the NEEC course and discussions. The NEEC course that I presented is linked to the research question of how the NEEC has shaped and informed the practice of the non-formal environmental educators and how the NEEC responded to the DESD. In the following chapter, I present, analyse and discuss the findings from the research study. I present this thematically, influenced by the literature reviewed regarding my research questions.

CHAPTER 5

DATA PRESENTATION AND ANALYSIS

5.1 INTRODUCTION

In this chapter, I report on my findings from the semi-structured interviews, field observations and document analysis. I identify patterns and trends that emerged from the data and use them as themes and sub-themes to present my data.

In the first section of the chapter, I include profiles of the participants, their professional background and responsibilities. I also provide an overview of the environmental risks and challenges that are specific to the areas in which my participants work.

I follow this by presenting the findings taken primarily from the semi-structured interviews. This section presents participants' expectations, their perceived values of the NEEC and their perceived challenges. This section concludes with the participants' view about how the NEEC could be improved and developed. In the third and fourth sections, I present specific data collected from the documents and the data collected from the field observation.

The final section of the chapter provides an analysis of the data in relation to the challenges presented by both ESD and the challenges of sustainability that Namibia faces.

5.2 THE PROFILE OF THE PARTICIPANTS

This section gives a contextual analysis of the participants in my study. I begin by providing the participant's professional details intended to convey background information of the participants that will illuminate their involvement in the NEEC course.

As I indicated in chapter three, to ensure confidentiality, anonymity and privacy, each participant has a pseudonym. I summarize the participant's profiles in Table 7.

Name of a participant	Sex	Academic qualification	Professional qualification	Occupation
Jake	Male	Grade 12	Diploma in Forestry NEEC Certificate	Head Forest District Officer
Erna	Female	Grade 12	Certificate in Community Project Management NEEC Certificate	Community Coordinator
Manu	Male	Grade 12	None	Assistant EE Educator
Sibongo	Male	Grade 12	None	Assistant EE Educator
Frieda	Female	Grade 12	None	Assistant EE Educator
Dan	Male	None	None	Chairman of the community forest
Mike	Male	Grade 12	None	Assistant EE Educator

Table 7. Summary of the research participants' professional profile

The first participant is Jake, district forest officer for the North-Eastern Region (Kavango Region). Jake achieved this position via a promotion in 2001. He holds a forestry diploma from Ogongo Agricultural College and a Namibian Environmental Education Certificate from the Polytechnic of Namibia. Jake has attended a number of in-service training programmes in the course of his career; forest fire ecology and management in Kruger National Park, South Africa, bee keeping and management in Kitwe, Zambia and forestry on dry land management in Dar es Salaam, Tanzania.

He accumulated years of experience in community forest management, environmental conservation, forest fire management, human resource management and community mobilization. Jake's personal interest is environmental conservation.

I had an interview with Jake and spent a day with him, attending the regional meeting where he presented a PowerPoint presentation on his Directorate's regional budget.

The next participant is Dan. Dan is a community member of Mbeyo, where Mbeyo community forest is located. Although he has no formal education qualification, he is entrusted with the role of chair for the Mbeyo community forest, a position he has held for the last four years. Dan leads others on the sustainable use of forest resources. He attended a fire-fighting programme organised and presented by Jake. I held an interview with Dan to discuss the usefulness of the fire programme implemented by Jake.

Erna was my third research participant. Erna works as a community coordinator for the community programme funded by Development Aid from People to People (DAPP), based in the Kavango region. She is responsible for helping the community to establish a community nursery, vegetable garden and for establishing other community income generating projects. She worked for 8 yrs for an environmental club programme, working with different schools in the Omusati region before she moved to the Kavango region. It is very interesting to note that despite not having any teaching qualification, she trained teachers and children on how to integrate environmental education into their curriculum. Erna holds a certificate in community project management from the University of Zimbabwe and she holds a Namibian Environmental Education Certificate from the Polytechnic of Namibia. I held an interview with Erna and I observed a community meeting which she ran.

The next four participants Mike, Manu, Sibongo and Frieda are current NEEC students and are assistant Environmental Educators at Disho Environmental Education Centre in Rundu. Despite holding only grade 12 certificates, they are interested in addressing environmental issues and they decided to become assistant tutors while studying at the same time. Frieda's background differs somewhat from the other three students. She holds a diploma in carpentry from Rundu vocational training centre. She worked as a shopkeeper for three years, before she decided to join the environmental education field. I held a focus interview with this group and I observed a session where they tutored a session together.

5.2 .2 Specific environment issues and challenges of the Kavango

The Kavango region vegetation is classified as a sand forest. The Kavango River is one of the few perennial river systems in Namibia and the region is a haven for wildlife. The overriding concerns and issues in this region are around rights over natural resources, economic empowerment and development, HIV and AIDS, malaria and other communicable diseases, poverty reduction and high levels of unemployment (NNF, 2006).

5.3 THE RESULTS FROM THE SEMI-STRUCTURED INTERVIEWS AND FOCUS GROUP INTERVIEW

This section presents data collected from semi-structured interviews with individuals and with the focus group. The section broadly follows the interview and focus group interview schedules (Appendix 4.)

5.3.1 Course expectations

In this section, I examine the question I asked participants regarding their course expectations. I felt that knowing the course expectations of these particular participants, I would have a better understanding of how the aims of the NEEC related to the perceived needs of the participants.

Jake said that his expectations of the course were to get an understanding of environmental education and to learn to make sound decisions regarding the environment, to acquire the knowledge to run environmental programmes, and to learn from the experiences of others from different organizations. He emphasised that all his expectations were in line with the work that he is currently doing.

Erna's expectations were as follows:

I wanted to learn how environmental education is treated in our country. I was interested in knowing how EE works and how EE is used elsewhere as a tool for responding to different environmental issue in communities.

She further added that:

Monitoring and evaluation of programmes was not my expectations. I just find it in the programme and it was very useful to me.

Mike expressed his expectation of the course as follow:

I enrolled for the course to improve my ability in writing and reading English. Secondly I expected to learn how to influence others. I was convinced that the course offers relevant information which I can acquire and transfer to other people.

Mike added that once he has the desired knowledge, he plans to return to his village and talk to the people and the traditional leaders to get them to influence the community. He emphasized that he will focus on deforestation since it is a major issue in his community. He hoped to get help from forestry officials and agricultural extension officers.

Frieda, Sibongo and Manu's expectations were on developing knowledge about environmental education. They indicated that they want to learn more about the issues that affect the environment to gain some insight into how to solve them..

5.3.2 Development of the environmental education understanding

When asked how the NEEC has contributed to their understanding of environmental education, Erna indicated that she involves others in the planning of EE programmes and now trains learners to be leaders to guide others in EE activities. She said she does this because she learned about the importance of involving others in EE activities from the NEEC course.

She further added that:

With the child aid programme, when I have meetings with the community usually with the introduction of the programme, I ask community members what they think should be done. I then involve them in activity development and implementation and further discussions.

When asked to clarify the importance of discussion she said that dialogue is important for the development and implementation of EE activities. Involvement of others is important to increase a sense of ownership and increase the sustainability of programmes.

In comparison, Jake said that his understanding of EE concepts has improved because he can now identify environmental issues. Planning and addressing environmental issues and the identification of stakeholders who have the same interest on similar issues shape his understanding of environmental concepts.

Frieda responded that the programme (NEEC) has taught her a lot. She used to hear people talking about the environment and she related it to plants only. Now she is able to identify issues and analyse the causes. Frieda states that she has learned a holistic view of the environment, that the term includes people and how they interact with the environment that surrounds them. It is interesting to note that Frieda had never heard of the four dimensions (political, social, economic and biophysical) of the environment until she joined the course.

Sibongo reflected on some of the actions that he used to do and never thought were wrong because he was not aware of the negative impact they had on the environment. He highlighted the issue of littering. He said:

Now I understand that some of the plastic bottles we can even reuse them again for drinking or even for storing seeds for the next cultivation.

5.3.3 Values and benefits gained by students from the NEEC

Erna, when asked about the major benefit that she gained from the NEEC course, said that evaluation was the major skill that she gained from the course. Erna now uses this new found knowledge in her practice. She mentioned that she tries to involve participants in evaluation by looking at the questions in the evaluation tool for comments and useful changes that will benefit all.

Another significant benefit that Erna gained and values is the involvement of others in the planning and development of workshop and programmes. She stated that:

I started involving others in my work and in the planning. Involvements of teachers, students and community facilitated the load of work and create the sense of ownership of programme or meeting. I trained learners how to be on the lead when their teachers are not there and how to work with community. We established an environmental club cluster system, which is still functional and very successful.

She commented that she felt she has developed professionally and what she does, she is doing it with the help of the NEEC. Erna added that she always carries her NEEC file with her to refresh her knowledge if she is stuck while implementing workshops and meetings. She mentioned that the NEEC has given her confidence and she feels she is on the right track in her work.

Jake emphasised the importance of the knowledge that he gained from the course. He said that being involved in the course improved his English since he was required to do a lot of reading. He pointed out that some of the readings related to the issues he faces in his work and his interest in environmental management. The course has enabled him to develop an interest in watching and listening to environmental programmes on television and radio. He mentioned that he has upgraded his computer skills, because he was required to type his assignments and portfolio tasks.

Mike, Sibongo and Frieda mentioned the modeling of tutors' techniques proving helpful for them to execute their duty as assistant tutors and complete their assignments at the same time. Mike commented that *"We learn about issues, risks and problems in module one, and we did this through participation. When I involve my students, I also apply the same strategies"*. Sibongo explained that he found theories and methods used by tutors useful and he models those methods and theories during his tutoring.

5.3.4 NEEC informing educators practice

Jake explained how the course improved his practice in many ways.

I learned from the tutors how to present sessions and give information in front of the audiences with a lot of confidence and self-esteem that I built up during the course. I am

now able to organize and manage community workshop with participants from different backgrounds.

