

The teaching of Environmental Studies in grade four with special reference to Man'ombe circuit

by

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**DEDICATION TO MY LATE GRANDMOTHER N'WA-MGWAMBANA
NORIA MASIYA**

May her soul rest in peace



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ABSTRACT

The mini-dissertation was conducted as an effort to investigate how Environmental Studies is treated in grade four. Through the combination of an in-depth literature study and focus group interviews with learners, educators, principals and the area manager, the purpose was to find out what their views and opinions were, concerning the issue under investigation.

In this study, the participants were selected from four schools (learners, educators and principals). I also interviewed the area manager of Man'ombe circuit. The qualitative research design was used because it enabled the researcher to pursue multiple methods of data collection in order to explore the focus of the inquiry. Qualitative research is more concerned with understanding the social phenomenon from the actor's perspective through participation.

The methods of data collection used included in-depth and focus group interviews. Through these methods, a deeper understanding and clarity concerning the problem investigated, were gained. New insights were also gained concerning the educators and learners of Environmental Studies.

The important contribution to the study is that it has encouraged learners of Environmental Studies to develop skills, values, knowledge and social participation as well as to attain values and skills that contribute to a sustainable environment.

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CHAPTER ONE

INTRODUCTION, PROBLEM STATEMENT AND OVERVIEW OF THE STUDY.

1.1 INTRODUCTION

Environment refers to the world around us. According to the Concise Oxford Dictionary (1992: 392), environment refers to physical surroundings and conditions, especially as affecting people's lives. It starts with attitudes, heart feelings, values and personal worldviews.

Education is a lifelong process in which knowledge is shared, and constructed skills and attitudes as well as behaviour are developed. "Education is the complete process of bringing up the child, a process of help and guidance towards intellectual maturity" (Engelbrecht and Lubbe, 1977:99). Gunter (1986:12), defines education as a "deliberate, purposeful, systematic and responsible intervention by an adult in the situation of a child by his assistance, supporting and guiding accompaniment of the latter on his way to adulthood in the true sense, which is worthy of a human being, as the goal". Environmental Studies is an approach that is aimed at developing attitude, skills and behaviour (TED, 1986: 01). As a result the teaching of Environmental Studies should ultimately be aimed at solving problems of the environment.

In this section the background of the problem, research questions, research aim, claim and research plan will be discussed.

1.2 BACKGROUND OF THE RESEARCH

The new political dispensation in South Africa makes a need for a paradigm shift in the education and training system inevitable (Department of Education, 1997:30). People moved away from the old school of thought where they were denied access to opportunities to gain skills and experience necessary to develop them. However, in some subjects the curriculum of the past is still existing and taught the same way as before. Widespread criticism of the existing curriculum in South Africa can be viewed as the basis for the continual review of curriculum (Department of Education, 1997:43). For example, it appears as if some educators still do not give learners chances to explore, chances to participate in environmental issues, nor

opportunities engaging them in problem solving skills. The teaching of Environmental Studies is no exception, as some of the above mentioned problems still exist.

The school is an important area of a child's development, and thus has a natural role in Environmental Studies. It can also be defined as an important educational institution that creates a unique teaching-learning situation and caters for all education needs of the community. Environmental Studies is currently implemented from grade one up to grade four. According to the Environmental Studies syllabus (TED, 1986:2), Environmental Studies in grade four incorporates aspects of subjects such as Geography, History and Natural Sciences. Environmental Studies is firmly based on the principles of proceeding from the known to the unknown, and forms the best introduction to the study of these subjects mentioned above. One of the main aims of the Environmental Studies is to lay foundations for the study of the above-mentioned subjects in later grades.

Grade four was chosen as the focus level for this study, because in this grade learners know how to read and write, and are starting to become more constructive in asking questions. In addition to that, environmental issues have to be treated in primary education – treating them through the child's interaction with the environment. According to Taylor (1987:16), education has to underpin community action, which must be future orientated and worldwide responsibility. There should be a focus on current and potential environmental situations while taking into account the historical perspective. Grade four is also chosen because the scope and content of Environmental Studies as a subject is determined by the point of view that in this grade level the young learners must learn to know and understand their environment in its widest sense. The scope of the study is therefore learner's social, political, economical and scientific technology. According to Van Rooyen (2000), the biophysical should be our starting point in relation to the other dimensions (political, social, scientific – technological and economic) of the environment and the environmental crisis.

According to Van Rooyen (2000), the teaching of Environmental Studies is not treated the way it was supposed to be. The reason differs from one school to another. In some schools, the aims of teaching Environmental Studies seems to be a matter of adding on to the number of subjects already existing. As an extra subject, the educators give themselves less time to teach and can become even less serious about it. In addition to the lack of interest, educators also appear not to be fully qualified to teach this subject. Being under qualified means being uninformed.

1.3 PROBLEMATIZING THE RESEARCH QUESTIONS

The study is aimed at addressing the following questions formulated from the research problems:

What are the educator's perceptions towards the teaching of Environmental Studies in grade four with special reference to Man'ombe Circuit?


What are the learner's attitudes towards Environmental Studies in Man'ombe Circuit?

What are the Government and non-Governmental organizations (NGO's) doing to support Environmental Studies?

1.4 RESEARCH AIM

The formulation of the research questions led to the next step, namely, stating the research aims.

The aims of the research are to:

- 
- gather information about educator's and learner's perception towards Environmental Studies.
 - reflect on the meaning of the information gathered.
 - arrive at evaluated conclusions, and put forward an interpretation of the information to the relevant institutions (Government and non-Governmental organizations).

1.5 RESEARCH CLAIM

My claim is that good teaching should be directed towards helping learners to discover their own potential, to build on to it and to have confidence in it. I believe that the positive attitude towards the teaching of Environmental Studies plays an important role. The type of teaching required is one which is related to environmental sensitivity, knowledge, problem-solving skills and values clarification for every age. The teaching of Environmental Studies should consider the biophysical as the starting point. Van Rooyen (2000) warns that any attempt to ignore the

biophysical would distract our understanding of environmental issues. Special emphasis should be on environmental sensitivity.

Last but not least, the monitoring by the department and good qualified educators could bear good fruit in developing a positive attitude.

1.6 SAMPLE

The target group for the study will comprise four primary schools, learners, principal, educator, and the following in Man'ombe Circuit, that is:

Learners	: N = 30 per school
Educator	: N = 01 per school
Principal	: N = 01 per school
Area manager	: N = 01
Curriculum designer	: N = 01

1.7 RESEARCH METHODOLOGY

For the purpose of this study I will employ three data collection methods. These are :

. Observations

I will observe how Environmental Studies is treated in grade four in the primary schools in Mano'mbe Circuit.

. Interviews

I will interview thirty learners, one educator and one principal per school as well as the curriculum designer and an area manager.

. Documents

I will also consider different official and unofficial documents, which deal with the policy and implementation of Environmental Studies.

1.8 CLARIFICATION OF CONCEPTS

Some concepts used in this study may not mean the same for the writer and the reader. To avoid this misunderstanding, hereunder follows a brief outline of the definitions of essential terms used in this research.

1.8.1 School

School is an educational institution that creates a unique teaching – learning situation and caters for all education needs of the community. Duminy and Steyn (1983 :339) define school as “An organization or institution in a society with the particular function of doing educative teaching”. With the above statement, a school is established with the purpose of meeting the demands of the specific society or community in which it is situated.

1.8.2 Teacher/Educator

Teacher /educator is a person who follows the profession of teaching, i.e a profession of imparting knowledge, skills and attitudes to others with the intention of achieving learning. He/She is a person or medium through whose influence learning is affected. Thus, without the educator, education and teaching are dead.

1.8.3 Principal

A principal is “the administrator charged with the formal leadership responsibility at the building level” (Monaham,1982 : 289). The principal manages the school as a whole.

1.8.4 Curriculum Designer

A curriculum designer is a person responsible for drafting the curriculum for a specific grade.

1.8.5 Area Manager

He is a person appointed to examine and report on the working of some areas or institutions. For the purpose of this study, he checks what teachers or educators and learners do at school.

1.8.6 Department

The office of education primarily concerned with collecting and disseminating statistical data on the status of education in the various areas and territories.

1.8.7 Curriculum

Curriculum is considered as the reconstruction of knowledge and experience systematically developed under the auspices of the school (or University), which enables the learner to increase his or her control of knowledge and experience. In line with this, Oliver (1976 : 9), view curriculum as “planned learning outcomes for which the school is responsible”. Oliver (1976 : 9) perceives curriculum as “a plan or programme for all the experiences which the learner encounters under the direction of the school”.

Longstreet (1993: 53) view curriculum as “the result of the interaction of objectively developed plans for school study with the backgrounds, personalities and capacities of students in a transactional environment created by the teachers for the benefit of the students as well as for the better implementation of the plan”.

Messick (1992: 57) emphasised that curriculum must evolve and change to account for new conditions of society and differing needs of today’s young people. “It is a concept which denotes all the activities which constitute a teaching and learning programme that is in a course of study” (Van der Stoep, 1984: 204). In conclusion, curriculum entails all the formal and non-formal experiences under the guidance of the school. It is the sum of all experiences, which include aspects that directly or indirectly influence the learning process (Van Rooyen 2000).

