

**CURRICULUM RECONTEXTUALISING USING GARDENS FOR THE HEALTH
PROMOTION IN THE LIFE ORIENTATION LEARNING AREA OF THE SENIOR
PHASE**

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Msawenkosi Wiseman Jenkins

SUPERVISOR: PROF. H.B. LOTZ-SISITKA

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ABSTRACT

With a view to understanding how curriculum is interpreted at classroom practice level, the study examined three stories of how the environmental discourse of the National Curriculum Statements (R-9) was recontextualised using school gardens in the Life Orientation Learning Area for the Senior Phase. To understand how the curriculum is recontextualised, I used Bernstein's theory of recontextualisation where he explained how official pedagogic discourse (OPD) (in this case the environmental discourse is first delocated once it is transferred from the field of production (FOP) and relocated in the recontextualising field (where teacher educators and departmental officials mediate the discourse) and in the field of reproduction (FOR) which is the classroom and school. Bernstein explained that as the discourse is delocated and relocated it undergoes transformation. This transformation is influenced by practitioners' prior-knowledge, experience, culture and beliefs and other factors. To understand how transformation of the environmental discourse takes place, Bernstein's conceptual constructs of selective appropriation and ideological transformation were applied to an interpretation of three lesson processes, to explain how the discourse was changed. Each lesson was reviewed in terms of the selective appropriations and ideological transformations which took place.

All three of the lessons observed took place in one school, and as such the study is designed as an interpretive case study where I have tried to make meaning from a rich, thick description of a specific case context. The school is located in Bizana, one of the villages in the O.R. Tambo District Municipality in the Eastern Cape Province, and is currently in the process of implementing South Africa's new National Curriculum Statement (NCS) like all other schools in South Africa. In conducting the research I observed lessons, interviewed the learners and teachers, and a community member and the manager of the SANBI greening project, and I also analysed documents which included the NCS for Life Orientation, and teachers planning documents and learners work produced in the lessons.

I started the study by conducting a document analysis of the NCS, through which I identified dimensions of the Official Pedagogic Discourse. This was used as a framework to review the lessons to understand how the OPD was being recontextualised. The study concludes by discussing the key findings of the study in the form of a set of analytical statements. Some of the findings indicate that teachers have not been given adequate training for understanding and implementing the NCS which affects the recontextualisation process. The study shows that there is a dire need for professional development if the OPD is to be interpreted adequately by teachers so that its implementation at the meso and micro- levels becomes clear and effective.

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DEDICATION

I dedicate this study to my lovely wife Nomvuyo who has had to put up with my continuous absence during the time of conducting this research.

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LIST OF ACRONYMS

- ANC: African National Congress
- AS: Assessment Standard
- CASS: Continuous Assessment
- C2005: Curriculum 2005
- DOE: Department of Education
- DVT: District Visiting Teams
- EEASA: Environmental Education Association of Southern Africa
- EECI: Environmental Education Curriculum Initiative
- EEPA: Environmental Education Policy Act
- EEPI: Environmental Education Policy Initiative
- FOP: Field of Production
- FOR: Field of Recontextualising
- FGP: Focus Group Participant
- GET: General Education and Training
- HIV/AIDS: Human Immuno Virus/ Acquired Immuno Deficiency Syndrome
- HOD: Head of Department
- HSRC: Human Science Resource Centre
- ITEC: Institute of Training and Education for Capacity building
- IQMS: Integrated Quality Management System
- LO: Learning outcome
- MED: Master of Education
- NCS: National Curriculum statements
- NECC: National Education Crisis Committee
- NEEP-GET: National Environmental Education Policy -General Education and Training
- NEPI: National Education Policy Initiative
- NGO's: Non Governmental Organizations
- NMF: Nelson Mandela Foundation
- NQF: National qualifications Framework
- OBE: Outcomes Based Education

OPD: Official Pedagogic Discourse

PRF: Professional Recontextualising Field

Prof.: Professor

RNCS: Revised National Curriculum Statements

RSA: Republic of South Africa

SADTU: South African Democratic Teachers' Union

SANBI: South African National Biodiversity Institute

SASA: South African Schools' Act

SGB: School Governing Body

SMT: School Management Team

TB: Tuberculosis

UK: United Kingdom

UN: United Nations

UNESCO: United Nations Education, Scientific and Cultural Organization

WESSA: Wildlife and Environment Society of South Africa

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 BROAD CONTEXT OF THE STUDY

With the attainment of democracy in the last 13 years, South Africa has had to undergo major social transformation. For forty years prior to 1994, South Africa was ruled by a White minority under the apartheid regime. This regime had far reaching effects on all the aspects of life of South Africans, in general, and Black South Africans, in particular. Blacks were oppressed under the apartheid regime leading to unequal development and underdevelopment in comparison to other racial groups. After the attainment of democracy in 1994 a new Constitution was promulgated which gave cognizance to basic human rights for all South African citizens, including the previously disadvantaged Black majority. Embedded in the Constitution were basic human rights which included the right to education, and the right of all citizens to a healthy environment. The aim of the new Constitution was, among other things, to address the imbalances of the past, particularly social injustices.