Jake said that in trying to work with the community to find solutions to issues, he learned from the course that it is best to identify the root cause and try to deal with this cause first. He said that in doing so he has to apply some of the theory he learned, pointing to social constructivism as particularly important in dealing with specific community issues.

Jake explained that social constructivism is important in addressing a group of people. The theory is based on a social situation and it encourages participation *“the decision which the group will make will be based on mutual agreement among the group”*. He further added that he learned that it is vital to involve others in issue identification and to decide mutually on a solution. This is what he termed *‘participatory decision making’*.

Erna explained that with the help of the new programme, she asked the community what they think should be done about the project ‘child aid’ and thereafter involved them in the development of activities and further discussions to map the way forward.

Four of the participants emphasised the usefulness of the methods and theories in informing their practice. Frieda mentioned that;

“I found behaviorism theory and social constructivism important. Behaviorism helps me to approach students in a convincing manner and through this theory you can get students to respect you, while social constructivism theory enhance students critical thinking through debate and discussions”

It is interesting to note that these participants did not have any tutoring qualifications, but despite the complexity of the theories, they understand them and therefore apply them in their practice.

5.4 CHALLENGES AND PERCEIVED RECOMMENDATIONS OF THE NEEC COURSE

In this section, I focus on the challenges that students experienced in the course and secondly on the recommendations made by participants to help improve and develop the course.

5.4.1 Challenges of the NEEC course

Challenges, in this context, refer to as those aspects of the course that the participants had to grapple with in order to understand and accept them. When asked about the aspects of the course they find very challenging, Erna pointed out the implementation of her programme as the most challenging aspect. She further indicated that her issue of HIV/AIDS was a complex one. That led to participants challenging her about the link between HIV/AIDS and the environment. She faced challenges from her own participants as well, "*who told you to plan a programme*" one of the participants asked. Some participants felt that a different response was more appropriate.

Erna explained implementation as the process that follows the planning. "*To implement a programme I have to invite people to come to witness and participate in the programme*". Erna concluded by trying to explain that a programme, as a response to an environmental issue, is a choice one makes between a programme, a curriculum and a resource. She identified this issue during assignment one. "*I cannot really explain what is it but I know I was raising awareness about HIV/AIDS.*"

Jake's experience of the challenges of the course varied from other participants. Jake mentioned the challenge that evaluation poses for participants. He finds it challenging to implement evaluation, "*how to involve others to carry out evaluation effectively*". He further points out that often participants end up evaluating how much a presenter knows about the programme rather than the actual intention of the evaluation which is how effective is the programme.

The EE center tutors each had different challenges they experienced, two of them mentioned that they had experienced lack of support from their tutors when they were back at their workplace. Manu mentioned, "*The nature of the course is distance education course and this decline convener support to students and the time between*

contact sessions are longer and therefore that hinders the learning process.”, while Frieda explained that *“it is difficult to learn something new from the book on your own without the support of the tutor.”* Frieda could not specifically point to which area of learning she is referring.

Mike’s experiences of the course challenges are based on the complex content of the course. To Mike *“the course materials are critical reviewed and taken from different sources to such an extent that if you read on your own you may not even understand some of the vocabulary”*. When asked about the kind of support they get from the NEEC course tutor they pointed out *“the tutor used to write and send tutorial letters about assignments. That is very useful”*. This group confirmed that they were required to form study groups and to help each other with assignments and other course tasks. They said that this often did not work out since participants have different commitments.

5.4.2 Perceived recommendations of the NEEC course development

It is important to note that all six participants emphasised the further development of the course into a diploma level and then eventually into a degree level. None of the participants made suggestions to improve the running of the course. No-one had any complaints or suggestions on the inclusion or exclusion of course content.

5.5 DATA COLLECTED FROM DOCUMENTS

Because of the nature of the half thesis, my time with participants was very limited. I consulted documents to get insights into participants’ professional practice that I could not capture during interviews or observation. In this study, I used documents to look for consolidation of what participants mentioned during interviews and what I observed during field observations. I did this by analysing each participant’s documents separately. Documents analysed were planners, reports, and minutes of meetings, portfolios and curriculum.

5.5.1 Jake's planner

Jake's planners are very complex. It involves the National Directorate of Forestry where each district plan is indicated and what they are expected to achieve as a district. A monthly planner is compiled from the year plan (Appendix 5A). Jake's planners reflected involvement in forestry law enforcement, local community development, meetings, training and monitoring of community foresters and office administration.

5.5.2 Jake's reports and minutes of meeting

Jake's quarterly reports are for the district. These reports conform to a national format (Appendix 6). The reports reflect community environmental awareness through celebration of environmental days, community development through bee keeping training (one training course was done) and issuing of permits for harvesting forest resources (68 permits were given during the reporting quarter) and law enforcement through confiscating of illegal harvested timber from the forest (one fine was given during the reporting quarter). Quarterly reports provide an opportunity for reflection and recommendations.

Minutes of meetings reflect community development meetings held with community and stakeholders involved in facilitating the effective management of community forests (16 meetings were held); these meetings are linked to the district year planner.

5.5.3 Erna's planners

Erna's planner is sophisticated, a year planner reflects the schedules for different community meetings for the whole year and a weekly planner is then drawn from the year planner indicating activities to be executed in a particular week (Appendix 5B). These include visits to schools to give lessons on how to start Hope Human Youth Clubs (HHYC), visiting the community to give lessons and to sensitize the community about orphans and the vulnerable children programme as well as a malaria prevention programme (these are programmes that the 'child aid' project is engaged in). Her work also includes further planning and office administration.

5.5.4 Erna's reports and minutes of meeting

Erna's reports reflect work done over a monthly period in both the orphan and vulnerable children programme, the malaria programme (six schools were visited) and on HHYC. Minutes of meetings are compiled for community meetings to capture what was discussed and decided upon (four community meetings on OVC were ran during the month that I visited her). This facilitates follow up and further planning.

5.5.5 Tutoring preparation

This preparation is guided by a course curriculum. The curriculum indicates topics to be covered, main activities and resources needed for each particular activity (Appendix 7). The course is run on a three-month cycle, four days a week. Only one of the four tutors was in a possession of the preparatory notes. (Appendix 8).

5.5.6 Course participants Portfolios

The course curriculum indicates that participants are instructed in the use of portfolios and therefore have to compile a portfolio towards the end of the course. The evidence in the portfolio includes the participant's three assignments, reviewed articles and pictures on environmental challenges and issues and reflection of participant's professional development. This evidence reveals that tutors communicate with students in the portfolios through comments and suggestions on their work.

5.6 DATA FROM FIELD OBSERVATIONS

In this section I present how the participants are involved with the community in their daily work that I observed. Engagement with the community involves prior planning, implementing and reflection through report writing and discussions. I discuss how each participant engages with the community that they serve. Erna is a community coordinator, Jake, a district forest officer and Frieda, Manu, Sibongo and Mike assistant EE educators.

5.6.1 Observations of participants' work

I conducted three observations on the six participants. They base their activities on a yearly plan, a weekly plan and a personal plan, which is pre-determined before the activity is implemented.

I observed Erna holding a community meeting to establish a community garden for generating income to help orphans and vulnerable children in Sinzongoro community. The meeting started at 11h:00 and ended at 15h:00. Jake's activities that I observed were firstly a presentation he made at the Kavango region quarterly meeting, the rest of the activities were office based. I observed the four environmental educators giving a lesson on 'the environment', which was a co-tutored lesson by all four educators.

5.6.2 Erna's community meeting

The community meeting with Erna was held at Sinzongoro with 28 community members present. Among these community members was a headman of the village. The meeting started with a prayer by one of the community members. Erna explained the aim of the meeting with reference to the message that was sent across the entire village through the headman and through the radio. She explained that the meeting aimed to identify a piece of land in the village for the purpose of growing vegetables and fruit for the orphans and vulnerable children. Erna requested that a committee be elected to oversee the activities of the garden and that a leader should be elected.

The discussion centered on who qualifies as an orphan with inputs from both the community members and Erna. This led to the conclusion that a child who has lost one or both parents, as well as children who are not cared for by their parents due to financial problems (to be proved by the headman) would be classified as vulnerable children. Erna told the meeting that in some instances, a child can be both an orphan and vulnerable.

The village headman indicated a piece of land in his community that he was willing to give to for use by the project.. The meeting then proceeded to the nomination of the committee. Erna reminded everybody about the importance of nominating committed

people to help enact the project from the ground. The meeting nominated 25 people who were seconded to form a committee for the gardening project. The committee agreed to meet for the first time on 5 July 2008.

Erna summarized the meeting giving highlights on the discussion. The headman got an opportunity to thank everybody and emphasized the importance of taking the responsibility entrusted to him or her seriously to make the project a reality.

Erna discussed the result of the meeting with the headman and two volunteers from the community after everybody left, they agreed that the meeting went well and the headman offered to oversee the overall progress of the project. It is interesting to note that during this reflection nothing was written down, rather it was an informal reflection.

5.6.3 A day in the office with Jake

As mentioned before, I spent a day with Jake in a meeting that he attended and the rest of the time in his office. An invitation was distributed for the meeting on 21 May 2008. The meeting took place on the 20th June 2008 at the Kavango regional council board room in Rundu (Appendix 9). The quarterly meeting focused on the capital budget of each directorate and line ministries. Jake represented the Directorate of Forestry for Kavango region.

He gave his presentation using a PowerPoint presentation and responded to questions based on his 20 minutes presentation. Jake answered the questions posed to him and he asked for suggestions and comments from the other participants. Jake was aware of participation and he invited discussion during his presentation to allow participation. He left the meeting after he presented his directorate budget.

A client came to the office complaining of equipment that was confiscated when forestry officials accused him of illegal logging. Jake is the official responsible dealing with illegal harvesting of wood cases. Jake, after consulting other officers, confirmed that the issue had been referred to the police and had become a police issue. He called in the client and informed him of the current situation. It is important to note that Jake sees it as important to consult others in following up on whatever happens in his absence.