1.8.8 Education

According to Duminy and Steyn (1983: 328), education is defined as the action or process of educating or being educated, the intentional and acceptable influence of someone, which has an enhancing effect on others. Education is especially concerned with the positive formation of a moral character and the development of the entire personality of the emerging adult.

1.8.9 Environmental Education

According to (Van Rooyen 2000), environmental Education is an approach to education that develops in man an awareness of:

Natural aspects (water, air, etc)

Building aspects (human altered landscapes)

Spatial aspects (the elements of location, distance, density, direction, and variation in the environmental)

Social and cultural aspects (individuals and groups, technology, religion, institutions, economics, aesthetics, demographic and other human activities)

According to Sumner (1991: 54), "Environmental Education is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems.

1.8.10 Attitudes

According to the Concise Oxford Dictionary (1992:70), attitude is a settled opinion or way of thinking. In this study, both the educators' and learners' opinions will be dealt with seriously.

1.9 OUTLINE OF THE SUBSEQUENT CHAPTERS

Conducting this research on the attitude of the educator on teaching Environmental Studies and attitudes of the learners involved, my findings might be of great use to learners, educators as well as curriculum developers. The research comprises the following additional chapters.

CHAPTER 2

This chapter will review the literature involving the theoretical background and earlier research dealt with concerning the teaching of Environmental Studies.

CHAPTER 3

This chapter deals with the results of the research methodology's different methods, namely observations, interviews and documents which will be used for the collection of data. Different groups such as learners, educators, principals, the curriculum designer and the area manager will be interviewed.

CHAPTER 4

In this chapter data will be analyzed and interpreted.

CHAPTER 5

The final chapter presents recommendations from the result of the research. Suggestions and recommendations on how Environmental Studies should be taught are made.

1.10 MY IMPRESSION AT THE START OF THE RESEARCH.

My interpretation is that the teaching of Environmental Studies in primary level (especially grade four) of the four schools is not the way it is supposed to be. Many educators of these younger learners are still uncertain as to the meaning of the term "Environmental Studies". Does it mean learning about everything around us? This is one of the questions usually asked by some educators. Educators should choose methods that are appropriate. That is, the methods that will enable learners to explore the environment, to investigate recognized concerns and to take action to make the world a better place for all living creatures. Learners should be able to address social and biophysical environmental issues in order to promote development and social judgment.

The importance of environmental issues has led to the development of special environmental days and weeks on the South African calendar. Some of these occasions are celebrated internationally, for example Arbor Week, World Wetlands Day and World Environment, while others are specifically South African, for example, Heritage Day. In some primary schools, these special environmental days go unnoticed. The reason differs from one school to another. Celebrating environmental day is an opportunity for focusing the activities of the whole school on a particular environmental issue for a day.

In conclusion, the national department of education should help with the teaching of Environmental Studies by supplying relevant information to these schools. They should supply environmental information and organize workshops for the educators and learners.



CHAPTER TWO

THEORETICAL FOUNDATION OF THE STUDY AND LITERATURE REVIEW

2.1 INTRODUCTION

The first chapter of this mini-dissertation provided the background and motivation of the study of the teaching of Environmental Studies in grade four. The research will review literature involving earlier research done on this topic, so that a base can be found to support this research. The purpose of a literature review Merriam (1995:31) is to summarize and integrate previous work and to offer suggestions for future inquiries. According to Borg and Gall (1983: 143), the review of the literature can help in limiting the individual's research problem and in defining it better. They further state that in reviewing the literature the reader should also be alert to research possibilities that have been overlooked.

The value of the literature review can be summarized as follows (Henning 2000):

It provides a foundation for building knowledge.

It shows how a study advances, refines or revises what is already known.

It offers a collective point of reference for interpreting the researcher's own finding.

It provides clues to methodology and instrumentation. That is, knowing what approaches have been used before, and with what success.

Through this review, I attempted to define the concepts learning, environment and the subject Environment Studies. I also looked at the advantages of Environmental Studies in the curriculum. In conclusion, the study made use of an extensive and comprehensive literature study.

2.2 LITERATURE REVIEW

According to Huber (1980:5), a learner comes to school with needs for social skills that can be met through well-planned intervention on the part of the educator. Learners come with dreams, hope, aspirations, fears, frustrations and resentment. They come uncertain about learning,

fearful of the unknown and distrustful of people. They need proper guidance from the educators, the kind of guidance that will enable them as learners to have positive hope, aspirations and dreams; the guidance that will make it possible for quality learning to take place. As educators consider Environmental Studies and its role in the curriculum, they must first think about the learners in the classrooms (Skeel, 1995: 13). That is, what values and beliefs do they bring with them? What are their abilities and expectations? Knowing what is expected of you as an educator will enhance a learner's understanding of environmental issues.

According to Taylor (1987:15) and Van Rooyen (2000), one of the primary aims of Environmental Studies is to enable learners to understand the complete nature of environmental issues arising from social, political, economical, biophysical and scientific-technological interaction. It is educationally sound that the learners in the primary school develop the knowledge and an understanding of his or her environment on the basis of the actual experience of phenomena. At primary school, the learners' experience of life is determined largely by the political, social, economical, biophysical and scientific technological influences to which he or she is subjected within the community, in which he or she lives and moves.

An Environmental Studies educator should take aspects mentioned above (social, economical, political biophysical and scientific-technological) into consideration when teaching this subject. As an educator, one should be able to accept learners who may hold different values. This can be done through using concrete methods of communicating specific objectives. Learners should have opportunities both to observe at first hand and to use books, stories, pictures and charts when dealing with environmental issues. Educators should consider every learner's prior experiences as the starting point. That is, to consider what these learners know and what they don't. Let them realize the environmental issues from a local point of view. For example, let them deal with their school-surrounding environment.

Educators should always support the learners in every relevant activity during the lessons. According to Elstgeest & Harlen (1990:2), the support which educators need to develop must be in the form of skills and confidence to guide the learner's learning through the learning encounter. Learning encounter simple refers to the way learners interact with the content.

2.2.1 Learning

According to Clayton (1989:35), learning is used to refer to both the process and the result of change. As a process, learning refers to the experiences a learner goes through, his internal and external activity and his reactions to the situations in which he finds himself. As a product, learning refers to the actual change in the learner's behaviour. These changes may be temporary or relatively permanent. From the definitions given, it becomes clear that learning involves the following:

- a change in behaviour of the learner.
- a result of the interaction with the home, the classrooms and the school environment.
- a connection of the existing knowledge with new information.

According to Gravett (1995:3), learning entails a qualitative change in the manner in which people understand and interpret matter. According to Gravett (in Pachecho, 1996: 46-47), the following are characteristics of learning:

a) Learning is an active accumulation of knowledge.

Learning is not a passive process whereby information is stored in the brain for future use. In teaching Environmental Studies, an educator should confront learners with hands on practical experience.

b) Learning is cumulative

No new knowledge can be learnt in isolation. The existing knowledge forms the foundation for new knowledge to be accommodated. The teaching of Environmental Studies should not be isolated from the rest of the other subjects. There should be incorporation of environmental concerns in the specific outcomes of all eight areas of learning in Curriculum 2005.

c) Learning has a personal significance

The child himself must attribute significance to what he is learning. In teaching Environmental Studies, learners should develop action competencies consisting of an understanding of social, economic, political and biophysical systems and their interactions.

d) Learning is a conceptual change

A conceptual way of learning will bring qualitative change in the way in which a person interprets the subject context. Teaching Environmental Studies will result in new insights into the addressing of environmental problems, and will develop practical ways to move our society towards sustainability.

e) Learning is an intentional activity

Learning does not take place accidentally but intentionally. The teaching of Environmental Studies should have a specific aim or purpose. That is, the specific aims that an educator wants to achieve should be indicated.



2.2.1.1 Learning in the context of Environmental Studies

Environmental Studies can be integrated into programmes of learning through consideration of the environmental context of learning (Van Rooyen 2000). According to Henning (2000), the environmental context of learning, if considered through 'learning area lenses', shows how environmental concerns are an integral part of each learning area, and thus demonstrates the cross curricular nature of Environmental Education. For the specific outcomes to have meaning for the learners, they need to be contextualized, and it is here that environmental contexts have such an important role to play in learning programme development. According to the Discussion Document (1997: 10), three possible ways of conceptualizing the specific outcomes are offered as approaches to learning programme development. The three possible ways of conceptualizing are a topic-outcomes approach, a thematic-outcomes approach and an issues-based approach. Conceptualizing learning through these three approaches to learning

programme development can enable the development of action competencies and environmental understandings.

2.2.1.2 Active learning in Environmental Studies

According to Van Rooyen (2000), the environment could be understood when considering the central position of the biophysical component in its interaction with the other four aspects, namely political, social, economic and scientific technological. The interaction of these mentioned aspects could be advantageous if active learning is done. Active learning should take place as follows Van Rooyen (2000):

- **encounter:** the experience of the learner should be taken into consideration. That is, what he or she knows. It is also very important for learners to get first hand experience of the environmental issues by visiting sites, or by means of visual experiences through video material, picture etc.
- **dialogue:** an educator should discuss and debate environmental problems with his or her learners. Even more importantly, learners should debate issues amongst themselves. Out of the discussion and debating, there could emerge ideas for environmental solutions to the said problems.
- **practical hands-on activity:** learners should be actively and purposely engaged in different environmental activities aimed at solving environmental problems.
- **reflection:** at the end of the lesson learners should assess the problem solving process. Assessment can be done in the form of evaluation discussions, tests, examination etc. After assessment, there will be re-adjustment if need be.