In line with environmental goals embedded within the South African Constitution the environmental focus in the NCS (R-9) is articulated in one of the foundational curriculum principles. Through the articulation of this principle, the environmental focus has become an integral part of all eight learning areas in the National Curriculum Statements (R-9). Education in any state system is not value free. It is used and mobilized as an effective social strategy, and is used by the state to bring about social transformation. To achieve the post- apartheid transformation objectives as set out in the Constitution, it became necessary to transform the entire school curriculum to embrace principles of equity and equivalence across the country, as well as to articulate a human rights, social justice, inclusivity and environmental focus in accordance with the transformation objectives of the country. This environmental focus has been supported by the National Environmental Education Project for the General Education and Training Band (NEEP-GET), a project started by Prof. Kader Asmal (the then Minister of Education). The new curriculum (NCS) that has come about as a result of a long awaited democratic dispensation in South Africa means that schools have to change the manner in which teaching and learning used to take place under the apartheid system.

As noted by environmental education teacher researchers such as Ncula (2007) and Mvula-Jamela (2007) implementing the National Curriculum Statement involves a combination of teacher abilities to develop lesson plans that contextualize the curriculum statements, use of learning approaches,

and capacity to plan and assess learning according to the requirements of the Learning Outcome and Assessment Standards framework of the National Curriculum Statement. It also requires teachers to develop critical reflexive skills to review the curriculum and its implementation process.

In the past dispensation environmental education did not occupy a central place in the curriculum. This is evident in the fact that in all subjects taught very little (if any) attempt was made to include environment in lessons. Now that education is being transformed gradually, all Learning Areas have an environmental focus (DoE, 2002a) and it is in this context that my study is framed - during this time of curriculum change and transformation.

Construction of the new curriculum followed a number of clear steps. The first step, immediately after 1994 elections was to iron out variations in the curriculum used by the 17 different education departments. The second step, presented as an emergency intervention while new curriculum policy was being developed, purged the existing curriculum of racially offensive, sexist and outdated content. The third wave of reform shifted the focus away from content to assessment, with the introduction of continuous assessment in schools in 1996. Following this, an Outcomes-Based curriculum was introduced, along with the first version of a new national curriculum, called Curriculum 2005 (C2005), which was initially streamlined and strengthened in 2000 by a Ministerial Project Committee.

The strengthening of C2005 created a National Curriculum Statement (NCS) which is designed in such a way that educators can design lessons that respond to poverty issues through developing learners' knowledge, values, attitudes and skills that can contribute to social transformation. This study critically considers what happens when teachers work with the NCS, with special reference to recontextualising processes at school level.

1.2 MY ROLE AS LIFE ORIENTATION TEACHER AND MY INTEREST IN THE RESEARCH

I am employed by the Department of Education as a School Principal in one of the Junior Secondary schools in the Eastern Cape. The school in which I work is situated right in Bizana. This school offers learning from Grade R- 9. The school has an enrollment of 1259 learners with 35 teachers. Part of my job as a school manager is that of offering a subject, which in this case is Life Orientation in Grade 8, so that I can have at least 5% contact time with learners. Apart from being a school manager, I also serve in the South African Democratic Teachers' Union (SADTU) as a Branch Chairperson. Part of my responsibilities as a leader in the Branch Executive Committee of

SADTU is to assist the Department of Education in facilitating the training of teachers at a district level to interpret and implement departmental policies.

In my Honour's degree I was introduced to environmental education which captured my interest. In my area of operation quite a handful of schools have been offered orchards, vegetable, and indigenous gardens by the South African National Biodiversity Institute (SANBI) through a project called 'Greening of the Nation'. The intention of providing schools with these gardens was to assist teachers to use those gardens as a resource in the teaching and learning process, and to strengthen knowledge of biodiversity in the Bizana area, which falls in one of South Africa's biodiversity hotspots. I have identified that teachers are not making optimum use of the extended classroom resource provided by the gardens in teaching their different Learning Areas. This being the case, learners were deprived of practical learning experiences like learning by doing, and the gardens are a neglected educational resource. To use gardens for teaching will require teachers to engage with and make meaning of the NCS (R-9). Using Bernstein's (1990) framework it is possible to see that an environmental discourse reflecting the new social and democratic principles of post apartheid is firmly part of the Official Pedagogic Discourse (see section 1.3 below). I was interested in how this discourse translates into classroom practice, and as such I studied three different recontextualising stories in my school. I examined how this discourse is translated and recontextualised by teachers. This was done through involving teachers in planning their lessons, observing their practice and reflecting on what happened during practice.

The Province is currently experiencing significant problems with the school nutrition programme; consequently the role of school gardens becomes more significant in contributing towards poverty alleviation, by exposing learners to skills to produce vegetables. It therefore has potential for teaching learners about nutrition and healthy lifestyles, which are both covered in the Life Orientation Learning Area.

My interest as an educator is to investigate firstly how gardens can be used as a resource in teaching Life Orientation in the Senior Phase and secondly how delocation and relocation of the Official Pedagogic Discourse takes place in the Field of Reproduction (that is the school) as this is my sphere of operation. I am also keen to understand how teachers are using gardens as a resource to appropriate certain aspects of the pedagogical discourse as determined by their knowledge and experience. This recontextualising process is the focal point of my study. I am interested in developing a deeper understanding of how teachers are interpreting and translating the environmental focus into appropriate classroom pedagogy.