Jake called a caretaker and gave instructions for the updating of the office inventory. He reminded the two drivers who were to transport a group of people to a place called Ndiyona about the rules that apply to the use of cars.. He checked that they had no issues to discuss before they left. Jake provided an opportunity for others to view their opinions and concerns that facilitates effective discussion and participation.

5.6.4 Co-tutoring session of environmental education lesson

The session observed for Manu, Frieda, Sibongo and Mike was a co-tutored lesson. The course coordinator and the four EE assistant educators arranged for the course to be co-tutored, although usually they tutor sessions in pairs and I initially asked to observe each pair. The session focused on the theme 'environmental issues' (Appendix 10). The first two tutors to present were Frieda and Manu. Manu arranged the group in four smaller groups. Frieda gave each group instructions to describe an environmental dimension given to them (biophysical, social, political and economic). The instructions were as follows:

- *Describe with reference to local examples the dimension for your group*
- *Present your description of your dimension in a flipchart.*

After each group presented their dimension, Manu led the discussion around the presentations from different individuals and he finally commented on their presentations.

The following session was presented by Sibongo and Mike. Using the same convenience group, Sibongo gave two groups the problem of littering and another two groups the issue of deforestation. He gave the instruction as follows:

In your group give

- *The nature of an issue (what is an issue)*
- *The causes of an issue (underlying causes and direct causes)*
- *Effects of an issue (short term and long term)*

- *Examples of local responses to the issue*

Mike and Sibongo moved from group to group to see if groups needed assistance. After the group finished they presented their findings. Mike allowed the group dealing with deforestation to present first and then moved to the group dealing with littering. Both Manu and Frieda contributed to the discussion around the presentations of the two issues from the four groups.

There were questions regarding the NEEC course and the four EE facilitators tried to answer them. Mike thanked everybody for coming and the group dispersed.

5.7 ANALYSIS AND DISCUSSIONS OF FINDINGS

The discussion in this section of the chapter is informed by my research questions and the four themes that emerged from the NEEC analysis and the data presented in this chapter. These four themes are:

- The relationship between the course aims and the participants' perceived expectations of the course. This aspect of the discussion attempts to identify the extent to which the course philosophy and principle have relevance in the context of environmental educational providers in the non-formal sector
- The relationship between the course orientation and the professional practice of these participants. The discussion here attempts to understand the extent to which the course content, that is the concepts and competencies on which the course is based, inform practice
- The third aspect of the discussion focuses on the challenges that the participants identified in relation to NEEC and how these challenges influence and affect their practice
- The final aspect of the discussion considers the extent to which these practitioners are able to incorporate the views of EE in the context of ESD and the environmental challenges Namibia and their communities face into their practice

The discussion essentially analyses the extent to which the NEEC is relevant both in the context of the identified needs to address the issues seen to challenge the sustainability of Namibia and in the context of EE providers in the non-formal sector. If ESD is recognized as having value for Namibia, then EE initiatives and programmes such as NEEC should conform to ESD philosophy and principles in order to help course participants address the challenges identified by Namibia at the WSSD.

5.7.1 The relationship between the course aims and the participants' expectations of the course

The findings from the study reveal that participants come to the course knowing what they want to achieve from the course and that they frame these expectations primarily by their professional practice. Jake for example wanted to develop his ability to make sound and informed decisions on environmental issues and challenges and to address the challenges he faces in his community.. Looking at Jake's planners and minutes of meetings and reports, it reflects that a lot of his practice involves decision- making and involvement of others in the process and requires collaboration. These documents also revealed that reflection is a central aspect of his practice.

Erna simply expressed her need for knowledge to empower her as a professional. Knowledge empowerment with particular reference to Palmer (1998) is embedded in professional development principles. Erna works with communities, runs meetings and presents lessons on Malaria and OVC. The documents analysed for Erna indicates that her profession is community based, collaborative, and requires critical inquiry. Although there is not any evidence of reflection appearing in her documents, from the observation of running a community meeting it becomes apparent that she has developed the necessary knowledge and understanding she requires to develop in her profession. Evidence from this meeting included working with others to run a meeting, and democratic participation and group discussion as well as with others after the meeting. Her ability to build on these meetings and to respond to the needs of her community requires her to reflect more critically than the evidence reveals (UNESCO, 2005).

The tutoring session observed for Manu, Sibongo, Frieda and Mike reveals that they have knowledge about the content of their lessons. However, Frieda was the only one in possession of preparatory notes. Her notes lacked objectives and aims, assessment strategies and a list of required resources.. In observing these lessons, I noted that the lack of good planning and preparation limited the learning opportunities. Furthermore, it limited creativity and innovation in the presentation of the lessons.. The only evidence of reflection was observed in the discussions the tutors had with each other after the lessons. The discussions however focused mostly on the content to be covered and who should present.

The expectations of the participants in relation to what is required by their particular professional contexts reveals that the course orientation goes beyond what their initial expectations were, yet the course is structured to meet the actual professional needs identified by the observations and document analysis. Although participants did not explicitly articulate what they expected regarding knowledge and competencies, an analysis of their expectations in the context of their practice as seen through the interviews, document analysis and the observations revealed the following:

- The expectations of the non-formal sector represented by these participants are met in the first instance by the focus on conceptual understanding, UNESCO, (2005); Murray, (2005); SEEN, (2005) and Palmer, (1998) all emphasised that knowledge with understanding increases opportunities of creating new ways of approaching practice and understanding why certain practices need to be done the way they are
- Evidence from the study revealed that all of these EE providers are working in situations where participation at various levels is central to their practice. It was noted that all of them worked well with their groups. They involved the people with whom they were working in decision making , by drawing on the experiences of the groups and through adopting an interactive approach, even Jake who is very much an authority figure dealt with people in a sensitive manner and took time to listen to them (Palmer,1998)

- It was noted that Erna and Jake were most responsive to the needs of their communities and although this is a requirement for all of these EE providers the tutors were apparently less able to respond directly to their learners' needs, this may, however be the fault of the curriculum they were expected to follow.

One of the aspects requiring attention was the need for the various EE providers to develop a network within which they could work. Not only did this group of providers all working in the Rundu area not work together in any way, no other attempts at networking were made (Murray, 2005). The course aims and principles need adjustment as there is nothing tangible in the NEEC related to networking and the role of networks in developing practice

5.7. 2 The relationship between the course orientation and the professional practice of these participants

The beliefs and philosophy of EE programmes as identified by NEEC (2008);, Murray, (2005) and UNESCO (2005) guide the execution of professional practice. The study revealed how the philosophy and beliefs of an EE programme guided the professional practice of EE providers as follows:

- The orientation of the NEEC is revealed in the practice of the EE providers as displayed through the planning of their daily activities. Evidence from the study showed that planning is essential for Erna and Jake for their professional practice (UNESCO, 2005). The study revealed that while planning is central to EE providers, assistant EE educators are not committed to planning, thus limiting their opportunity to practice their profession at full potential
- The study revealed that although reflection and reflexivity are key requirements of these professional contexts, reflection where it did occur tended to be largely informal and was not used systematically (NEEC, 2008)
- It was noted that participants showed confidence and knowledge of what they are practicing in their profession. Observations indicated that participants are able to work with others and develop relevant programmes, in the case of Erna, a meeting with the

community, while Jake compiled and developed a presentation that he presented to the regional meeting

- Evidence from the observation and interview revealed that assistant EE educators are applying relevant NEEC strategies, approaches and methods appropriate to their professional practice

Evidence from the study has indicated that participants are able to carry forward NEEC beliefs and philosophy and translate them into practice in their professional contexts. From the interview held with Jake it appeared that the inclusion of others in planning and working together towards an agreed upon solution is important. This shows that Jake reflects the idea of participation; initiates discussions and construction of meaning socially. This is important to Jake in achieving his objectives in his practice. In relating to what Jake said to what the documents revealed, it became apparent that there is a collation between the two. Jake's documents included reports and minutes of a training workshop, permits issued, law enforcement and community meetings. Evidence from these documents is a true reflection of responding to the NEEC philosophy.

5.7.3 Participants' perceived NEEC challenges in relation to the NEEC programme

This section explores analyses and discusses the perceived NEEC challenges in relation to how these challenges are met by the NEEC programme. The findings from the study reveal that participants encountered challenges from the course that have affected their professional practice. Although participants did not specifically indicated how the challenges affected their practices, analysis of the interviews, observations and documents reveals the following:

- The NEEC challenges experienced by the participants revealed in the study is firstly that of implementing responses to environmental issues. The study revealed that participants follow the best route for their professional context. ESD supports the notion of creativity in the face of changing circumstances and application of knowledge to new environments (UNESCO, 2005). Evidence from the interview with Erna reveals that the implementation of responding to issues remains a concern in her practice.

- The second challenge is that of evaluating their programmes. Evaluation is essential to further planning. Evidence from observation and documents analysed did not reflect any evaluation done. This shows that participants did not develop a conceptual understanding of evaluation; therefore, they are unable to apply it into their practice.
- Evidence from the interviews reveals that the third challenge was continuing tutor-participant support. The NEEC programme has made provision for continuing student support. To meet students' needs, there are tutoring workshops and contact sessions held that aims to support students with their learning (NEEC, 2008). Evidence from interviews with participants reveals that there is a need for intensive support that is regular and monitored to ensure quality professional development.

5.7.4 Key Namibian environmental challenges in relation to participants practices

Evidence from the study reveals that there is no clear understanding of the current Namibian environmental challenges identified at WSSD. It was further noted that participants develop environmental issues responses in their community without any explicit link to national challenges. Although the link between national challenges and participants' practices is not reflected in detail, the study reveals that participants' practices are inferring to national challenges and are working within the structure of ESD in the following way:

- Erna's programme focuses on responding to health issues and poverty reduction (UNESCO, 2005). By working with the community, she draws from community knowledge and work with the community to develop projects using natural resources. Evidence from interviews with Erna and documents analysed reveals that Erna's practice strongly emphasised the improvement of people's livelihoods and quality of life and promotes local development and poverty alleviation. Evidence from documents analysed indicated that Erna's programme links to some Namibian environmental challenges identified at WSSD and her programme allows her to approach environmental issues in a holistic way.