The four active learning aspects discussed are advantages of teaching environmental studies. If these aspects of active learning can be followed step by step, environmental problems could be solved or minimized. The reason being that the gap between what is and what should be has been closed. This simply means that during the teaching -learning process, there has been movement towards reaching the ultimate goal of solving the particular environmental problem.

2.2.2 What is Environment and the subject Environmental Studies?

The concept environment is defined as everything that is external to the organism. According to Word Power Dictionary (1996:337), environment refers to physical surrounding and conditions, especially those affecting a person's life. A human being's environment includes such factors as temperature, food supply and other people. The diagram 1 below best describes the perceptive on the environment Van Rooyen (2000).

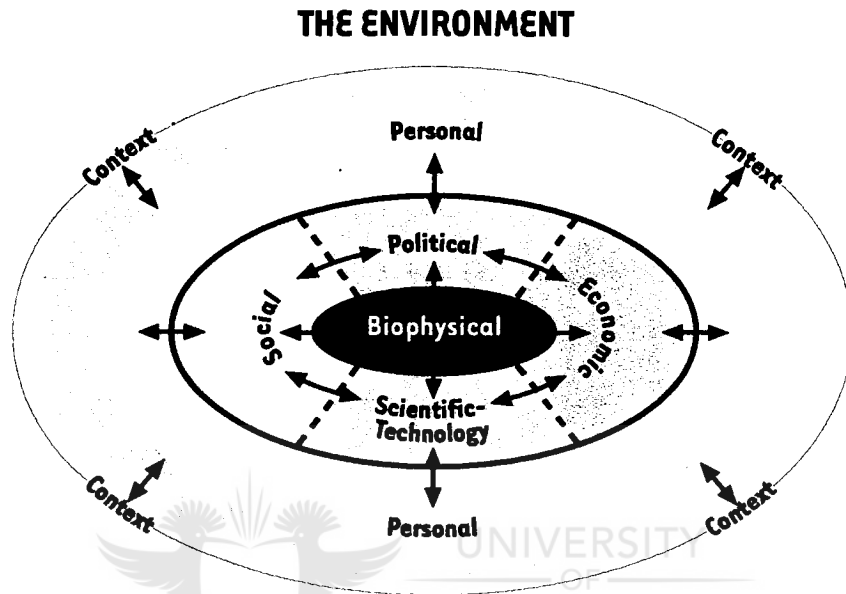


Diagram 1 Van Rooyen's model of the environment

According to Hopkins (1986:19), the environment may be divided into biotic (living) and abiotic (non-living) components. Non-living environmental factors, such as temperature and sunlight, make up the abiotic environment. Living things make up the biotic environment. Both the biotic and the abiotic environments interact to make up the total living and non-living things.

Social and cultural surroundings are an important part of a person's environment. The cultural and biological inheritances of human beings have enabled them to advance beyond any animal in controlling their environment Nelson (1992: 11).

The environment itself is the greatest instrument for Environmental Studies. Any environment- natural or artificial- provides a pool of information for resources, systems and interactions. This in itself is a clear indication that the environment of a learner should be taken into consideration when teaching Environmental Studies. According to Taylor (1987:15), a key concept relates to the view that fostering responsible and effective participation concerning the quality of the natural, social and cultural environment, is basic to improvement.

2.2.2.1 The subject Environmental Studies in the curriculum.

According to the old Environmental studies syllabus (TED, 1992: 2), the learner should realize that he or she is a member of a particular community and that he or she is bound by various ties to particular groups of people in that community. Environmental Studies, as indicated earlier, should lay a foundation for subjects such as Geography, History, Biology etc. in the later grades. As learners learn more about themselves and their environment, they realize that others have similar feelings and problems. This simply means that different environmental issues will be treated more or less the same by these learners.

Environmental Studies is an approach that is developing attitudes, skills and behaviour. According to Skeel (1995: 11), Environmental Studies should assist learners in the development of a good self-concept, and help them recognize and appreciate the global society and its multicultural composition. It should develop learners who foster an active participation in their communities' thereby producing learners who are involved in solving environmental issues. This subject should provide knowledge of the past and present as a basis of decision making.

To sum up, therefore, Environmental Studies is an all-embracing concern for every one. It is directed towards improving the existence of all living and non-living things. Environmental Studies should examine major environmental issues from local, regional, national and international points of view. This will help learners to acquire insight into environmental conditions in other geographical areas. The success in the teaching of Environmental Studies will result in the community benefiting.

2.2.2.2 Advantages of Environmental Studies

There are a number of factors that should be considered when teaching Environmental Studies. For example, what should the programme achieve? With what topics and issues should it be concerned? What will its role be in meeting the needs of the society? Responses to these and related questions will be formulated to outline the advantages of Environmental Studies.

The environment is the whole world, but young learners cannot understand the vastness. For them the whole world is the small part they have seen and experienced. Therefore the teaching of Environmental Studies cannot be based on studying the aspects of the world that young learners encounter in their daily life (e.g. transportation, communications, predictable and unpredictable changes of the weather etc).

The general issues of the environment are important and they need to be tackled in primary education through the learners' interactions with it at their own level. The experience of the environment is unique for every learner. Getting to know the environment and learning the relationship within it is a very personal experience for the learner, who is at the centre of it. Environmental Studies start within the concrete environment of each child, because the child grows up in it, learns from and belongs to it, depends on it and has his or her own influence on it.

Although the environment of each learner may be unique, it is not isolated. That is, an environment of one learner, though it may be different, cannot be isolated from the rest of his or her class or schoolmates. So the educator should consider each and every children teaching Environmental Studies.

Learning and gaining insight within one's environment is rational for every learner. Everything is a challenge and demands the learner's attention, at home, in the street or at school. For example, questions such as: 'why do we have rain?' can be asked at home or at school. Thousands of impressions occupy their minds. They want to know why things happen the way they are. Learners will accommodate themselves to these impressions, attempt to make sense of it all, and select and create order in this apparent chaos.

These occurrences, the process of coming to terms with the surroundings or world, form the basis of Environmental Studies. Proper teaching of guidance in this subject can help learners to eventually develop effective participation in local, regional, national and international affairs. An advantage of teaching Environmental Studies is that it comes into being when the natural development is consciously and positively influenced, secured, encouraged, enriched and arranged by adults (educators) who themselves belong to and are parts of the interaction between the learner and his or her environment Skeel (1995:52).

In teaching Environmental Studies, learners should be encouraged to take part in environmental projects. This can be achieved if environmental educators can draw up an environmental policy. This policy can provide a useful framework for starting intentions and managing action plans for improving school based environmental activities. According to Le Roux (2000: 74), an environmental policy is also an ideal project for a school environmental club. The policy will include among other things environmental days such as Arbor Day. Learners will be given information about this day, and also be engaged in the planning of activities that are to be implemented. Such information may contribute to learners developing a love for their surroundings.

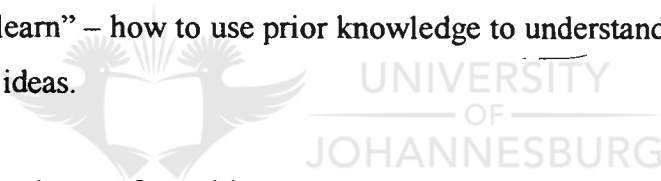
According to the previous syllabus (TED, 1992: 2), the following are considered additional outcomes of Environmental Studies:

- the learners become aware of the majesty, beauty and order in God's creation, and their sense of wonder must be stimulated.
- learners be thankful and personal appreciation and acceptance of the gifts of God and the responsibilities of man towards these gifts.
- learners become aware of the wonderful things created by man, and a sense of responsibility with regard to the preservation and further advancement of these should be developed.
- the learners be helped through their critical observation and thought to classify their world, to express themselves in language and to think purposefully.
- they develop such skills as speech, reading, writing and drawing so that they are able through these to come close to reality and acquire and exercise an intelligent control over their world.

- respect and tolerance for others be aroused. learners should be taught to respect their own property and that of others and extend their respect to animals and plants.
- learners be led to a high ethical standard by practicing co-operation, courtesy, personal, neatness, helpfulness, consideration, faithfulness, steadfastness and responsibility.

According to Parker (1991: 115-6), Environmental Studies programmes address four educational goals:

- The development of enlightened democratic citizenship for effective participation in local, state, national and international affairs.
- The appreciation and understanding of our cultural heritage, including diversity and its role in contemporary society.
- The acquisition of academic knowledge and abilities related to the study of the motives, action and consequences of human beings as they live individually as well as in groups and societies in a variety of place and time settings, and the joy of learning about self, others and human history.
- Learning “how to learn” – how to use prior knowledge to understand complex ideas and how to create new ideas.



All the above mentioned goals are of equal importance, for they reinforce each other.