1.3

STRUCTURING OF THIS STUDY

This study draws on some of the theoretical concepts of Basil Bernstein which focus on recontextualising of the Official Pedagogic Discourse (OPD). Studying Bernstein's theory has helped me to understand how knowledge and policy texts move from one arena to another. Bernstein's work provides insight into the rules and procedures via which knowledge is converted to classroom talk.

Bernstein is of the view that there are three spheres in which pedagogic discourse takes place, namely:

- **Field of Production:** This is the field where new knowledge is constructed and recontextualised in the form of OPD (primarily by knowledge producers and Ministries of Education).
- **Recontextualising Field:** This is a field where the Official Pedagogic Discourse (in this case the NCS) is appropriated from the field of production and is transformed into pedagogic processes and practice (e.g. teacher education, textbook writing). Bernstein distinguishes between an Official Recontextualising Field (populated by state education agents such as curriculum advisors) and a Professional Recontextualising Field (populated by other educational professionals, teacher educators, NGOs and textbook authors).
- **Field of Reproduction:** This is the field where the Official Pedagogic Discourse is used to construct pedagogic practice. Some times teachers use the OPD directly (Wilmot, 2005) and they become primary recontextualisers, and other times they draw on other recontextualisation materials and processes (e.g. textbooks) that mediate the OPD. In this study I was interested in how teachers were using the OPD directly, as the Department of Education policy (DoE, 2002) requires teachers to develop their own Learning Programmes, Work Schedules and Lesson Plans drawing on the OPD.

In this study the NCS represents the Official Pedagogic Discourse. Bernstein's construct of ideological transformation and selective appropriation has been used to understand how the OPD is delocated and relocated through the teaching of Life Orientation in the Senior Phase.

1.4 RESEARCH QUESTION AND GOALS

In the light of this research interest, I defined the following research question to guide the study:

How are school gardens used by teachers to recontextualise the Official Pedagogic Discourse of the Life Orientation Learning Area related to health promotion in the Senior

Phase?

To address the research question, I set up the following goals to provide further guidance for the study. They are:

- To review the Official Pedagogic Discourse related to health promotion in Life Orientation Learning Area Statement,
- To identify expectations and possibilities for using school food gardens in the Life Orientation Learning Area,
- To investigate the implementation of environmental lesson plans for Life Orientation,
- To review the lesson planning and implementation to identify the delocation and relocation processes involved in curriculum recontextualising.

1.5 CONTEXT OF THE RESEARCH SITE

This study took place in the Eastern Cape in a small village called Bizana, in an urban school. This school has an enrollment of 1259 learners and 35 teachers, 10 of which are males. The school has a functional School Governing Body (SGB), a Principal with 2 Deputies and 4 Heads of Departments (HOD). Bizana is located in the Albany-Maputoland Biodiversity Hotspot, and is a centre of biodiversity endemism in South Africa. It is also located in what was a former 'homeland' area under the apartheid government's separate development planning framework. The town of Bizana serves a large rural area and is generally characterized by communities that are said to be poor (in monetary terms).

1.6 CLARIFICATION OF TERMINOLOGY USED IN THIS DISCOURSE

Before moving on to an overview of the study, I briefly clarify some of the concepts used in this study.

Recontextualisation

In this study recontextualising refers to the transformation and the embedding of Official Pedagogic Discourse within a discourse of social practice (classroom practice). The Official Pedagogic Discourse is constructed as new knowledge or policies are produced – normally by university knowledge experts in conjunction with the Education Departmental Officials at the level of the production (national level). Bernstein provides us with insights into how dominant ideologies at the macro-level translate to pedagogic discourse at the meso-level and pedagogic practice at the micro-

level, a process which he describes as recontextualising.

Discourse

Discourse is viewed as the systems of meaning that we ascribe to texts (Heck, 2003). The following is a description of three distinct ways through which meaning can be ascribed to texts:

- Review a piece of text that is read to identify the different discourses as evidenced by the words used,
- Analyse the processes through which the text is developed and interpreted to examine the development of particular words, ideas or images, and/or
- Review the social and historical location of the production and use of the text and the regulated practice that takes place within particular social situations.

In this study I consider the context of text production (i.e. how the NCS was produced) in Chapter 2 by giving a contextual and historical background to the NCS and its construction. In Chapter 4, I review a piece of text (the Life Orientation Learning Area Statement) to identify the different discourses in the OPD (NCS Life Orientation), and I examine how teachers use the text to guide their classroom practices.

Appropriation

This is the assimilation of concepts into a governing framework, assimilating new ideas into schema. People use these schemas to organise their current knowledge and provide a framework for future understanding. Bernstein uses this concept more sociologically and explains social appropriations that occur as a result of ideological interests and associated transformations. Ramsarup's (2005) study shows how teachers and other educators selectively take essential aspects of the Official Pedagogic Discourse which in their view are most relevant and desirable for learners to understand and internalize or selectively appropriate the discourse to align with their existing schema, or prior knowledge and experience.