- Evidence from Jake's documents reflected that Jake frames his practice within the structure of ESD. Jake's programmes involve local development, empowerment, and realization of ownership of natural resource management. Evidence from the interviews indicated that Jake is also involved in conflict resolution over natural resources and law enforcement. Although there is no explicit inference to Namibian environmental challenges, it became apparent that Jake's practice, while within the ESD structure, is grounded on natural resources and their management, society and governance and development to fight poverty (SEEN, 2005). Evidence from the interviews indicates that Jake developed the necessary skills to collaborate with others to meet community challenges.
- Evidence from the observation indicates that the financial resources budgeted for Jake's region is specific and does not allow him to respond to other environmental challenges in communities outside the boundary of the ones prescribed by the Ministry.
- The documents analysed of the EE educators revealed that the central focus for the course curriculum is natural resources and their management with the inclusion of society. The EE tutors approached environmental issues in their local context without referring to the Namibia environmental challenges. Although their participants have opportunities to choose environmental issues relevant to their community, participants are not aware of the national challenges, this made linking impossible. Evidence from the observation of the lesson showed that the proposed ESD structure is met in the first instance by allowing participation, drawing from participants' experiences and contextualizing learning to local environmental issues (UNESCO, 2005).

The NEEC programme as it stands, while conforming to ESD principles, is not explicitly referring to the Namibian environmental challenges. Unless the NEEC programme makes the link between Namibian environmental challenges explicit, the ESD vision of meeting these environmental challenges in Namibia will continue to be difficult to achieve.

5.8 CONCLUSION

In this chapter, I have presented the findings from the data gathered from the semi-structured interviews, semi-structured focus group interview, field observations and document analysis. The findings that I reported links to the research question of how the NEEC has shaped and informed the practice of the non-formal environmental education providers and how has NEEC responded to ESD. Further to this, I presented an analysis and discussion of these findings.

CHAPTER 6

CONCLUSION

6.1 INTRODUCTION

In this chapter, I present a critical and reflective summary of the study. The first section of this chapter reviews the purpose of the study and the motivation for the research. The second part of the chapter is a critical reflection of the research process and design and why I selected this particular design. This is followed by an overview of the main findings from the study. I discuss the lesson learnt from the study, followed by the discussions on the limitation of this study. The penultimate section of the chapter highlights issues that need to be addressed. Finally, I end this chapter by presenting areas for future research.

6.2 PURPOSE OF THE STUDY

The current state of environmental challenges in Namibia, the fragile environment as well as the unknown effects of global warming on the environment, increased the demand for environmental literacy in Namibia.

This study aimed at understanding how the NEEC programme responds to ESD and how the NEEC programme has shaped and informed the practice of the environmental education providers in the non-formal sector.

My interest in this study was prompted by the desire to provide a better tutoring system for the NEEC programme. As a tutor for the NEEC programme responsible for presenting the course, my responsibility is to present the course, guide and assess students. My concern was to find out whether the programme addresses the needs of the participants in the non-formal sector, which includes their ability to locate their practice in ESD and to meet the needs of their communities by addressing the environmental challenges in their communities.

This research enabled me to understand the participants' ability to translate the course philosophy and competencies in their professional practice

The findings from this research provided answers that inform my own professional context as a NEEC programme tutor. Therefore, I feel better prepared to provide meaningful assistance to the future students. This study also provided relevant insights into the future development of the NEEC.

6.3 OVERVIEW OF THE STUDY

In this section, I begin by presenting the research design and process and a critical reflection of the findings follows.

6.3.1 Research design and process

As shown in chapter one, I adopted an interpretive orientation employing a qualitative case study approach. This approach made it possible for me to engage and interact with my respondents regarding issues pertinent to my topic. The interpretive orientation is facilitated by the integration of three methods, which are, interviews, field observations and document analysis.

By using the set of data collection instruments that I have selected, I had the opportunity to understand participants' perceptions and experiences of translating the NEEC philosophy, competencies and aims into practice. The interviews provided a foundation for conversations with participants, through these conversations I gained in-depth understanding and relevant insights to respond to my research question. The interviews revealed that there were aspects regarding the participants' professional practice that I could not get from these conversations. I therefore used field observations to make a link between what participants say they do and what they actually do. To triangulate the two sources, interviews and field observation, I employed document analysis. This form of triangulation has increased validity and reliability of the findings for the study.

Through the process of data collection, I experienced some difficulties that could have affected the study had I not resorted to other strategies. The main problem I encountered was the withdrawal of one of the participants after repeated efforts to set a time with him

for the interview and visits. The focus group, an alternative approach I employed, consisted of the four EE centre tutors. It so happened that this group provided me with a wealth of valuable data.

6.2.2 Overview of the main findings

On the positive side, the study: revealed that participants engage in democratic participation effectively, all of them worked well with their groups in their context. Further to this, participants showed high competency in the particular areas of their profession with particular reference to environmental education. The participating EE providers revealed a sound conceptual understanding of the course content.

Certain key issues arose that need to be addressed by the NEEC. One important aspect is that of reflection. While reflection and reflexivity are acknowledged as central to their professional practice, it is not systematically used. Second, planning is necessary for effective practice; this study has shown that little attention is given to planning. Although these participants work in Rundu, they are not working together in any meaningful way, therefore the aspect of networking needs to be a future focus the NEEC. Another key weakness identified is that the NEEC curriculum does not make any explicit inference to environmental challenges to sustainability identified by Namibia at the WSSD in 2002, Participants, therefore, did not have any guidance in developing a deep understanding of these environmental challenges or how to relate them to their professional contexts holistically and logically.

These findings contributed to the lessons that I learnt which I discuss in the following section. These findings will be useful to the EE providers and NEEC curriculum developers to make informed choices in the future.

6.4 LESSONS LEARNT

From conducting this research, I learnt a number of things. This section reflects significant lessons learnt from the research process, including the topic researched, the findings as well as how I have developed as a researcher and a tutor through the study.

6.4.1 From the research topic

Through my literature review in chapter 2, I have learnt how important the historical EE background is in the global context and in the context of the situation under review. I have also come to the realization that the EE providers' practice in the non-formal sector in the Namibian context is under-researched.

6.4.2 From the research process

Through this process, I have developed a number of key skills as a researcher and I experienced new insights that have increased my confidence in this regard. Firstly, I have gone through the process of developing a proposal for relevant and meaningful research, selecting an appropriate paradigm in which to locate the study and designing relevant interview questions to carry out interviews effectively and get relevant data. I have learnt how to employ different methods such as interviews, observation and document analysis for triangulation to increase validity and reliability. Secondly, I have gained skills and experience on how to choose and review relevant literature regarding the area of study. Thirdly, I learnt how to conveniently and logically group ideas into a case study to provide a sound foundation for the structure of the dissertation. Lastly, I have gained insights into how to analyse data and how to draw informed conclusions.

6.4.3 From the findings

The lessons learnt from the findings include the realizations that:

- If EE initiatives in Namibia are serious about addressing environmental challenges, then we should explicitly raise their status in EE curricula across the entire educational spectrum and develop explicit guidelines on how to respond to these challenges.
- To contribute to DESD we need to be clear of what our aims are and what we are trying to achieve through various EE initiatives.

- There is a need for continual support for EE providers through networking and collaboration to create the desired impact in their fields and to ensure that incentives are provided for them to develop further.
- The beliefs and values that EE providers hold about the environment, influence what and how they practice their profession in their particular contexts. Therefore, EE programmes should critically engage with the values and beliefs of EE providers.

6.5 ISSUES TO BE ADDRESSED

Drawing on the findings of this study issues emerged that need to be addressed. These include:

- EE programme should be re-oriented to conform to ESD standards and provide explicit guidelines about responding to Namibia's environmental challenges identified at WSSD.
- EE programmes should focus their attention on developing EE providers' skills of reflection and reflexivity through developing their capacity for critical and strategic thinking.
- EE providers need to be aware the importance of proper planning, therefore professional development programmes should provide an opportunity for structured activities that develop planning skills.
- EE programmes should provide a better focus and explicit guidance on how EE providers should develop networking systems that will benefit them.

6.6 LIMITATION OF THE STUDY

This study has limitations that attributable to the size of the sample and the duration of the study. Therefore, the results cannot be generalized. Only six participants from three different professional practices were involved in the study and the study was conducted within a limited period. The vastness of the region in which the study was located linked

to time and resource constraints meant that the research had to be limited to only three different professional contexts, and this I feel has further limited the study. My inexperience in conducting research was also a limitation in this study. A further limitation of the study was the lack of literature on the development and implementation of EE programmes in the Namibian context.

6.7 AREAS OF FURTHER RESEARCH

Looking at how the NEEC programme has had an impact on EE providers professional practice, the study reveals that there are issues that need to be addressed. I therefore suggest the following:

- The use of portfolios in the NEEC programme
- How the choice of environmental responses (programme, learning resource or environmental curriculum) influence participants' practice
- The impact of planning on EE providers' professional practice

6.8 CONCLUSION

This study has revealed that if we are indeed to take EE initiatives seriously and view them in the light of the vehicles to respond to environmental challenges and contribute to DESD, then we need to re-look at how we support EE providers. The study reveals that there is a need to measure the effectiveness of EE providers' practice in order to support them with relevant skills and knowledge as a continual process and keep them aware of the new developments in the EE sector as they unfold. Therefore, EE programmes and organizations should strengthen collaboration in order to motivate EE providers at all levels.

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Appendix 1

INTERVIEW SCHEDULES: EXTRACT FROM THE PILOT INTERVIEW

Oshikoto Region

Northern Namibia

Enquiries:

Martina Namutenya (Interviewer)

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Dear Colleague

You are invited to answer the following questions through an interview

The primary purpose of this data is to:

- Inform the researcher (Mr. Martina Namutenya); and other stakeholders in education, of the diverse contexts in how Environmental Education has impact on non-formal practice.