2.2.2.3 The interim syllabus for Environmental Education

The interim syllabus (Northern Province's Department of education 1996:17), emphasis the integrity of Environmental Education within learning programmes. That is, the incorporation of environmental concerns in the specific outcomes of all eight areas of learning, namely:

- Human and social sciences
- Life orientation
- Languages
- Technology
- Natural sciences
- Maths and numeracy
- Arts and culture
- Economic and management sciences

For these eight learning areas, there will be conceptualizing of learning. Through learning programmes, there will be environmental understanding and action competencies.

Diagram 2 on page 21, indicate how an environment orientation to learning may influence learning programmes and the attainment of specific outcomes across learning areas.

According to the Environmental Discussion Document (1997: 12), environmental concerns in each of these specific outcomes of the learning areas, the cross-curricular nature of environmental education, is demonstrated by:

- The way in which environmental concerns form part of each area of learning.
- The way in which environmental concerns and contexts contribute to the achievement of the specific outcomes in the eight areas of learning.

CONTERXTUALISING LEARNING

Through learning programmes which make maximum use
of the environmental context of learning

through approaches
which may be

THEME BASED

Highlighting

- *Possible Studies
- *Possible Methods
- *Possible Assessment
Strategies

ISSUE BASED

- *Possible Studies
- *Possible Methods
- *Possible Assessment
Strategies

TOPIC BASED

- *Possible Studies
- *Possible Methods
- *Possible Assessment
Strategies

Leading to:

ENVIRONMENTAL UNDERSTANDING AND ACTION COMPETENCIES
(through attainment of the specific outcomes across learning areas)

Diagram 2: Environmental Orientation Learning

The general aim of Environmental Studies is that learners are helped to make progress in knowledge, organization, discipline and self-reliance through an active involvement with the world around them.

2.3 CONCLUSION

It is clear from the previous discussions that the foundation of Environmental Studies is of great importance in the later grades and daily life in general. According to Martorella (1976: 25), Environmental Studies went on to posit the cultivation of 'good citizenship' as a major goal and in turn, to define good citizenship in terms of noble lofty social responsibility.

Environmental Studies aim to produce learners who act intelligently with respect to environmental problems and who become active and committed member for environmental justice and the alleviation of environmental ills. As a member of the community, the learner should commit himself or herself to the upgrading or improving of his or her surroundings, and become a member who is able to manage environmental problems or conflicts in just and humane ways. Learners should discourage projects that destroy the nation or the surrounding environment, for example, discouraging littering, pollution etc. Above all there should be a development of the understanding, attitudes and skills of political literacy which promote participation on a variety of forms of social action to help improve and maintain environmental quality.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter, I will present a discussion of the main methods of data collection. In my inquiry, I made use of qualitative research. According to Patton (1987:7), qualitative methods consist of three kinds of data collection: direct observations, in-depth open-ended interviews and written documents. Important research notions such as validity and reliability will also be discussed as they are exemplified within the paradigm. The role of qualitative research as a problem identification investigation strategy in educational research, will be discussed in this framework.

3.2 TENETS OF QUALITATIVE RESEARCH

According to Strauss and Corbin (1991: 19), qualitative research is done by researchers in the social and behavioural sciences, as well as practitioners in fields that concern themselves with issues related to human behaviour and functioning. This is because research can be conducted on study organizations, groups and individuals. It can be carried out by research teams or by persons acting in pairs or alone. According to Strauss and Corbin (1991: 21), the main tenets or beliefs of qualitative research, which distinguish it from quantitative research are:

- the researcher is an instrument and declares his or her assumptions and presuppositions;
- a collection of verbal and iconic data which are processed qualitatively
- the contextualizations of research activities in naturalistic settings
- ideographically orientated research which implies depth and “verstehen”
- the ontology of qualitative research does not distinguish sharply between subject and object
- the theory of qualitative research is based on construction principles,
- a focus on the iconic perspective, and
- the methodology of qualitative research

3.3 COMPONENTS AND PROCEDURES OF QUALITATIVE RESEARCH

According to Strauss and Corbin (1991: 36), the components of qualitative research consist of the following:

- data collection – in qualitative research, data collection comes mostly from interviews, observations and documents. Qualitative evaluation data begin as raw, descriptive information about programme and people in programmes. In this mini-dissertation interviews, observations and documents were conducted on how Environmental Studies are taught.
- data analysis – coding techniques that are implemented to organize and conceptualize the data consisting of different analytical or interpretative procedures. Analytical procedures included non-statistical sampling and the memorandum or diagramming of conceptual relationships.
- data interpretation – a stage during which consolidated and analyzed data are argued as findings. The data of the teaching of environmental studies were analyzed and argued as findings.
- verbal or written reports presented as overviews or in-depth discussions. In this research, verbal and written documents were considered when researching on the teaching of Environmental Studies. Relevant documents were considered.

The practice of using qualitative information is not new to the field of educational research. Qualitative information forms the background of many research studies and is used to derive hypothesis. In qualitative or interpretive research, hypotheses are not tested through numerical data collection, nor are they statistically based. The data are produced in natural language and the detail can be structural in dendograms or other devices (Miles & Huberman, 1988: 18).

A tentative hypothesis gives direction to data collection. However observation hypothesis could be formulated to explain the observed behaviour. This procedure is especially helpful to research that studies social and educational settings. According to Hopkins (1986:269), qualitative data in the form of words rather than numerical values underline all research.

Qualitativeness precedes the researcher's quantifying through observation device in descriptive and experimental research methodologies. In qualitative research, intensive data collection occurs in a natural context, and may use one or more data collection techniques. That is, anything that gives or provides information concerning the social situation under study, can be used. For example, the focus of data collection for educationally selecting such as the classroom, school or school system, where many aspects of the learning environment can be observed, and factors associated with the nature of the learning environment can be studied.

According to Krathwohl (1991: 313), qualitative researchers are judged by how insightfully they analyze their data, how well they present their interpretations and how carefully and tightly they related them to their data. The method may involve interactions between the researcher as a participant or non-participant observer, individuals in the environment using such tools as questionnaires, opinionnaires, attitudinal scales and other observation devices.

Large amounts of data are collected over a long periods of time. Therefore, apart from data collection, reduction is often necessary, as all the gathered data may be irrelevant to the chosen study.

According to Hopkins and Antes (1990: 270), interpretation and verification may be difficult because data collection is so broadly based. The process of reduction is also a process of categorization. The data collected should be reduce to manageable quantities.

According to Miles and Hurberman (1988:21), data reduction continues throughout analysis. Reducing and ordering data implies the selection and interpretation of it in order to present a more detailed utilization of reality.

Interpretation involves explaining the findings, answering "Why" questions, attaching significance to a particular results, and putting patterns into an analytical frame work. According to Best and Kahn (1983: 204), the interpretation of qualitative research data is more dependent on the researcher's background, skills, bases and knowledge than conclusions derived more directly from the numerical analyses of the data.

3.4 THE NATURE OF THE RESEARCH PROBLEM

The methods most applicable to the nature of the research area need to be indicated, which implies that the research must include a selection of designs. The researcher design is qualitative in that it explores the perceptions of the participants (learners and educators) regarding Environmental Studies as one of the subjects offered in grade four (Strauss and Corbin, 1991: 29). The design gives a holistic and description of their perceptions and attempts to extract the important qualities of these.

Research needs to be valid, and in the qualitative paradigm, reliability has to be obtained. In this study the two concepts, validity and reliability, will be discussed.

3.4.1 Validity

According to Hitchcock and Hughes (1989:45), validity refers to the extent to which the materials collected are true, and should represent an accurate picture of what or who is being studied. Validity is the quality of data-gathering instruments and procedures that enable it to substantiate what it is supposed to measure. The standards (Gay, 1986:110) for determining validity are as follows:

- content validity is the degree to which a “test” measures the intended content area, or in which it observes reality in a fitting manner
- concurrent validity is the degree to which the scores on a “test” are measured, or in which replicated research procedures and settings deliver compatible findings
- productive validity is the degree to which a “test” can predict how well an individual will do in future, or on which experimental research predicts behaviour or outcomes.

In conclusion, validity in qualitative research is however, not obtained in this way as no tests have been conducted. According to Henning (1994:5), the researcher strives to state explicitly what he or she does step by step, arguing validity by thoroughness and rigour and by strong theoretical substantiation.

3.4.2 Reliability

According to Wallen and Fraenkel (1991: 85), reliability refers to the consistency of the information obtained. For example, if we have used a yardstick to measure a desk three times and obtained different readings each time, we would conclude that the information was unreliable-either because the yardstick was defective or because the yardstick was used improperly. Reliability (Hitchcock and Hughes, 1989: 45), concerns the extent to which any particular method of data collection is replicable. That is, if the research was to be repeated by someone else using a different technique, would the same findings be discovered? Are the results stable? Are we fairly certain that the same general results would occur time and time again?

In conclusion, for the purpose of this study, a transcript of the focus groups interview will be taken back to the respondents for the first reliability check, the reason being that the respondents should check whether they agree with data that has been transcribed. Additional information will be accepted and added to the transcripts.