Ideology

Ideology can be described as a linked set of ideas and beliefs that we use to guide or frame our discursive practice, which often manifests as organizing structures. In this study I use the notion of ideological transformations as described by Bernstein to mean transformation of the OPD based on ideas and beliefs that are strongly held, or unconsciously practised by teachers.

Delocation

The process of recontextualising entails a principle of delocation which involves selective

appropriation and ideological transformation of a discourse from the field of production.

Relocation

As the discourse is recontextualised a principle of relocation is used to explain what happens in that particular discourse. This transforms the OPD to a legitimate discourse within the recontextualising field. Bernstein (2000:116) posited that in the processes of delocation and relocation the original discourse undergoes ideological transformation as influenced by history, experience, prior-knowledge and beliefs and values of the practitioner. This therefore means that national curriculum in schools is not so much 'reproduced' as 'produced' by teachers in the Field of Reproduction (i.e. Schools) (Apple, 2003 cited in Ramsarup, 2005:10).

Having clarified the concepts used in the study, I now provide an overview of the different chapters that make up this study.

1.7 OVERVIEW OF CHAPTERS

Chapter 1 forms an introduction to the study. In this chapter I outline the broad context in which this research took place as well as the specific research site. The chapter also introduces the research question and goals. It also clarifies the key concepts used in the study, and gives a brief overview of the three recontextualising processes as described by Bernstein (2000:116) and indicates my role and interest in the study.

Chapter 2 provides a broad theoretical and historical context for the study. To get a better understanding of how school gardens can be used to teach Life Orientation in the Senior Phase, I start by exploring the development of environmental education with reference to countries like Latin America, Australia and the United Kingdom. I then explore gardening and cultural practices and stereotypes, history of curriculum trends and transformation, history of gardens and conclude with further discussion on the theoretical framework introduced here in Chapter 2.

Chapter 3 describes the methodology and orientation within which this study was conducted. This chapter further explains the research design decisions through describing the interpretive case study methodology used in this study, and its coherence in relation to the research question and goals. Tools used to generate data are described. The chapter further discusses how the data was analysed. Ethical issues, trustworthiness and validity are also discussed broadly in this chapter.

Chapter 4 starts with an analysis of the Official Pedagogic Discourse in which I identify key

features of this discourse with specific reference to the Life Orientation Learning Area curriculum statement (DoE, 2002a). The chapter then goes on to use thick description to describe three recontextualising processes in three different Life Orientation lessons in the Senior Phase in my school, taught by three different teachers. Evidence of selective appropriation and ideological transformation as identified in three recontextualising stories are highlighted in this chapter. The framework identifying the features of the OPD is used to describe these stories, to enable me to identify continuities, changes and discontinuities with the OPD. This helped to highlight selective appropriations and ideological transformations. The chapter provides a critical analysis of what actually took place in the study.

Chapter 5 discusses the findings which were presented in Chapter 4. These findings are articulated in the form of analytical statements, which address the research question. The findings highlight patterns and trends associated with the recontextualisation stories in Chapter 4. The findings discuss the potential for using gardens in Life Orientation, the selective appropriations and ideological transformations identified in the study, and factors influencing the recontextualisation process, as well as learners and teachers views on using the school gardens. The chapter shows too that the complexity of the OPD influenced the recontextualisation process.

Chapter 6 reflects briefly on the research process and presents a concluding summary for the study. This chapter discusses what I have learned from the study and how it has helped me to understand the implications for using school gardens for improved teaching and learning. This chapter also presents recommendations within the case context of the school, and identifies some aspects for further research.

1.8 A NOTE TO THE READER

While this study is critical in the sense that it unpacks and tries to understand issues associated with curriculum transformation, it does not try to 'blame' or cast doubt on teachers' abilities, practices and attempts to implement the NCS and its discourse. It rather tries to reflect the realities of curriculum implementation in the schools and to inform ways of improving teaching and learning. The research does not suggest that there is one way that the OPD could have been interpreted. All I have attempted to do in the study is to describe how teachers at the classroom level appropriate and transform environmental discourse as stated in the Official Pedagogic Discourse. It is hoped that this knowledge will be emancipatory, in the sense that it will enable me, and other teachers to better implement the NCS and thereby improve the quality of education we offer to learners in our schools.

My analysis has been rooted in the field of environmental education. In order to work with some useful conceptual tools for curriculum research and provide a useful lens to view and interpret the three recontextualising stories, I drew on Bernstein's theories. As this is only a half thesis Master of Education (MED) study, the intention was not to critique this theory but to explore its sociological messages and possibilities. In this sense, the research is similar to earlier work by Ramsarup (2005) who investigated recontextualising processes in Bernstein's three fields (the ORF, the PRF and the FOR) using his concepts of selective appropriation and ideological transformation. My study, however, focuses only on the recontextualisation processes in the Field of Reproduction (the school). I was therefore able to draw inspiration from Ramsarup's (2005) study, and classroom based curriculum studies conducted within this research programme such as those by Ncula (2007) and Mvula-Jamela (2007) both of whom studied how school gardens can be used for curriculum purposes.