Please be assured that this information will be treated confidentially and your name will not be mentioned in any documentation resulting from the data, without prior written approval given by yourself.

Date: 06 April 2008

SECTION 1. Professional Biography

Q1.

- 1.1** What kind of work you are currently doing and what position do you hold

At the moment I am an information officer and I am responsible for omusati region. The work that I have to do is collect information, produce, distribute information and make sure that the information is going through to the community. Actually I am collecting information for the people of Omusati region.

- a) How do you make sure that the information has reached the community?

We work hand in hand with Omusati regional council and we have a lot of stakeholders and support groups in the region. You know... and all this information on issue on HIV things. Everything is in order.

b) For how long have been at that position?

I currently just started. I have been just there for seven days.

1.2 a) I wonder if you can share with me the kind of professional qualifications do you hold which are related to your work?

I have a diploma in Public administration and I major in information science. That is why I get the job that I have. I also have a qualification that I will get for Namibia Environmental Education Certificate course. Otherwise I have other qualification like ICDL computers and others to mention few that is all.

b) When you mention that others, what actually are that other qualifications are you referring to?

I also have a certificate in Secretarial course and office procedure, so I can fit anywhere.

1.3 a) Could you please tell me your duty station and the kind of people you are working with?

In the moment I am in the job-training. At the moment I am in based in Oshakati but my duty station will be Omusati region regional office. We are working with community. I mean like here we are working with Oshana community. But in Omusati is where my duty station, so I will work with people in Omusati region.

b) Omusati region is a big region, where exactly will you be based? What town will you be working from.

I will be based in Outapi, is where the office will be, but I will be working with the community so.

1.4 What are the challenges and issues that you are facing everyday at work?

a) Although you are still new at your position, could you please tell me if there are any issues or challenges at your duty workplace?

Yes there is a lot of issues, our region or let say Namibia there are issues like HIV/AIDS, Malaria and we are know talking about cholera. All of this I mean we can tackle them when we as officials or what ever work hand in hand as I do with the community on how to prevent themselves or how to even combat these things. It is a real challenge. If we are talking about infrastructure which we do not real have enough?

I wonder if you can as well look at challenges at your work place or in your context that can block or hinder your potential achievement.

Eeahhh. I cannot really tell in the moment. If you now what to do then why should you let other things to block your work. If you know what to do you can always do it.

Q2. NEEC

2.1 How did you hear about the course and what motivates you to join the course?

a) I would like to ask you some few questions about the course that you registered and completed in 2007. First of all, How did you hear about the course and in fact what motivates you to join the course?

I never heard about before from somebody. I just saw it in the newspaper. At that moment I did not have any knowledge about the environment. I felt so in love with EE and the advert attract my attention. I real liked to work with the community before and I felt unfortunate for not having any information/Knowledge about EE. That was my chance; I always wanted to work with the community. Even the job that I had by that time requires me to work with the community, but the community have to come to me and not me going in the community. And it was a good chance for me to go and work with the community. I real like it from the first time I saw it in the newspaper, jaa.

b) You mentioned about the job you have before that requires the community coming to you, I wonder if you can share with me the kind of the job that you had before?

I was a librarian assistant. So most of the time I have to be in the office, because I was alone I could not go out. In fact I have to wait for the community to come looking for the information and I give them to the community. But it is not that I do not want to go out, but is that I have to be in the office and do other work and looking at that it will not allow me even if I wanted to.

2.2 What expectations do you have for the course before you actually started the course?

You know it was a bit difficult, according to the perception that I have I think I was just going to know about the environment. I did not know that I will go to the community; I think I just wanted to know at least about the environment. I wanted to know desertification, I wanted to know more about desertification, you know, hmm deforestation and others. I really don't know whether I was going to know too much, but that is what I really wanted to know.

2.3 What are your experiences of being a student of the course?

That is a very good question. I have been challenged by the course if not experiencing difficulties. Even though I do not believe in difficulties I believe in challenges. So I just have a lot of experience. I learnt that with NEEC you have to be hardworking. And you have to be team player. As with NEEC you will have to work with other colleagues. You can do it on your own. Otherwise you must be also

patient and cooperate with other people. That is the lesson that I learnt and the experience that gain being a NEEC student .

[I think I should ask for specific relevant examples here]

2.4 In what way do you think the NEEC programme has improved your understanding of environmental education?

It changed me. It changed my view I mean the other way round. It change the way of knowing the environment. In a way it was a way of developing. Could you repeat the question I think I did not understand it.

a) I was basically saying in what way do you think the programme has improved your understanding of EE and the environmental itself.

It is in such a way that I am able to differentiate between EE and environment. If we are talking about environmental education we are talking about a long process that is long process of learning that I did not know. Like I said if I go to the community I will be able to communicate with them. I don't think I understand the question very well?

b) Do you understand the concept environment better know before you join the course?

Oh yes. I now look at the environment as any surroundings. Before I only thought the environment were just animals, trees and others. I can differentiate a person is not environmental friendly or not.

Now I can see things in a different way form the other time before I join the course. It really taught me a lot.

[I am not so sure whether I get the kind of information that I want' my participant could not understand the question and I tried to scaffold it and it seems as I moved away from the focus.]

2.5 How do you see your practice (day to day) work related activities after you completed the NEEC programme?

a) Having involved in the course do you think you have improved in doing your work, do you think you have improved professionally. How do you see your practice? **(This is the question that I ask)**

Yes, I have real improved and that can be proved by someone else. [I should have asked a follow up question of what she meant by her improvement to be proved by someone else] I totally get a good understanding even in social life not just about the environment. And as I said now that my work is to work with the community, educate the community, inform the community now I can be able to deal wit the community. If I tell now I went to the camp holding the flood victims. I know I can get the kind of the information that I want from them. Btu hmmm... I cannot get it before. This course has improved me a lot really. And I can express myself now very clearly now.

2.6 Has the course helped you to carry out your daily practice at work more efficiently? In what ways? **[I did not ask this question. I see it similar to 2.5]**

.....

2.7 How do you incorporate/ integrate skills, knowledge and understanding developed from the NEEC into your practice.

Especially by working with community people, you have to use

methods and theory and policies and procedures. These things learn from NEEC, before I could not do it. Know that I have learnt about theories and methods I can use them on my daily activities. And if I can mention very well my main responsibility at the current job is to change behaviour through communication. And with theories that I learn from NEEC programme, I will be able to do that.

- a) You mentioned something very interesting here about theories and methods. Could you please share with me some of the methods and theories that you learn and you are now applying?

With the methods we have methods like video shows. And I will use that tomorrow and the show and tell also. With theories I usually use behaviourism and constructivism theories.

2.8 What aspects of the course do you think are relevant to you as practitioner?

I can say the whole aspects of the course are relevant. The whole course from the start to the end is very relevant. As I said I have to produce hhhmm.... To produce Omusati portfolio and that has to deal with producing and developing. And these are the things that we have done in the NEEC developing a fact sheet and everything. The whole course is really important in my work.

2.9 What do you find the most challenging aspect of NEEC programme?

Uuhhh.. That one I can say the implementation part I was a bit challenging and it needs somebody to do a lot. Not that it is difficult, but it needs a lot of time and of time for some to complete it. The implementation part it really, really need a lot of time and effort.

a) I wonder if I can take you back, you mention the implementation part being very challenging. What implementation part are you referring to?

We are talking about the NEEC, it is actually the implementation of the programme a that I did. I have decided to do a programme and I have to implement it. That one is a bit challenging because it needs a lot of time and a lot of hard working. It also involve a lot of hard working.

b) You mention something which is quite striking there, I am just wondering if I can take you back a step. What kind of a programme did you develop and on what issue?

You know when we were doing the course were asked to choose the issue in our community. I chose deforestation in our village likekele. So I developed the fact sheet and I have to develop a programme on that Issue. Just to shaw people how to stop deforestation in their region.

c) Did anybody help you in the implementation of this programme?

Yes. I worked more closely with my former colleagues in the NEEC programme. I work closely with my colleagues at work and the community people. I could not do it without their help .Because this things like I said it need a lot of team working They help me by developing the programme, planning the programme and then implementing it.

d) Could you say your programme was successful and why?

Yes. It was a successful one. I recently visited the place and the school looks so green from the trees that we planted. And i Heard people who were involved in the programme success. And some has even bought two trees and plant them at their house. They are trying to demonstrate what we have done during the implementation of the course. It is real successfully and this was my aim that everybody knows deforestation and will be able to demonstrate to the others. And other participants have already started. I think it will be working hand in hand

2.10 What aspects of the course do you find least/ less useful to you as a NEEC participant?

a) I mentioned at the beginning of the interview that the research is also aiming at further development of the NEEC programme. With this regard what aspects of the course do you find less useful?

I real cannot see anything less useful. To me everything in the NEEC is still useful. Eehh... there is nothing that I can think of that, is less useful.

2.11 Would you recommend a course to other professionals in different fields? Why?

a) As we are moving towards the end of the interview. I would like to know if you can recommend the course to other professionals in different fields and why would you do it?

As I have said, I mean, everybody saw the development on me and I don't think it is even me who should recommend them, it is just the way I develop, the way I grow up in terms of professional. That already shows people. I remember know people think when I just got this job now and they think it is because of NEEC, the hard working that I have been putting on last year so. Probably this course has to be taken by everybody who is interested and hardworking person. I real recommend it to anybody who is will to develop. I think it is a good idea if this course can be taken like a two year course or three year course. I mean it is real good course and it I doing a lot.

b) Finally, I would like to ask you if there is anything that you would like to share with me, that I could have asked you but I forget it in a way.

Not real that you have not asked the way NEEC look at it. When OI saw the advert I couldn't realize that is the course which is worth it like this. I though is just a those simple course. I think the way even the institution weigh the NEEC or the way it is market it is not enough. I think Polytechnic has to do something market it as a valuable course. I mean not everybody can seriously.....So, I think if that

can be considered, then NEEC courses can be just regarded just like other courses. Unless if there is a reason behind that, then I real do not know. It is real a good course and it is worth it.

c) Let me thank you very much for your worthwhile time that you gave for an interview. I Know it was worthwhile and to interview a past participant. Other people in the future might come for similar kind of help. Please continue doing the good work.