3.5 DATA COLLECTION

According to Maykut (1993: 46), the data of qualitative inquiry is most often people's words and actions, and thus requires methods that allow the researcher to capture language and behaviour. Qualitative research consist of three methods of data collection. Data is collected through interviews, observations and documents. The paradigm and the format of the investigation determine the nature of the data collection methods mentioned above. The data from the these interviews, observations and documents are then organized into major themes, categories, and case examples through content analysis. The three methods will be discussed fully.

3.5.1 Observations

Observation is the primary technique for collecting data on a non-verbal behaviour. Although observation most commonly involves sight or visual data collection, it could also includes data

collection via the other senses, such as hearing, touch or smell. Observations are often conducted as a preliminary to surveys, and may also be conducted jointly with document study or experimentation. According to Hopkins (1986:198), observations involve the evaluation in observing the planning and activity process in a variety of real-life contexts. The effectiveness of this approach is considerably enhanced when the observation is underpinned by an agreed specification of the teaching strategy to be employed (Hopkins, 1986: 198).

According to Bailey (1987:239), there are two chief types of observation: participant and non-participant. The participant observer is a regular participant in the activities being observed, and his or her role is generally not known to the other participants. On the other hand, a non-participant observer does not participate in group activities. If observations are to be meaningful for research studies, they must have acceptable levels of reliability and validity (Hopkins and Antes, 1990: 149). In this study will also use observations because an observer on the scene can discern ongoing behaviour as it occurs. I will be a non-participant observer, that is, observing how Environment Studies is taught in grade four.

3.5.2 Document Analysis

The study includes the analysis of official policy documents and the interim curriculum regarding the teaching of Environmental Studies in South African schools. These documents and the interim curriculum gave direction to this research.

3.5.3 Interviews

According to Ary et al (1991: 58), an interview is a “purposeful conversation” usually between two people or more, that is directed by one in order to get information. The interview is then a special case for social interaction between two persons, and such as subject to the same rule and restrictions as other instances of social interactions (Ary et al,1991: 5). One major advantage of the interview is that the interviewer can standardize the interview environment by making certain that the interview is conducted in privacy and that there is no noise. Interviews range from quite informal and completely open-ended to very formal with the questions predetermined and asked in a standard manner. Four types of interviews (informal, unstructured, semi-structured and structured) will be discussed fully.

3.5.3.1 Informal interviews

According to Best and Kahn (1993: 200), in an informal interview, questions emerge from the immediate context and are asked in the natural course of things. This is an interview type lacking structure or control totally. The strength of this type is that, interviews are built on and emerge from observations. The interview can be matched to individuals and circumstances.

The weakness is that it is less systematic and comprehensive if certain questions do not arise naturally. This is an unsuitable method of interview as questions are neither open-ended nor closed (Best and Kahn, 1993: 204).

3.5.3.2 Structure interviews

According to Wallen and Fraenkell (1991:105), the structured interview is an instrument in which individuals are asked to respond to a series of specific questions. These are types of interviews in which “all informants are asked to respond to as nearly identical a set of stimuli as possible” (Bernard, 1988:208). Structured interviews are usually arranged around a prearranged schedule of questions which are usually both short, direct and capable of immediate (frequently “Yes” or “No) responses. The structured interview technique requires that interviewers ask the questions exactly as they are worded. For the purpose of this study, this method will not be used, as it would be difficult to duplicate the circumstances of such surveys in small-scale school-based research.

3.5.3.3 Semi-structured interviews

According to Hitchcock and Hughes (1989: 83), the semi-structured interview is a much more flexible version of the structured interview. This type of interview allows depth to be achieved. The interviewer can expand the interviewee’s responses by including spaces for the interviewer to add comments or make notes. The value of a semi-structure interview is that of a systematic approach to data collection. A qualitative researcher points towards the importance of the establishment of empathy towards the interviewee. For the purpose of this study, this method will be used, as the study requires interviews on separate occasions in order to gather enough information for research.

3.5.3.4 Unstructured interviews

According to Bailey (1987: 192), the chief feature of the unstructured or non-directive interview is its almost total reliance upon neutral probes that are designed to be as neutral as possible. In the unstructured interview, scope is allowed for the interviewer to introduce new material into the discussion which, not been thought of beforehand, but arose only during the course of the interview. The aim of this type is to provide for a greater and freer flow of information between the researcher and the subject. This method is suitable for this study because the aim is to create an atmosphere where the individual feels able to relate subjective and often highly personal material to the researcher. It is also suitable in the group interview process. In conclusion, this method will be used in this study.

3.5.3.5 Focus group

According to Bailey (1987: 192), focus groups produce qualitative data that provide insights into the attitudes, perceptions and opinions of the participant. The focus group presents a more natural environment than that of an individual interview because participants are influenced by others. That is, people around them. The need to introduce rather more interviewer control into the non-directive situation led to the development of the focused interview (Cohen and Manion, 1988: 310). In conclusion, by choosing this method, I will involve several functions, such as observing, listening, moderating and analyzing, using the inductive process.

3.6 FOCUS GROUP INTERVIEWS

For the purpose of this study, focus group interviews is the suitable method chosen for collecting data. According to Cohen and Manion (1988:310), in the focused group interview, the interviewer can, when expedient, play a more important role: he can introduce more explicit verbal cues to the stimulus pattern or even represent it. In either case this usually activates a concrete report of responses by informants. The subject for the focus group is selected on the basis of relevancy to the topic under study. The focus group interview differs from the other types of research interviews in certain aspects. These have been identified by Cohen and Manion (1988:326) as follows:

- the persons interviewed are known to have been involved in a particular situation.
- by means of the technique of the content analysis, elements in the situation which the researcher deems significant, have previously been analyzed by him.
- using his analysis as a basis, the investigator constructs an interview guide
- the actual interview is focused on the subjective experiences of the person who has been exposed to the situation.
- the responses enable the researcher to test the validity of his hypothesis, and to ascertain unanticipated responses to the situation.

From these facts it can be seen that the distinctive feature of the focused interview is the prior analysis by the researcher of the situation in which subjects have been involved. One of the advantages of the focus group interview is that it can bring together people with varied opinions, or as representatives of different collectives.

Focus group interviews include several different types of questions, each of which serve a distinct purpose. According to Bailey (1987: 198), the following are the categories of the questions:

- opening questions are questions that everyone answers at the beginning of the interview. Such questions should be factual based.
- introductory questions are questions that introduce the general topic of discussion and provide participants an opportunity to reflect their connection with an overall topic. These questions encourage conversation and interaction among participants.
- transition questions are questions that move the conversation into the key questions that drive the study. During these questions, the participants are becoming aware of how others view the topic.
- key questions are questions that require the greatest attention in the subsequent analysis.
- ending questions are question that bring closure to the discussion, enable participants to reflect back on previous comments and are critical to analysis

In conclusion, focus group interviews will be relevant to this study, as the potential for discussion on Environmental Studies will develop, thus yielding a wide range of responses.

3.7 DATA ANALYSIS

Data analysis involves the process of coding, categorizing, clustering and consolidation of data. According to Hitchcock and Hughes (1989:43), analysis is what the researcher does with the data in order to develop explanations of the events so that the theories and generalizations about the causes and reasons, and the process of any piece of social behaviour can be developed. Analysis is an attempt to organize, account for and provide explanations of data so that some kind of sense may be made of it.

A principal rule in analyzing is to use a coding system. There are eight generic codes which are described here below (Hitchcock and Hughes, 1989:43):

- setting or content codes are information you have collected that pertains to the setting or content from which you have collected data.
- situation codes refer to the participants view of their setting. Their views may serve to explain some of their other perspectives
- process codes commonly used in analyzing data from life history interviews. The participant's responses will determine the specific categories.
- activity codes refer to the fairly routine activities of an organization. Data that describe the nature of the meeting number present, agenda and so forth.
- event codes derived from routine events that occur infrequently. Data that describes the event and even events that occurred before the study was begun.
- strategy codes stem from the methods participants use to accomplish what they want and what they do not want.
- relationship and social structure codes-are gathered from patterns of behaviour you observe, or are reported by participants that constitute friendships, romances or hospitalities, for example.
- methods codes come from all of the notes to yourself about the logistics of the procedures and reflections on such aspects of the study as whom to interview next, what other questions should be asked, and the link.

The type of the study will help to determine how many and exactly what kinds of codes to use for analysis. Each code would have several categories within it, and typically some data will fit in more than one category or code. Miles and Huberman (1994:50) recommend early coding because the researcher can improve on existing data as she continues with data collection. They further maintain that, in the event of a category being poorly developed, the researcher can return to the field and collect data to fill in the gaps.

3.8 SAMPLE GROUP

According to Hitchcock and Hughes (1989: 81), the sample is a procedure which allows the researcher to select people to question from a large group. There are two main ways in which the researcher can sample a population. The methods are quota and random sampling. For the purpose of this study, random sampling will be used. As Bailey (1987:83) states that, if this method is done with care, sampling can be highly accurate. Random sampling will reduce any possibilities of bias, since each individual identified within the population has an equal chance of being chosen to be interviewed.

In this study, four grade four educators and one principal per school in four randomly chosen Man'obe primary schools, were interviewed. The sample group from Man'ombe circuit are the schools Ndzalama, Vurhonga, Sukani and Miehleketo. Apart from these four schools, I also interviewed one Area Manager.