CHAPTER 2

HISTORICAL AND THEORETICAL CONTEXT OF THE STUDY

2.1 INTRODUCTION

This chapter starts off by presenting a broad perspective on some of the issues relating to environmental education through reference to Latin America, Australia and the United Kingdom. This review identifies three inter-related issues that have relevance to this study, which I have used to structure the rest of the chapter. Following the international review, I provide a discussion on gardening and cultural practices associated with gardening, as this may shed light on the aspect of bias in implementing environmental education. In particular, I outline the gender based disparities or gender roles associated with gardening. I then discuss the history of education in South Africa so as to shed light on some of the difficulties of including environmental education in formal education systems and I then discuss the NCS, South Africa's statutory curriculum and its assessment framework, which are new to most teachers in South Africa. I discuss the NCS historically, describing the curriculum trends that occurred before and after the democratic dispensation, and the policies that govern education today. The chapter concludes by discussing Bernstein's theory of Pedagogic Discourse in more detail, which has been employed in this study (See Chapter 1) to provide perspective on curriculum processes in schools.

2.2 SOME INTERNATIONAL PERSPECTIVES

2.2.1 Environmental Education in Latin America

Environmental education was perceived as a pedagogical field identified with schooling as far back as 1970 (Stevenson, 2007). The inter-disciplinary, multi-faceted connotation of an action oriented approach to environmental education was recommended as a consequence of a number of conferences including Tbilisi and Belgrade (these are early UN Conferences outlining principles and orientation of environmental education) (Irwin & Lotz-Sisitka, 2005). However, implementation of these approaches has been difficult in formal school systems around the world, as reported by Stevenson (1987). In Latin America, these difficulties are reported to be the result of inadequate teacher training as well as ideological difficulties with the school system that does not easily accommodate innovation (Reigota, 1999, cited in Stevenson 2007). Stevenson (1987:77) argued that "It is not surprising that teachers fail to engage students in critical and reflective

analysis of environmental issues” as a result of serious teacher-training problems. The difficulty of including environmental issues in schools using classical parameters of formal education as reference is confirmed by Reigota (1999, cited in Stevenson 2007). This he argues, “does not only dishearten enthusiastic teachers but it also demotivates them as they are forced to oversimplify [the issues]”. (Francalanza ,2004:63 cited in Stevenson, 2007:161) argues that:

the tendency to simplify renders environmental education teaching activities to simply mean excursions, interpretative walks, waste material collection, reforestation campaigns, museum and zoo visits and the commemoration of public holidays just because teachers lack proper training in the proper handling of practical learning in relation to the goals of environmental education.

This tendency to simplify environmental issues was also found in South African research in the context of the National Environmental Education Project’s pilot project (Lotz-Sisitka & Raven, 2000).

2.2.2 Environmental Education in Australia

Environmental education in Australia originated as a result of the promotion of nature and outdoor study, essentially in primary schools, and later the conservation movement. Nature study gained prominence through the school camps movement in Australia as advocated by (Reid and Strom, 1980, cited in Stevenson, 2007). The primary purpose of nature study was and is still to develop an understanding and appreciation of the natural environment through first-hand observations. Stapp (1974, cited in Stevenson, 2007:140) posited that “... the conservation movement, which grew gradually during the first half of this century, introduced a concern for the preservation of species and areas of natural significance through sound management”. Conservation education has focused mainly on helping the public to better understand the importance of natural resources in society and to generate citizen support for natural resource management programmes (ibid). In the 1990’s Australia was at the forefront of a socially critical movement in environmental education, where educators such as Robottom (1987) and Fien (1993) argued that environmental education should be about social change processes.

The implementation of environmental education in developed countries is seen to have been skewed towards schools (Giolitto, 1907; Gough, 1997; OECD, 1997; cited in Stevenson, 2007). Stevenson (2007) indicates that these authors are of the view that during the last thirty years, environmental education incorporated into the school curriculum has been limited in scope. It has also been troubled with biases and distortions that have not facilitated a clear understanding of the complex nature of the environment or sustainable and prudent use of natural resources.

2.2.3 Environmental Education in the United Kingdom

In 1991 the UK government committed itself to implement the provisions and standards of the UN Convention on the rights of the Child with some ramifications. Goodall (1994:93) confirms that "... these rights aimed at ensuring that every child and young person, up to the age of eighteen years is cared for". The intention was to ensure that all children and young people have the opportunity to 'enjoy the highest attainable standard of health'. In 1992 the Earth Summit held in Brazil committed many governments, including UK government to implement 'Agenda 21'. Subsequently the UK government started producing reports on education, training public awareness covering progress towards sustainable development in the UK whose first sections were published in January 1994 (*ibid.*), showing the influence of international events on national policies and actions. Critically assessing environmental education trends in the UK, (Gayford cited in Harris & Blackwell, 1996:9) argued that:

the significant problem for environmental education in most of the UK and elsewhere in the world is that there is a preoccupation with the statutory curriculum and the assessed elements of learning which makes it difficult to move the thinking of senior managers and planners away from some of the simpler and somewhat outmoded ideas of the nature and purpose of environmental education.