It is my pleasure Martin.

Appendix 2

1. Date of interviews and time

The interview was done on a Friday, 16 of May 2008 from 16h:30 to avoid jeopardizing her work schedule. It was an agreed schedule with Ms. Erna.

2. 1 Professional Background and responsibilities

Erna hold a diploma in project management and a NEEC certificate and a Namibian .

She worked as an environmental officer at DAPP tree planting and environmental education programme at Outapi Ombalantu from 2001-2008. Managing school environmental clubs under the DAPP programme in Outapi educational circuit. When asked how EE clubs fit in the planting programme the answer was "their activities were more on environmental issues, we thought of environmental degradation. It was therefore appropriate for us to teach tree planting to fight deforestation"

She responded to the kind of works she is doing as" I am now doing child aid project in Kavango region. It is a community project and it involves children and I am a project leader."

When asked to elaborate more on child aid project and its intentions the response was: "we are trying to educate the community to uplift their living standard, in health, hygienic and how to take care of orphans and vulnerable children of which the number is increasing from day to day. We are therefore trying to do this by means of helping them to establish community income generating projects such as vegetable gardening."

2.2 Course familiarization and publicity

When asked how she heard about the course her response was" I heard the course from a friend who knew that I was involved in this environmental education with school club. He

told me that there is a course that might be good for me to improve my knowledge and skills. He further told me that he saw the course advertised in the newspaper”.

3. Course expectations and motivation.

When asked to explain on what motivates her to get enrolled in the course her response was” what motivates me to join this course is the fact that I was involved with school clubs. I thought if I join the course it will enrich me in terms of knowledge and skills to run the clubs more efficiently”.

When asked about the course expectations, the answer was” I wanted to learn how environmental education is treated in our country. How EE works and also to understand the responding communities in different regions” she further stated that she wanted to learn environmental education approach, issues around the world and in the country and how to respond to them. That was some of her expectations she said.

When asked to what extent was the expectation met, the response was “I think all my expectations were met”.

When asked in what ways does she think her course expectations were met. She responded in the following ways:

“When I started running these environmental clubs, I have a problem of coming up with a plan of activities. Then when I joined the NEEC we were taught how to identify environmental issues or just any issue. After identifying we have to plan a response to the issue. My issue was HIV/AIDS. I then have to plan my activities that I am going to use to implement my response. So I learn how to plan activities.”

I think the detailed explanation of how her expectation was met was not really explicitly explained above but it is integrated through out the discussions.

When asked to explain whether there were any other aspects that were not her expectations, she responded that” If you listen very well I mentioned how environment was treated and how the community responded to environmental issues. But I did not mention anything about monitoring and evaluation that was not my expectations. I just find it there and I thought wow this is wonderful. This is very important to me.

4. Perceived value of the NEEC in the context of professional responsibilities

4.1 Perceived useful course content: Issue identification, response, planning and implementation and evaluation

When asked about why she singled out the aspects of Issue identification, response, planning and implementation and evaluation as important the response was ...

“ At first I did not have any idea about how to evaluate the programme. Then why I say it was important to me, it helped me even where I am standing now. I am evaluating my child aid programme with the educational approach that I learn from NEEC. In many cases when I evaluate the programme, I succeed and people will say wow you have experience can we learn from you”

4.2 NEEC Influence on the current professional practice.

When asked how the NEEC influence her current professional practice her response was as follows;

Whatever I do in my work I think of what I have done in the NEEC. For example the programme that I am currently doing, for me to implement it I gained experience from NEEC. NECC taught me that to implement a programme effectively, you need to A,B,C..e.g to motivate the community on how to involve them to identify issues. With child aid project we have issues affecting the community, we have to involve the community to identify those issues and plan together responses.

When asked to explain why it is important to include the community she said: Why is important to me is because these activities are not just for me who came to do the activities in that community but, I have to involve the community to make them feel the ownership of the programme and for them to develop themselves with confidence.

4.3 Success and turning points through NEEC

When asked about what major success did she receive from NEEC? She responded that evaluation was the major skills that she have gained and used it. However when she was asked to elaborate to what extent dose she involves others in evaluation, she pointed out that she always involve others in evaluation. She further elaborated that she involves others in evaluation by developing questionnaires to check how people involving in the programme itself understand the programme and what improvements and changes should be made.

She answered the question of understanding EE after completing the course in the following ways:

“I have changed. I started involving other people in my work and in the planning. Involvement of learners, teachers and community facilitated the load of work. I trained

learners how to be on their own if the teacher is not there and learners started taking responsibilities and the lead for the club. We developed environmental club cluster system, so far there are two out of five that I can say they are very successful”.

She further said that schools that were participating in the tree planting competition, under her guidance they all win the competition. She felt that it was the skills that she picked up from NEEC that helped her to guide these schools efficiently towards victory.

She further commented that she developed professionally and what ever she is doing now, she is doing it with the help of the NEEC. She emphasized that she always carry her NEEC materials with her so that if she get stuck she can look up again for information and refresh her self. Confidently she said, “With that understanding of NEEC I think I am on track”.

4.4 The NEEC course and improved EE understanding

When asked in what ways has the NEEC improved her understanding of EE, the reply was “ the NEEC course has improved my EE understanding. I started involving others in the planning of EE responses and train learners to be on their own and lead others when I am not there, or when their teacher leader is not around.”

She further added that with the child aid programme, when she has meeting with the community usually for the introduction of the child aid programme, she asks the community what they think should be done. And they are then involved in the activities development and discussion.

When asked to clarify the importance of discussion she responded that discussion is important to implement the activities and plan the activities very well. Involvement of discussions with the community is important in EE. I cannot just go there and tell them this is what we are doing and how you should do it.

5. Challenges

When asked to share her experiences on the challenging aspects of the course, she responded that she will really would love to share her experience on the challenging part of the course. She said "The planning and development was very good, but the implementation of the programme was very challenging. As I said I worked on HIV/AIDS response, to implement it I have to invite learners as my participants". She continued by mentioning that "the one who came where even challenging me with questions like how does HIV/AIDS fits in environmental issue and who told you to develop a programme". Some participants who were invited for the meeting they did not turn up. She said that the time was very short and may be she did not plan very well.

However when asked to explain what she means by implementation her response was" I developed the programme, to implement it I have to invite people to come and witness it, be part of the programme through participating. People should know that Johanna has developed a programme and this is its intention and how it works".

A further question was asked for Johanna to clarify by what she meant by a programme. Her response was" in NEEC the initial thing is to identify an issue, when you identify an issue you then have to plan for a response which can be a programme, resource and another one I *cannot* remember" She further said " I am bit confused I don't know how to put it, but I was raising awareness with the programme about HIV/AIDS through dramas, songs and poems".

5.Rationale for a Choice of a programme

Her response to why she choose to work on a *programme* and not a curriculum or a resource was ,"I find it easy to develop a programme. Although we learn about curriculum and the resource, I find it difficult to plan a curriculum and a resource. I thought of LSM and the printing. A programme was an easy response for me to implement. I already have people involved in the programme of environmental club that I was running for schools."

When asked to clarify how does she finds the programme as an easy way of conveying message she said" to convey the message to my participants through drama or poems, learners write poems and poems can then be read to everybody. Sometimes they write posters and posters are displayed and people can look at them and the message they are spreading. With a programme you can reach many people".

6. Reflection on programme implementation

When asked how the response of the people was after implementing the programme she said" the response was very good, it was also challenging in a way because people showed interest and wanted to have similar programme run again.

When asked to whether she made some follow up to see whether people understood after the implementation she said" I did this NEEC in 2005, but till 2007 people were like continue with the activities we created in 2005. Then it gives me a clear picture that people understand the message". When asked to clarify about the activities that the schools are doing she said" there is a programme that I called youth for hope club and in this club we have awareness activities intending for learners to help others. These awareness activities include HIV/AIDS and cleaning campaign. Other activities are vegetable garden & tree planting."

She furthered added that there are many students who are in Youth Hope Club. When asked to explain if there is any reason in particulars why there are many students in youth hope club she said" I think they are finding HIV/AIDS as a challenge in our community. Teachers are encouraging learners to join and learners themselves they do not want to be infected with HIV/AIDS, therefore they are taking it seriously. That is why there are many learners in the club, because they want to send message to others."

Course Recommendation

When asked whether she can recommend the course to other professionals in different fields, she replied that,

" I will recommend the course anyone capable of doing the course. The course is not only tackling EE issues, built the skills and knowledge of implementation, planning, monitoring and evaluation can be used elsewhere. Everybody can learn them, like those people who are working with community, community worker in community development activities; they really need to do the NEEC, because the approach in NEEC to approach the community is really good and if somebody is using it she will never fail."

When asked whether she has any specific recommendation that she wants to make to the general course improvements she said:

" This course is being offered as a one year course, but it is not a small thing to be held in one year. I think this course should be either for two or three years. We cover everything in one year, but things are just squeezed in one year. Participants are just doing things fast and they are not really learning. They are not putting themselves there. They are just doing the assignments to get the points. Therefore we end up not improving our skills. As it was supposed to be".

Appendix 3



REPUBLIC OF NAMIBIA

MINISTRY OF EDUCATION

PROGRAMMES AND QUALITY ASSURANCE

Tel: 264 61 2933200

Private Bag 13186

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Windhoek

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NAMIBIA

Enquiries: MN Shimhopileni

9 April 2008

File: 11/1/1

Martina Namutenya
P. O. Box 1889
Ondangwa
Namibia

Dear Sir

SUBJECT: PERMISSION TO DO EDUCATIONAL RESEARCH

Your letter requesting permission to do research as part of the post-graduate studies for a Masters of Education Degree, through the Rhodes University, Grahamstown, South Africa, has reference.