3.9 CONCLUSION

In this chapter, qualitative research and its related concepts were discussed. The interviews and observations methods were discussed fully. In this study I used interviews, observations and documents to gather data related to the teaching of Environmental Studies. I interviewed relevant people, observed different activities and used or read different documents related to the teaching of Environmental Studies. In the following chapter, data analysis and the findings of the research project will be discussed.

CHAPTER FOUR

ANALYSIS AND INTERPRETATION OF DATA

4.1 INTRODUCTION

The aim of this chapter is to discuss the procedure followed during the collection of data. I will also focus on research findings. The implications will be discussed in the light of the research questions of this inquiry.

4.2 ANALYSIS OF DATA

I will conduct different interviews at the Man'ombe circuit. The research was done in a disciplined and co-operative mood. Field notes were kept during the period of interviewing which were later analyzed. Analysis of data took place through the listening of the recorded interview, which was transcribed.

Typewritten transcripts of the focus group interviews, discussed in the previous chapter (paragraph 3.6) were then taken back to the respondents for the first reliability check. This was to check whether the respondents agreed with the data that had been transcribed. No additional information was given by the respondents. The study of the focus group interviews was consolidated after the analysis.

4.2.1 Interpretation

4.2.1.1 Aims, goals and objectives

In a curriculum the aims, goals and objectives, (the so-called ends of education) should be discussed (Bailey, 1987:102). In this regard, the core syllabus should conform fully to the requirements of the curriculum.

Global aims are explained fully at the beginning of a syllabus, and the aims for the specific subject are clearly set out and discussed. Aims are long-term broadly phrased statements which

give general guidelines to educators. According to Marsh (1992:86), some examples of education include:

- mastery of basic facts and theories in fundamental subjects;
- cultivation of personal interests;
- development of democratic attitudes, and
- good study skills and work habits.

Goals are more specific statements which represent the purpose of a particular course. It is necessary that all subjects should be goal emulating. The determination of goals is an important and necessary step in order to make maximum use of instruction time. The rationale for elemental Environmental Studies is summarized in four major goals (Marsh, 1992:86):

- Knowledge – acquire knowledge about human experiences in the past, present and future.
- Skills – develop skills to process information.
- Values – to develop democratic values and attitudes.
- Citizenship (social participation) – to have opportunities for social participation.

These four goals are intertwined and overlapping. The four goals are summarized in diagram 3 in the next page.

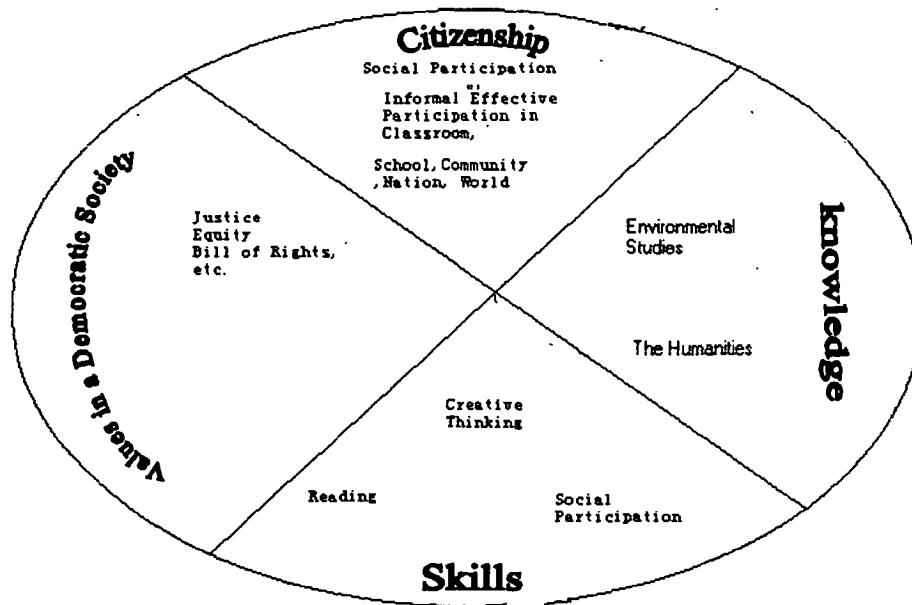


Diagram 3: Goals of Environmental Studies (Skeel, 1995:97).

Objectives is a term which refers to a specific accomplishment that a learner should be able to achieve in a specific period . A well written objective specifies the level of acceptable performance and conditions under which a learner must perform. According to Chapter 8 Messick (1992: 41), there are three main questions to answer with the general process of curriculum planning. These are:

- what are the objectives?
- what learning experience will be used to achieve the desired objectives?
- what evaluation procedure will be used to determine whether the objectives have been reached.

In this study it is hoped that the perceptions by educators and attitude by learners towards Environmental Studies should be addressed by encouraging the learners to pursue their studies with interest. It should be a process that seeks to develop the necessary awareness, ethics, values, knowledge, skills and commitment to allow people to become environmentally literate.

4.2.1.2 Learners' attitude

I was given an opportunity by the principals of the four schools mentioned to interview and observe the attitude of learners during Environmental Studies lessons. Learners (boys and girls) were divided into two groups at each school. The first group in the first school was named A and the second school B. In the second school, the classification was C and D. The classification in the third school was E and F, and finally the classification in the fourth school was G and H. The four schools were classified as school 1,2,3 and 4.

Before conducting the interview, I first prepared an interview guide. That is, the guide which channelled me throughout my interview. An audiotape was utilized to obtain the best possible record of the interviewees' responses. The recorded interviewees' exact words were then transcribed as raw data, which was then analyzed (Bell, 1993:43). All the interviews were conducted in the interviewees' preferable language, which was Xitsonga. This makes it easier for the interview to take place. The Environmental Studies in the four schools is offered in Xitsonga. Apart from offering this subject in their own language, the learners are unable to express themselves properly in English. The data was first transcribed in Xitsonga, which was then transcribed into English. Although the transcription in English was not always the direct words of the interview, the meaning remained the same. A group interview was conducted in which learners (participants) were asked a set of questions. The following raw data serve as an example of how data was transcribed from Xitsonga to English to assure the validity of the data collected for the study. I asked the eight groups A, B, C, D, E, F, G and H the extent to which Environmental Studies helped them. In response, group A said that:

Yi hi dyondzisa leswaku hi twisisa no amukela leswaku hi vanhu lava nga na vutihlamuleri etikweni (it teaches us to understand and to accept ourselves as unique and worthwhile human beings).

The following matrix summarizes the observation and interview data. The information collected from the observation and interview were categorized. All the categories were identified. Their properties are indicated in TABLE 01

TABLE 01: A MATRIX OF RESPONSES FROM LEARNERS.

METHOD OF DATA COLLECTION	SCHOOL 01	
	GROUP A	GROUP B
Interview 1	Understands and accept themselves as worthwhile human beings	Respects the rights of people to hold personal beliefs and values
Interview 2	Makes them engage in Environmental projects in the community	Making them to be Environmentally aware, that is knowing what is bad or good
Observation 1	Some learners have difficulty in getting environmental posters as they do not buy newspapers, magazines, etc.	Learners enjoy taking part in environmental projects such as Ahibasiseni, Masakhane, etc.
Observation 2	They enjoy lessons outside the classrooms	Participation is good in the classroom

METHOD OF DATA COLLECTION	SCHOOL 02	
	GROUP C	GROUP D
Interview 1	Practice acquired life and decision making	Demonstrate value and respect for human rights as reflected in (Vumunhu/Ubuntu).
Interview 2	To provide accurate, up-to-date information about the environment	Making them (learners) aware that every citizen is an instrumental decision maker.
Observation 1	Find it difficult to read books related to environment	Participate effectively in a classroom with environmental posters
Observation 2	In both occasions, outside and inside the classroom, they participate the same way.	Lack of commitment outside the classroom



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METHOD OF DATA COLLECTION	SCHOOL 03	
	GROUP E	GROUP F
Interview 1	Demonstrate understanding principles in Environment	Understanding of interrelationships between the surrounding environment
Interview 2	Making them (learners) answerable citizens	Develop skills which will help in solving environment crisis
Observation 1	Learners enjoy playing environmental card games	Enjoy singing environmental songs
Observation 2	Enjoy viewing environmental posters inside the classroom	They do well outside the classroom



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METHOD OF DATA COLLECTION	SCHOOL 04	
	GROUP G	GROUP H
Interview 1	Respect our surrounding environment	Develop a holistic view of the environment
Interview 2	Promote participation in the different forms of social action to help maintain environment quality	Making them to take action towards the prevention and resolution of environmental issues
Observation 1	Enjoy practicals more than theory	Lack of commitment outside the classroom
Observation 2	They (Learners) showed more participation when environmental issues were read than shown.	Participation is good outside the classroom

TABLE 01: A MATRIX OF RESPONSES FROM LEARNERS

It is clear from the matrix table (table 01) that learners have positive attitudes towards the Environmental Studies. They (learners) seem to enjoy practical lesson more than theoretical ones. For example, teaching them about the bad effects of littering could be effective if is done practically in their surrounding area.