Use of school gardens became a popular approach to environmental education in the UK in the 1980's and 1990's with the introduction of programmes such as the Learning through Landscapes Project and the international Eco-Schools programme (*ibid.*). Reports by researchers (Elliot, 1993; Alexander et al., 1995; Canaris, 1995; Halvvorsen, 1995; Morris et al., 2000; Brynjegard, 2001 – all cited in Dillon et al., 2003) suggest that studies to explore gardens in the curriculum in the UK indicated a positive impact on the development of the curriculum and social relationships. These reports also indicated that some school programmes showed a marked increase in community and parental involvement (*ibid.*). Research reports cited above represent secondary sources.

Viewing what the current literature presents, (Gayford cited in Harris & Blackwell, 1996: 9) argues that in the late 1990's, environmental education in the UK was characterized by a model of environmental education which is constituted by three interlinking forms described as

... education *about* the environment which is concerned with developing knowledge of environmental principles and processes and education which involves learning *in* the environment, where the environment is used as a source which may be linked to an extended classroom and the emphasis is on developing skills and awareness. The third strand is education *for* the environment which is aimed at addressing values.

This tripartite model of environmental education has been influential in the UK, Australia (Fien, 1993) and elsewhere, including South Africa (O'Donoghue, 2001).

This brief international review of environmental education in three countries has raised a number of issues relevant to this study's focus. These include:

- The difficulty of including environmental issues in schools using classical parameters of formal education, which leads to simplification,
- Environmental education has been influenced by the conservation movement (and other ideologies) which create bias in the ways that environmental education curriculum is interpreted and framed,
- Environmental education can be constrained by a preoccupation with the statutory curriculum and assessment.

These issues will be discussed in more detail with reference to the historical and contemporary context of environmental education in South Africa, particularly as this pertains to using school gardens.

I begin with a discussion on gardening and cultural practices associated with gardening, as this may shed light on the aspect of bias in implementing environmental education. I then discuss the history of education in South Africa as this may shed light on some of the difficulties of including environmental education in formal education systems and I then discuss the NCS, South Africa's statutory curriculum and its assessment framework, which are new to most teachers in South Africa.

2.3 GARDENING AND CULTURAL PRACTICES AND STEREOTYPES

Evidence is found in the work of Visvanathan, Duggan, Nisonoff and Wiegiersma (1997) that women were secluded in African agricultural households. Three basic variants of household food production systems are cited in the above work and all three indicate that there were differentiated gender roles in the food production system. The major role of men was that of producing food whilst women were responsible for processing and trading (Visvanathan et al., 1997). Women were prevented from engaging in field work, while young girls and older women were allowed to help on male owned fields, and married women were allowed to cultivate small fields. Even in Bizana today women are expected to work in small scale food production. This is based on the cultural assumption that they are physically weaker than men and cannot perform heavy duty in terms of food production.

Mukute (1999:17) describes a typical rural situation:

A woman in a rural area of Uganda is about to go to the garden to till. The husband is interested to be with his wife. The woman puts a child on her back, a hoe on her shoulder and a stool for her husband in her hands. When they get to the garden, the husband sits on the stool whilst the woman digs and weeds. Traditionally the husband carried a spear, a knob kerrie and other weapons. His duty was to protect the family, and to carry other tools would have compromised his position. What is regrettable is that even when lions are no longer a threat and attacks by other people is no longer a threat; men still behave as if they were.

The same scenario still exists in the rural area of Bizana where my school is located, and these cultural practices may bias the way gardening activities are seen and taught. This situation is exacerbated by gender-based disparities in educational access and literacy. Dankelman and Davidson (1988:123) argues that even though women's access to education has doubled in the past years they still form the majority of illiterates. He further argues that in many countries women do not attend school beyond primary level. He goes on to say that there is evidence in terms of the enrollment ratios in primary and secondary schools which suggest that girls have much less access to formal education than boys, who, in some countries, attend school ten times more frequently than girls of a similar age (see also UNESCO, 2005). It is further reported that girls drop out from school three times more than boys. In cases of financial crisis girls are more vulnerable as they are the first to be asked or forced to leave schooling.

In my culture educating girls was regarded as waste of resources as their place was seen to be in somebody's kitchen somewhere. Even now very few people invest in educating girls as they are expected to get married at some stage and take that investment away with them. Dankelman and Davidson (1988: 3) posited that “in terms of agriculture, women in the Eastern parts of Southern Africa played a crucial role in production; be that as it may they have been called the poorest of the poor”. He further argues that about 75% of the world's population is constituted by poor women who fell victims of illiteracy and unemployment.

Mukute (1999:17) is of the view that women are responsible for productive as well as reproductive roles. The former is often valued in monetary terms, the latter not. An example of the latter is fetching water and cooking for the family. He notes (ibid.) that “In East and Southern Africa, 60-80% of domestically produced food comes from women. Rural women produce 75% of farm labour and 60% of farm derived income. And to survive, most developing countries have had to put more land under production for food and cash”.

Mukute (1999) reports that work was traditionally distributed between husband and wife if the husband was a full time farmer. He explains that husbands and wives might have had separate fields or shared the same fields. Men were often considered necessary for ploughing and females for gathering firewood, wild fruits, vegetables and tendered children. Both women and men took responsibility for planting and protecting trees although men took on the heavy work of clearing and destumping the bush if fields had to be made. Where there were no men, women took the responsibility for clearing the land. This still applies largely in the outskirts of Bizana.