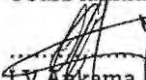
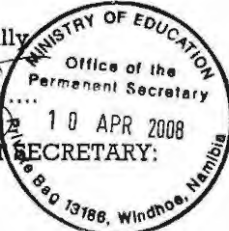
Kindly be informed that the Ministry of Education recognises your effort and the possible contribution your research initiative can make towards successful curriculum implementation for education in a broader sense.

This letter grants you permission to do the required work in terms of consultations, interviews and other related interactions at both school and regional office levels.

Kindly note that the Ministry of Education would expect from you to deposit copies of you published work in the respective libraries and resource centres. Also ensure that your research activities do not interfere with normal school programmes.

Best wishes for success in your academic endeavour.

Yours faithfully


V Karkama
PERMANENT SECRETARY:


Appendix 4

INTERVIEW FOR STUDY OF NAMIBIAN ENVIRONMENTAL EDUCATION CERTIFICATE

Oshikoto Region

Northern Namibia

Enquiries:

Martina Namutenya (Interviewer)

Oshilulu Combined School

P.O.Box 887, Ondangwa, Namibia

Tel: +264 65-243041(w) / Tel:+264 65 245758

Fax: 09264 65-245758

E-mail:mnamutenya@yahoo.co.uk.

Dear Colleague

You are invited to answer the following questions through an interview

The primary purpose of this data is to:

- Inform the researcher (Mr. Martina Namutenya); and other stakeholders in education, of the diverse contexts in how Environmental Education has impact on non-formal practice.

Please be assured that this information will be treated confidentially and your name will not be mentioned in any documentation resulting from the data, without prior written approval given by yourself.

Date:

SECTION 1. Professional Biography

Q1. Please provide the following details concerning your professional background.

1.1 What kind of work you are currently doing and what position do you hold	
---	--

1.2 Your Academic qualifications	
1.3 Your professional qualifications	
1.4 For how long have you been at the same position	
1.5 Could you please tell me your duty station you and the kind of people you are working with.	
1.6 What are the challenges and issues that you are facing everyday at work?	

Q2. Please answer the following questions about NEEC

2.1 How did you hear about the course and what motivates you to join the course

2.2 What expectations do you have for the course before you actually started the course?

2.3 What are your experiences of being a student of the course?

2.4 In what way do you think the NEEC programme has improved your understanding of environmental education?

.....

2.5 What changes did you notice on your professional practice after you completed the NEEC programme.

.....
.....

2.6 Has the course helped you to carry out your daily practice at work? In what ways?

.....
.....

2.7 How do you incorporate/ integrate skills and understanding developed from the NEEC into your practice. (Prompt for examples.....)

2.8 What aspects of the course do you think are relevant to you as practitioner? And Why

.....
.....

2.9 What do you find the most challenging aspect of NEEC programme?.....

.....

2.10 What aspects of the course do you find least/ less useful (Prompt for elaboration)

2.11 Would you recommend a course to other professionals in different fields? Why?---

Appendix 5A

Personal Work plan	
Period:	April 2008
Directorate:	Forestry
Station:	Rundu

Date	Activity	Resources	Responsible
07.04.08	Report writing (monthly, quarterly)	Office materials, sub reports	JM
08.04.08	Report writing (monthly, quarterly)		
09.04.08	Report writing (monthly, quarterly)		
10.04.08	Joint planning meeting CBNRM	Conference room	
11.04.08	Report writing (monthly, quarterly)		
12.04.08	Community meeting at Hans Kanyinga CF on block permit	transport	JM
13.04.08			
14.04.08	Attend interview for a leader laborer post	Boardroom, questionnaires	JMS,HL, HA, JI, FM
	Attend a consultative meeting on power situation in Namibia at KRC auditorium room as per invitation	transport	JM, KRC
15.04.08	Attend Stefan's handing over workshop		JMS
	Meeting with Rolf on CFN activities		JMS, HL, JM, RK, SR
16.04.08	Katope timber harvesting monitoring	transport	JMS, JM
17.04.08	Attend the interview for DVS at Rupara	transport	
18.04.08	Office work -attend to finance books		JMS, JI, JI
19.04.08	Meet with the headwoman for Ncamagoto on timber issues	transport	JMS, RK
20.04.08			
21.04.08			
22.04.08	Prepare the training materials	Flipchart, marker	JMS

	on basic beekeeping	pen	
23.04.08	Prepare the training materials on basic beekeeping	Flipchart, marker pen	JMS
24.04.08	Community training on basic bee-keeping	Transport fees, meals, cocky pen, boardroom	JMS
25.04.08	Community training on basic bee-keeping	Transport fees, meals, cocky pen, boardroom	JMS
26.04.08			
27.04.08			
28.04.08	Attend Quarterly meeting for community forests	Office materials	JMS, JM, RK, HL,
29.04.08	Monthly report writing	Office materials	JMS
30.04.08	Monthly report writing	Office materials	JMS

Appendix 5B

DAPP CHILD AID, KAVANGO REGION

Weekly Plan

Name:

Month: July 2008

Week: 27

Day	Time	Activities
Monday	0800 – 13h00	Visiting Mupini Combined School, to give the lesson on HHYC
	14h00 – 17h00	Visiting Tuguva Combined School, to give the lesson on HHYC
	17h00 – 19h00	Travel Back from Tuguva to Rundu
Tuesday	0800 – 13h00	Giving the leasons on OVC Programme at Kasivi village
	14h00 – 17h00	Giving the leasons on OVC Programme at Sinzogoro village
	17h00 – 19h00	Travel back from Sinzogoro
Wednesday	0800 – 13h00	Attending the OVC village meeting with volunteers at Kayirayira village
	14h00 – 17h00	Vising the Kahenge combined school, to give lessons on HHYC
	17h00 – 19h00	Traveling back from Kahenge
Thursday	0800 – 13h00	Vising the Mangeti combined school, to give lessons on HHYC
	14h00 – 17h00	Vising the Mururani combined school, to give lessons on HHYC
	17h00 – 19h00	Travel back from mururani to Rundu HHYC
Friday	0800 – 13h00	Reporting on the weekly field visit and all the project activities
	14h00 – 17h00	Reporting on the weekly field visit and all the project activities
	17h00 – 19h00	Sending report to the Country Office
Saturday	0800 – 13h00	Planning for week 27
	14h00 – 17h00	Doing Accounting and administration
	17h00 – 19h00	Sending the next weekly plan to the country office

Appendix 6

Republic of Namibia
Ministry of Agriculture, Water and Forestry
Directorate of Forestry

Prepared by: _____ Date submitted to RFO: _____

MONTHLY DISTRICT REPORT: D1

Criteria/ NDP Result/Target	Indicator (from C&I, NDP; DOF Annual Work Plan)	Verifier (parameter)	Unit of measure	Total 2nd Quarter 07	Cumulative: previous months	Year to date: Cumulative
1	2	3	4	5	6	7
1.2 Laws and regulations known to actors and effectively enforced.	1.2.1 incidence of illegal cutting, harvesting, transporting, marketing and exporting of forest products	number of fines given	number	1		
1.2	1.2.2 number of new cases	number of new court cases	number			
1.2	1.2.3 number of legally processed cases	number of court cases completed	number			
1.2	1.2.4 Forest products removed from the forest	number of harvesting permits issued	number	68		
	1.2.4 Forest products removed from the forest	number of transport (own use) permits issued	number	63		
	1.2.4 Forest products removed from the forest	number of transport (commercial) permits issued	number	174		
	1.2.4 Forest products removed from the forest	number of market permits issued	number	40		
	1.2.4 Forest products removed from the forest	number of export permit issued	number			
1.2	1.2.5 Forest products removed from the forest	quantity of products removed: wood (timber)	m3			
1.2	1.2.6 Forest products removed from the forest	quantity of products removed: firewood	tonnes	67.5		
	1.2.6 Forest products removed from the forest	quantity of products removed: charcoal	tonnes			
	1.2.6 Forest products removed from the forest	quantity of products removed: construction poles	numbers	2780		
	1.2.6 Forest products removed from the forest	quantity of products removed: droppers	numbers	2800		
	1.2.6 Forest products removed from the forest	quantity of products removed: woodcarvings	numbers			
1.2	1.2.7 Forest products removed from the forest	quantity of products removed: roots	tonnes			
1.2	1.2.8 Forest products removed from the forest	Area of land cleared	ha			
1.2	1.2.9 Forest products confiscated	quantity of products confiscated: wood (timber)	m3			
1.2	1.2.10 Forest products confiscated	quantity of products confiscated: firewood	tonnes			
1.2	1.2.11 Forest products confiscated	quantity of products confiscated: charcoal	tonnes			

Signature of the submitting DFO: _____

Approved by RFO (signature/date): _____

Appendix 7

Pre-environmental education course.syllabus.

TOPICS	CONTENT	AIDS/MATERIALS	BOOK	MONTH
	objectives, value, issue, risk responses under four environmental educations Dimension	cookies (group work)		
Introduction to assignment writing and essay writing (pre-course assignment)	Assignment writing skills, Assignments structure/format and process.	Flipchat, cookies Draft assignment handout and assignment format handout to be distributed to the participants	1	1 st Month
Introduction to mini portfolios	What is A mini portfolio, what are the goals and purpose, value, how is portfolio organized and what should portfolio contain.	Flipchart, cookies, Poster, Miniportfolio format handout.	2	2 nd Month
Introductions to the EE approaches.	Different method of theories in environmental education and its application.	Flipchart, cookies, poster. (Group work)	2	2 nd Month
Introduction to EE project/ program	Different between projects and program, stage in project/program development, implementation, monitoring and evaluation.	Flipchart, cookies, poster. (Group work)	3	3 rd Month

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09:36

15-07-08

Appendix 8

Second intake

11-06-08

Thursday topic

1. Define of environment
2. Explain ~~the~~^{give} example of problem, Issue & Risk.

01-07-08

Review on previous lesson
by one participant

Reflection by teachers what was
the workshop

Environmental is a broad word, we normally refer to all animal, plant, water, soils, man-made like ^{infrastructure} like railway, transport etc., include people.