4.2.1.3 Educators' attitudes

My second interview was with the educators. We talked about their perceptions about Environmental Studies. According to educator A, she described Environmental Studies as the core subject. That is, a learner lives in a certain environment. This is so because the environmental context of learning, if seen with 'learning area lenses', shows how environmental concerns are an integral part of each learning area, and it thus demonstrates the cross curricular nature of Environmental Studies.

Educator B (participant B) in the second school described Environmental Studies as a subject that attempts to bring or form an encounter, bringing together the learners and the school environment. According to Elstgeest and Harlem (1990:58), from this encounter emerges the awareness of coherence. The coherence of living and non-living nature manifests itself in numerous ways.

Participant C (educator C) believes that for the specific outcomes to have meaning for the learners, they need to be contextualized, and it is here that environmental contexts have such an important role to play in learning programme development. According to him, there should be incorporation of environmental concerns in the specific outcomes of all eight areas of learning.

Participant D believes that contextualizing learning through approaches which may be themes, issue and topic based, environmental understanding and action competencies may be attained.

When asked about the resources to be used, all participants believed that the most successful educators surround themselves with an assortment of books, cuttings from magazines and newspapers, picking up free leaflets at exhibitions and always having an eye for something useful among the variety of circulars which reach the school or home. Learners should also be encouraged to look for environmental cuttings which deal with environmental issues.

Some participants (A and D) believe that a school or national department of education, should bring together and organize environmental information. They cited that some learners are not able to bring cuttings from magazines and newspapers.

Asked about their goal in teaching Environmental Studies, all participants responded in more or less the same way. All interpret the principles of Environmental Studies as follows.

To promote:

- global thinking
- local action
- personal exploration and inquiry

- personal valuing
- citizenship
- a sense of place
- a pattern of holistic thinking.

It is clear that these mentioned aims incorporate the educational aims of many current curriculum subjects, and also associate the objectives with specific subjects. According to (Van Rooyen, 2000), effective Environmental Studies cannot be confined to any single disciplinary framework. This was also seen in the drawing of the new curriculum in 1996. According to a practical guide for education (1998:13), the curriculum consists of eight different compulsory learning areas, namely:

- language, literacy and communication.
- human and social sciences.
- economic and management sciences.
- technology education.
- mathematical literacy, mathematics and mathematical sciences.
- natural sciences.
- life orientation.
- arts and culture.

In each of the mentioned learning areas it was found that a set of specific outcomes describe what learners will be able to do at the end of the lesson. This will be fully discussed in the next topic (4.2.1.4).

4.2.1.4 Module of teaching Environmental Studies

According to Van Rooyen (2000:104), three national phase committees – one each of the Foundation, Intermediate and Senior curricular phases – were established to refine the curriculum for the respective phases. The specific outcomes in the learning programmes have been clustered around focal points, called Phase Organizers. These Phase Organizers facilitate integration within

learning programmes. Through highlighting the environmental concerns in each of the specific outcomes of the learning areas, the cross-curricular nature of Environmental Studies is demonstrated by:

- the way in which environmental concerns form part of each area of learning.
- the way in which environmental concerns and contexts contribute to the achievement of the specific outcomes in the eight areas of learning.

This could be best understood by discussing all eight learning areas in relation to the environmental education for sustainability (diagram 4 in the last page of Chapter 4)

a) Environmental Education/Studies in the Human and Social sciences.

This learning area should provide learners with a set of learning experiences which will enable them to explore and reflect critically on their society on a local, national and global scale so that they became active participants. This thinking is similar to the one in diagram four of van Rooyen. That is the social part. Diagram four, illustrates the understanding of the complexities of environmental issues and how social influences impact on life-sustaining resources.

b) Environmental Studies in Life Orientation

The main aim of life orientation is to empower learners to live meaningful lives. Issues of environmental health and environmental rights are thus central to this learning area. Learners should understand and accept themselves as worthwhile beings. Diagram four it is also related to the social being and illustrates aspects of van Rooyen's module of teaching Environmental Studies.

c) Environmental studies in Economic and Management Sciences

This is clearly indicated in diagram four. The impact of economic activity on the environment and the interactions between social, economic, political and bio-physical environments are important to

economic and management sciences. Entrepreneurial activities for the meeting of societal needs should be environmentally sustainable.

d) Environmental studies in Technology

The development of technologies have affected and changed human-environmental interactions significantly over time. The idea is that the technological process can be effectively applied in Environmental problem solving contexts. For example, technology may be used in waste recycling.

e) Environmental studies in language

For a learner to be able to make judgments about an environmental issue, he or she needs to have a clear understanding of the language and concepts involved in an issue. Learners are better able to understand and shape their interactions with the environment, when using language for learning, for example, a debate on pollution and its impact on the environment.

f) Environmental studies in Arts and Culture

Cultures have had a shaping effect on human environmental interactions. A clear understanding of culture and how it changes, helps us to understand the dynamic and changing nature of environmental issues and risks.

g) Environmental studies in Mathematical Literacy, Mathematics and Mathematical Science

Mathematics and mathematical literacy are important skills for action competency in solving and preventing environmental problems. The ability to use mathematics in predictions and survey calculations would lead to the understanding of the nature of environmental issues.

h) Environmental studies in the Natural Sciences

Studies within the natural sciences are integral to developing the action competencies needed to manage and utilize resources sustainably. Physical and natural sciences are considered the social and environmental contexts of science education.

i) Environmental studies in Arts and Culture

In Arts and Culture, an educator should communicate cultural values associated with land use and land ownership. Educators should make available visual representations showing changes in land use over time.

The only way in which one can make the specific outcomes in the learning areas relevant to learners is if one organizes learning programmes around issues, themes, topics and contexts which matter in our daily lives. The learning programmes should be more practical than theoretical. According to the four educators, there is success in the teaching of Environmental Studies. The only complaint was time allocated to their lessons and the national department of education's reluctance to supply relevant environmental materials. I also observed that most teachers are under qualified.

4.2.1.5 Assessment/evaluation in Environmental Education

According to Nelson (1992:368), evaluation in education is the process by which we assess what has occurred or is occurring in a classroom or school setting. Evaluation in education has five functions:

- to diagnose;
- to revise the curricular;
- to compare;
- to anticipate educational needs and
- to determine if objectives have been reached.

Too often educators are exclusively concerned with the last function.

According to the Discussion Document (1997: 44), if Environmental Education is to be integrated into the programmes of learning then the assessment of Environmental Education activities will become an important facet in the development of learning programmes. The document further states that the educator should be able to develop the necessary strategies and processes to assess learners' achievements and experience in this area. The assessment is based on learning outcomes which determines a learners' progress and assess their performance. According to the Discussion Document (1997:45), in order to obtain a full picture of achievements within and beyond the formal curriculum, it is essential to involve children in the assessment process. Assessment should be seen as an integral part of the teaching learning process.

In the four primary schools, evaluation or assessment is done through tests. Evaluation its usually either formative or summative. Summative evaluations are based on the achievement of particular objectives. Formative evaluation is more process oriented. Tests were the most common type of summative evaluation instrument used in the four schools. I observed that the tests given tested the objectives of Environmental Studies. The maximum test given was out of 50 marks, and the minimum pass mark was 25. These tests were given on a monthly basis.

According to my observation, these tests were helpful in achieving the aim. Apart from tests, observation is an evaluation technique which is best suited to situations involving social interaction independent work habits and group responsibilities. When using observation, educators must periodically schedule time, and design instruments to focus on these behaviours during a variety of classroom activities.

The evaluation methods discussed above were also used in the sample schools. Learners were given tests to discover what they had learnt. The tests were set in their own language (Xitsonga). These tests were flexible, thereby giving learners a chance to explore something on their own. I observed that learners were not involved in the assessment process. Only the educators were involved in assessment that is, how many marks to allocate etc. According to the Discussion

Document (1997:45), learners should be involved in assessing their own learning, experiences and achievements. In the sample schools, the assessment was aimed at measuring the learning outcomes and not at the understanding process. Lastly, the assessment was not done on day-to-day learning experiences. The educators assessed on a weekly or monthly basis.

4.2.1.6 Environmental organizations

Environmental organizations have been established, but they are not actively involved. I asked the principals of the sample schools about the support they were receiving from the environmental organizations or NGO's. Their responses were that, there were no organizations, or few if (any in) involved in promoting of Environmental Studies.

However, do they celebrate environmental days?. According to them, the environmental competitions from environmental organizations were meant for former white schools. It is alleged that these competitions reach them after the closing dates.

4.2.1.7 Educational support

According to the area manager, the department of education is supporting the teaching of Environmental Studies, like any other subject. According to him, there are workshops which encourage the teaching of Environmental Studies. However, he emphasized that the involvement of environmental organizations should be encouraged. Organizations must encourage learners to care about their environment.



4.3 CONCLUSION

From the discussed findings, it has emerged that the involvement of three structures – learners, educators and the department of education , could result in good citizenship. This was found after different interviews with learners, educators and the department of education. The data was later interpreted. Interpretation was done through the consideration of aims, goals and objectives.

The learners' and the educators' attitudes in relation to Environmental Studies was also discussed. That is, what is the learners' attitude? What is the educator's attitude? I also discussed the module on teaching of Environmental Studies, as well as the three national phase committees. The eight learning areas in relation to the environmental education for sustainability were analysed. The role of environmental organizations and the possibility of the department of education support was also scrutinized.