He reports further that patterns of decision-making varied considerably from community to community. Key issues included deciding on the proportions of food and cash crops to be grown, whether grain should be stored or sold and what investments should be made in ploughs and tree planting. Men made bigger decisions whilst women carried out day to day work. In most rural communities men tended to be over represented in decision-making positions. Little was known however about the role women played in informal decision-making, it might well be that here age was more important than gender (ibid.). In some areas of Bizana, men are responsible for making major decisions. In fact women seldom attend meetings and even when they do attend they remain passive because the culture does not really allow them to argue with men.

Both men and women as different members of the household used to individually own livestock, although the animals were often managed together in the same herd. Both men and women took responsibility for herding. Women were responsible for small stock such as chickens, ducks, goats, sheep and pigs. Today, most families who grow food do so because their incomes are low and vegetables are expensive (Asafo-Adjei, 2004). In Bizana and elsewhere women with children, especially those with large families, find it necessary to grow food, although for many, it represents significant additional work (Mukute, 1999; Asafo-Adjei, 2004). Dankelman and Davidson(1988:108) commented that “most of the cultivation is done by women: in one survey of rainy -season gardens, wives were solely responsible for preparation of the ground in 44 percent of cases, planting in 59 percent, harvesting in 65 percent and drying and storage of the produce in 82 percent.” (Mukute, 1999) posits that more and more women are finding themselves managing their households single handed due to migrant labour patterns and other factors such as the impact of HIV/AIDS on families in Southern Africa. It is reported in Botswana for example, that women headed 43% of all rural households (ibid). In some cases the man is away for work, in other cases, the woman is a widow or a divorcee. Often these households are poor since the women have many dependents and keeping the family going is difficult, because in areas of labour migration, it is not easy to get hold of labour or draught animals (ibid.). I cannot agree more with what Mukute says, as this scenario also applies in Bizana as well, due to the fact that many men are employed in the

mines, while HIV/AIDS is also taking its toll on families, often leaving women as the sole caregivers.

Dankelman and Davidson (1988:17) argued that, despite the situation that women find themselves in, Government and NGO programmes tend to favour male farmers. The majority of programme managers are men and despite gender training this is likely to affect the way the programme relates to women farmers. He further argues that “where women remain in subsistence farming their central position is usually ignored, even by the development professionals”. Thus training and agricultural extension programmes tend to marginalize women. His report suggests that out of a study of 46 African countries it became clear that less than 4 percent of extension workers who advise women are themselves women (ibid.). Hallows (1993:194-195) describes a situation of women as “being dominated by men despite the fact that the centrality of women is remarkable in all the literature and the experience of successful programmes in relation to the environment, development, primary health care and population”. He further argues that women are exploited when it comes to employment in that it is not easy for them to access decent jobs, even when they get employed, they are the lowest paid, as they usually work as labourers or domestic workers. (Mukute, 1999) is of the impression that women farmers are in a way downtrodden and marginalized.

This has implications for teaching gardening in Life Orientation Learning Area in Bizana because gardening is viewed as the most humble activity and nobody really aspires to be seen to be having anything to do with gardening. Due to this situation, few people want to participate in agriculture and the sustainability of rural agriculture is at stake. South Africa faces an enormous challenge to instill interest and motivation towards farming in its youth. In South Africa today both boys and girls tend to have negative perceptions about farming. Farming as well as gardening is viewed by most youth as a “humble” way of making a living. Parents often say, “If you play with your education, you'll end up on the farm.” Our children hear it from us that farming is not a career to be proud of, but one resorted to if everything else fails (Mukute, 1999). Creating a supportive environment that grows positive attitudes towards gardening and agriculture is therefore key to successful Life Orientation in rural areas of South Africa, if it is to help address immediate poverty issues, and if it is to address some of the gender disparities that have been outlined above.

The Eiselen Commission on Native Education (Hartshorne, 1992) in the Union of South Africa of 1951 reported that gender stereotypes were also advanced by the Bantu Education. Men were regarded as the heads of families and as being stronger than women, hence boys were assigned to do agriculture whilst girls had to choose between home economics and needlework. Agriculture

was mainly done in Black schools and as such portrayed an impression that Blacks were to assume a subservient role to the ruling White race. Another contributory factor to the negativity of our youth towards gardening was the manner in which punishment was administered. Because of the low status given to gardening, it was often used as a source of punishment for learners in the schools (NMF, 2005; Ncula, 2007). In order to remove this stigma that gardening has attained, the current curriculum has adopted a principle of inclusivity (NCS R-9), in an attempt to bring about transformation in the system. The principle of inclusivity is also related to human rights, social justice and a healthy environment in the NCS (DoE, 2002a), which is related to the South African Constitution which enshrines the right to a healthy environment in the Bill of Rights (see Chapter 2). The Constitution RSA, (1996:11) states that everyone has the right:

- to an environment that is not harmful to their own wellbeing
- to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that:
 - prevent pollution and ecological degradation
 - promote conservation and
- to secure ecological sustainable development and use of natural resources while promoting justifiable economic and social development.