As environment as has greatly expanded we realise that our environment is made up with four dimension.

1. Social = is about how people survive and where they live which might change the environment.
2. Economic = is all about how we use our resources by provides jobs, money and what impact can bring on environment.
3. Political → is all about who decides how resources are used e.g. war, legislation, rule etc.

today lesson

30/07/08

In a group

Identify your local environmental issue in the area you are now? Explain why you ~~using~~ ^{have} chosen it to be as an issue.

Try to outline your aim & objective in order response to this issue

Environment is divided into ~~to~~ four

- ~~feature~~ environment / biophysical

- social environment

- economic environment

- political environment

environmental

What are the ^{reason} greater for increasing issue and risk

- Greater pressure on resource - eg people are demanding on resource e.g. mining which broad war between Iraq and Mexico, Iran

- war - conflict

- Ideas of progress → bias chief

Appendix 9 A

Time	Activity	Description	NEEC competency	Comments
11h:20- 11h:30	Prayer			
11h:30 – 11h:45	Project ideas	Description of the idea about the project	Participation, access	Presenters encourage participants to participate in local language. Participation, flexibility and access.
11h:45 – 12h:30	Questions and answer method	Question based on the ideas of projects discussed	interaction	Participants participate and interact with presenters and each other
12h:30 – 13h:00	Information session	Discussion from participants and presenter about who qualify to be OVC if bears two	participation	
13h:00 - 13h:20	Questions and answer methods	Birth certificate issue. assistance should be seeked from the regional council with the help of the Child	Participate, reflection from past experience	Discussion

		aid project staff		
13h:20- 14h:00	Land for the garden	Headman gives suggestion according to piece of land in his community not being in use.	Decision, participatory decision	
14h:00 – 14h:20	Selection of committee	The group selected 25 participants to become members of the committee for mapping the activities and decide on dates for the next meeting	Access to knowledge, democracy, Participation.	Use of local language for participation. Democracy and involvement of others in decision making. The selection of the committee was done by meeting participants, there was no any influence from the child aid project staff.
14h: 20- 14h: 40	Setting the date and venue for the meeting	The selected group decided on the date and venue for the meeting. The date was agreed to be 5	Presentation skills	

		July 2008.		
14h:40 - 15h:00	Brief summary	Johanna gives a brief summary of the workshop and the importance of what was discussed		
15h:00	Vote of thanks	One of the headman thank the presenter and everybody who was there	participation	The participation has more strength when said by a headman.
	Discussion and reflection on the meeting	Volunteers who were present discussed with other presenters about the meeting. They focused mostly on the committee selection, birth certificate issues and land for the garden	reflection	Nothing was put on paper. Johanna agreed to write a report about the meeting

Appendix 9 B

Field note Observation reports

Meeting with the regional town council and regional council

Date: 20 June 2008

Venue: Okavango Regional Council office

Time: 10h: 00- 12h: 30

Jake presented a power point presentation of a quarterly report for the progress, challenges and issue of the Directorate of Forestry Okavango region. At this meeting each line ministry, parastatal and other NGOs which are involved in the up-liftment of the livelihoods of the Kavango region was represented.

Time	Activity Description	Comments	Indicators
10h:00 -11h:00	Jake gives a Power point presentation of the directorate of Forestry progress for the quarterly term.	Professional development of power point use.	
11h:00- 11h:45	Questions, answer methods and comments and suggestions from participants and Jake	Applied NEEC approach of presentation	Participatory and reflections

After lunch we came to the office where we spend the rest of the day. Below is a summary of activities that was done during the time we spend in the office

Time	Activity description	Comments	Indicators
13h:00- 14h:00			
14h:00– 14h:45	Organizing and get things done around the office , but using the		

	phones to give instructions It was done over the phones		
14h:45-14h:56	A client came with a complain of his things confiscated. He was involved in illegal harvesting of wood. He brought a letter from the lawyer. And he urges to be helped as soon as possible. Mr. Jonas told him to wait as he so wish. He waited outside.	The interaction is enhanced by discussions.	
15h:00 – 15h: 06	Mr. Jonas asked a colleague about a letter which a client brought and the colleague replied that she did not receive it. He took the letter to the colleague		Participation (through discussion,
15h:00- 06-	Excused	Not in the office or with me. Private time.	none
15:00 -15h:22	Staff members come in the office looking for Mr. Jonas and he was not there. They were able to look for what they want from his computer.		
15h:56 -16h:00	Came back to the office and follow up on those who were looking for him to assign cars and give approval of other items needed for the weekend.		
16h:00 -16h:05	Give instruction for the office inventory. And they discuss with the care taker about the item in the room		Participation.

	that some of them does not belong to the office. The care taker need to update the room		
16h:24 -	The client comes back in the office and they start discussing in a more friendly way. He was told to come back tomorrow around. They agreed.		Participation {discussion}

Appendix 9 C

Time	Activity description	Comments	NEEC Indicators	Follow up questions
9:41 – 9:45	Introduction and logistics: The tutors informed the participants that the new intake is combined with the March intake because of the days which the March intake missed.	There was no input or participation from the participants. Reflection form the previous day is not done		
9:45- 9:55	The tutor told the students to form groups and he was writing on the flip chart for the activities.			Why did you group them in groups and specifically four groups. How does group works facilitate group work.
9:55 – 10:16	Tutor gives instructions in a flipchart about what the group should do. Four Issues, deforestation and littering Some tutor went to some groups but not to all of them to see if they are done with the activities and not necessary to help them.	Participants work in groups for the activities given to them. It might have helped to go from group to group form time to time to see whether they are on track	Participation in groups and interaction between tutors and students. Social constructivism theory ideas are being exercised.	

		of what given to them to discuss.		
10:16- 10:31	<p>Group reporting. Group one They reported on deforestation. Looking at its nature, causes, and effects</p> <p>Causes: shifting cultivation,</p> <p>Effects: global warming, diseases</p> <p>What should be done: use of alternative building materials, use solar energy</p> <p>Participants ask questions focused on the presentation</p> <p>Tutors comments and emphasise on the use of contextualizing the issue.</p>	Tutors emphasized on the focus of context when reporting the issues.	<p>Participation in groups participation.</p> <p>Issue is contextualized during discussion</p>	<p>Where is the voice of the tutor? How is it coming through?</p> <p>What is the importance of contextualizing the issue.</p>
10:32 – 10:53	<p>Group 2 present their issue of they discussed</p> <p>The group focused deforestation.</p>	The group mentioned the effect of deforestation as wind erosion	<p>Critical thinking appeared during questions and answer. But not strong in terms of its application</p>	<p>Why is it important to give two groups the same issue to discuss and report on. Why do you look specific at two issues. (Michael)</p>

10:53 -11:10	The 3 rd and 4 th group presented littering as an issue; They focused on causes, effects, and responses. One tutor gives comments with regards to tender of municipality with regards to waste management.	Tutor does not go beyond the nature of the issue. And they do not give critical questions and comments.	Participants draw from the life experiences to give examples.	Is it important to give local example. Why? (Michael;)
	Question on answer	Only at this slot that one tutor comes in strongly with guidance		
		There was no proper round off made with regards to group presentations. It might have shown some strength.		
11:10 -11:16	Tutor engages participants In discussions about the four dimensions of the environment.		Participation, reflection form what is already learned form previous lesson.	Why did you solicit information from individual? (Renathe)
11:16-11:47	Each group should draw from their experiences and work on one dimension each, namely: political,	The explanation given by the	Presentation skills	How do you find it giving instructions

	biophysical, economical and social.	tutor not clear.		verbally. (Renathe)
11:47- 11:52	Tutor make a general conclusion on the day's activities. He started with issues and moved on to the dimension of the environment. He placed a strong emphasis on the usefulness of the biophysical with regards to the life support system.	It should have made more strength and great impact if involved participants.	Draw threads together and reflect on what was learnt	How do you assess that participants have learned something what was laernerd/.what you have taught them

Appendix 10



KAVANGO REGIONAL COUNCIL

Tel: (061) 266000
Fax: (061) 255036
Eng: J.J Domingos

P/Bag 2124
RUNDU
Namibia

17 June 2008

Head of Dept.
Dept. of Forestry
RUNDU
Namibia


Dear Sir/ Madam

**REMINDER: INVITATION TO ATTEND A QUARTERLY MEETING WITH THE
KAVANGO REGIONAL COUNCIL**

1. Reference is made to our letter dated 21st may 2008 regarding the subject matter.
2. You are hereby reminded that the quarterly meeting will convene on the 20th June 2008 at 09:00 in the Kavango Regional Council Board Room, Rundu.
3. Kindly prepare your presentation on a Capital Budget as per attached sample and maximum of 20 minutes is allocated for presentation.

Thanking you in advance for your usual cooperation.

Yours faithfully


Mr. S.H Kantema
Chief Regional Officer

All official correspondence must be forwarded to the office of the chief regional officer

Appendix 11

Pre-environmental education Certificate (PEEC)

05 /July 2008

Topic	Main activities	Resources	Responsible person
Welcoming remarks/introduction of the guest and program.	Welcoming of guest and students to feel free in participating and contribute to the lessons.	Flipchart and cookies	Mr.Phillemon Joseph Secretary)
Introduction	Introduction of the guest and program.	Flipchart and cookies	Miss .Renate K.
What is environment?	. Environmental issues, causes and responses.	Flipchart and cookies	Miss .Renate K.
Environmental Dimension	How does the four environmental dimensions interact. Student should be in four groups and each group should discuss one dimension and present to the others.	Flipchart and cookies	Mr.Micheal
Comments		Flipchart and cookies	Mr.Martin. Student tutor in training and students
General question	Student should ask question related to the course or sessions e.g. admission at polytechnic of Namibia and Mr.	Flipchart and cookies	Students
Answers	Martin will be responsible to respond where possible only.	Flipchart and cookies	Martin N.
Closure			Mr.Michael.