Lastly, all the factors discussed could result in good citizens who are answerably in environmental issues. Learners should lead. That is, social participation in the classroom, school, community and the world is required. They should be informed citizens (that is possessing knowledge which makes one culturally and scientifically literate), with the additional skills, mental, moral and spiritual growth to follow a vocation.

EDUCATION FOR A SUSTAINABLE ENVIRONMENT

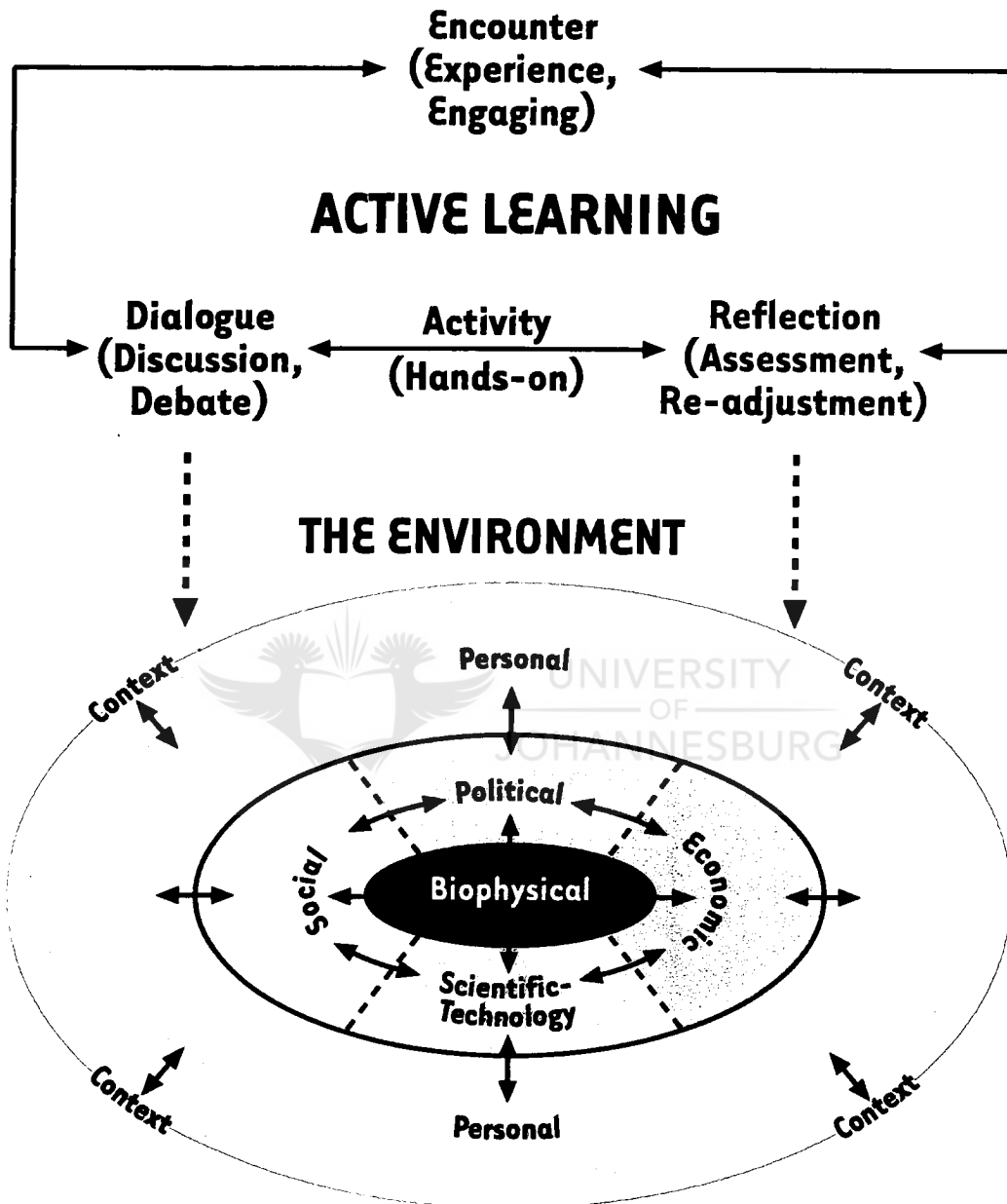


Diagram 4: Van Rooyen's model for Environmental Education

CHAPTER FIVE

LIMITATIONS AND RECOMMENDATIONS OF THE STUDY

5.1 AIM OF THE CHAPTER

The aim of this chapter is to provide a conclusion with regards to the whole study. There will be a discussion on the limitation of the study, recommendations from the research findings and recommendations for further research. The strengths and weakness of the study will also be considered.

5.2 CONCLUSION FROM THE RESEARCH FINDINGS

The research findings in the teaching of Environmental Studies emphasizes that young learners (grade four learners) need special guidance in citizenship skills. The will to choose a lifestyle and improve its democratic and qualitative character in a dynamic and flexible environment needs to be developed in learners.

It has also emerged that the implementation of the new syllabus has changed from that of a traditional one. According to the new methods, an educator should be a facilitator. The shift has resulted in specific outcomes. The specific outcomes change focus of the education system from one of being only content based to activity based. In this new method learners are supported in developing in a holistic manner as they progress through the achieving outcomes.

Despite the well-founded intentions of national department of education and curriculum planners and the guiding principles, outcomes-based education, has met with criticism. There are practical difficulties which might lead to a clash between ideals and reality. Jansen (1997:104) has remarked that: outcomes-based education must create learner centred activities, and substitute memory learning for understanding. It must develop learners who critically apply and demonstrate what they have learnt in different contexts.

This will not be able to take place in a classroom where an under qualified teacher with 60 children in a classroom designed for 25 learners with no resource material has to teach. This was observed in some of the sample schools where overcrowding and a shortage of resources were a problem.

According to Jansen (1997:111), the new plan offers a narrow, instrumentalist view of knowledge appropriate for classroom teaching. From a different angle some critiques state that the agenda for curriculum 2005 is politically based, and a form of affirmative action to redress the educational wrongs of the past (Henning, 2000). The approaches should rather be combined and the best issues taken from them.

5.3 RECOMMENDATIONS FROM RESEARCH FINDINGS

This was a empirical study using a research design characterized as qualitative contextual, descriptive and interactive. Considering the research problem and findings from the qualitative investigation, the following is recommended:

- there should be intensive workshop programmes for grade four educators in the Northern Province. According to Henning (2000), feedback from these workshops has indicated at least some success, for example, the Northern Cape Province, where learning programmes based on the environment were developed by teachers.
- resource materials should be developed and distributed to different schools. Area offices should supply existing resource material in Environmental Studies to educators.
- environmental projects (such as A hi basiseni, Masakhane etc) and competitions aimed at developing the kind of Environmental Studies that are desirable and practical in the new curriculum.
- there should be programmes which are inquiry based in order to encourage participants to adopt a research stance towards their Environmental Studies practice.
- the unacceptably high teacher-pupil ratio, especially in Black schools, needs to be treated in a more aggressive and practical way than through comforting promises by the authorities.

- the historically disadvantaged schools with little or no resources need to be provided with resources for more effective teaching, and need to be conducive to the learning environment if there is any seriousness in addressing the inequalities of the past.
- Lastly, a good method of teaching Environmental Studies should be taken from the two approaches if the new one does not address all the environmental issues.

5.4 RECOMMENDATIONS FOR FURTHER RESEARCH

In conclusion it may be stated that this research covered only a small section of the broad field of the teaching of Environmental Studies in grade four. This is due to the length of the mini-dissertation. I recommend that anyone can research this topic further.

- 5.4.1 The research was limited to certain schools in the Giyani district. It would be worthwhile to repeat the research in other parts of the country.
- 5.4.2 This research included participants from rural areas. The question arises as to whether the research would have had different findings in urban areas. This could be a valuable research focus.
- 5.4.3 This research was limited to certain grades (grade 4). It could be worthwhile to repeat this research in other grades.

5.5 CONCLUSION

This study reflects the educators' perceptions and the learners' attitude towards Environmental Studies. The literature review section of the study created a theoretical framework within which the research questions were presented. A qualitative research design was used. Data on the educators' perceptions were gathered through focus group interviews. Data was recorded, coded and analysed. Tables and a matrix were used to analyse and consolidate data.

The main aim of this study was to investigate the perception and attitude of both educators and learners, that is, how educators perceive Environmental Studies, and how a better method can be created from the two approaches if the new one is not addressing environmental issues.



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ADDENDUM 01

GUIDE FOR GROUP INTERVIEWS

1. Welcome

2. Individual approach for audio taping the interviews

2.1 Permission to record the in the interview on tape

2.2 Confirmation of confidentiality agreement, the participants understands that their names will not be used in any way no information will be shared that reveals their identity in any way.

2.3 Inform participants that any time during the interview the tape recorder can be turned off.

3. Introduction

3.1 Familiarise everyone.

3.2 What is your name and where do you stay?

4. Opening question

What are educators' and learners' attitude towards Environmental Studies?

5. Questions

5.1 What are the aspects which can be included in the Environmental Studies?

5.2 Is there any contribution to the making of good citizenship.