As indicated in Chapter 1, the NCS in South Africa has been heavily influenced by the South African Constitution and its values and objectives for social transformation. As such it is not only the history and culture of gardening and rural agriculture that is likely to influence the implementation of environmental learning in school gardens in the Life Orientation learning area, but also the history of education in South Africa and the NCS, which I now describe in detail.

2.4 EDUCATIONAL HISTORY

2.4.1 Pre-colonial forms of Education

Over our long history in the Bizana area, we have experienced many different educational systems. We had what was known as pre-colonial education which was very informal. It was exercised by all members (usually the elders) of the community. Education was therefore a community-based activity. The head of the community was head of all things. The only formal schools or learning sites were the initiation schools. Through this system of education, the elders of the community passed on the culture of the people in cultural learning institutions such as the initiation and circumcision schools known as *Intonjane* for young girls and *Ulwaluko* for young boys.

Education was aimed at guiding learners towards adulthood and self-sufficiency, and was through story telling with a moral or lesson. Education and social regulations were communicated by word of mouth from generation to generation by means of story telling and traditional and other riddles (*orayi-rayi*). Learners learnt through observing their elders and the skilled, and aspects of culture were represented through drama, handcraft, cooking, farming, medicine (*amachiza*), and hunting. Socialization of children occurred through participation in the culture of the society (see also Christie, 1985), and religious beliefs and practices which were based on an African tribal perspective. The cosmology followed a holistic view of the interdependence of nature and humankind, although human environment relationships were not always harmonious (e.g. during droughts etc).

Parents were responsible for their children and indeed for all the children in the community. The home was the main form of socialization. At home, tolerance, respect, endurance and choice were determined by parents who took absolute control over their children. Religion (*inkolo*) was most important and was based on beliefs in rites and rituals, belief in Supernatural being (*uQamata*), and belief that the ancestors were a go-between between the living and *uQamata*. The approach was top-down- approach from the 'tutor' or parents to the child, who was never consulted. This kind of education would be seen as being undemocratic today since children had no say they were told what to do and could not argue. Respect for your elder was emphasized and was seen to be extremely important. It was upheld by all and the penalty for being disrespectful was severe. From my personal experience children would never look directly in their elders' eyes when speaking to them, because that was viewed as being disrespectful (Gwabavu, 26 July 2007, pers.com).

2.4.2 Colonial Education

Colonial education was introduced with the arrival of the first missionaries, and formal education existed only on a very small scale, and only few boys and girls were taught the basic skills at primary schools. Most schools were attached to the church or mission institutions. In the Eastern Cape, to mention but a few, we had mission institutions like Mfundisweni in Flagstaff, Palmerton in Lusikisiki, Ludeke in Bizana, Shawbury in Qumbu, Clarkbury in Engcobo, Mt Hargreaves in Mt Fletcher and Clysdale in Umzimkulu. If parents were literate they taught their children at home (Guda, 20 May 2007, pers. com). Kallaway (2002: 9) argues that "missionary education took the form of compulsory boarding schools, which were sited a distance away to ensure that children would grow up relatively free of the influence of their parents, home culture, indigenous language, and local community". He further argues that curriculum was uncompromisingly "European" in its content and pedagogy in that it seldom if ever left space for indigenous knowledge or for the voices

of indigenous cultures to be heard and engaged in formal educational contexts. In the case of rural South Africa the curriculum was so designed such that it prepared blacks for servitude (Christie, 1985). Education policies were based on those of the mother country and the aim of missionary education system was to propagate Christianity, to instill western norms and values and the western form of rule. Most teachers in the mission schools were Africans who were under-qualified and only able to provide a rudimentary elementary education (Guda, 20 May 2007, pers. com).

The curriculum was narrow and based on the western classical curriculum and did not allow training in life skills or for jobs (Christie, 1985). On a minor scale weaving and bricklaying were introduced. For instance in Eastern Pondoland, Mfundisweni was one of the centres for bricklaying. Education prepared the learner for manual labour. This is best summed up by a statement that N.J. Le Roux made in Parliament in 1945 “Schools should not give natives an academic education, as some people are prone to do. If we do this, we shall later be burdened with a number of academically trained Europeans and non Europeans, and who is going to do the manual labour in this country”? (ITEC, 1998)

The curriculum emphasized reading, writing and arithmetic and the medium of instruction was English or Afrikaans. Education for the Africans was designed in such a manner that it would not be possible for them to compete either socially or economically with the white minority (Christie, 1985). Employment criteria for African teachers by the colonialists were based on the Minister of religion and the teachers' adherence to the norms and criteria of Western culture (ITEC, 1998). Acceptance and practice of Christianity put people in a position of inferiority as learners and not leaders (Ndunge, 25 August 2007, pers. com).

The colonists had required teachers to exercise certain roles which they had to play at school, church and community, such as to interpret in the court, to teach at schools and follow the Bible strictly. Failure to comply with these regulations or contravention of religious norms and values led to dismissal and there was no right of appeal. The responsibility for education was taken away from families and the communities and put into the hands of the 'Church' and 'experts' (Christie, 1985).

As a result western religion became a prerequisite for education. Traditional beliefs that used to hold society together were eroded as Christianity was put in its place. There were political manipulations that Christianity introduced, which were based on the western powers rather than the traditional powers. My experience is that its effect divided and undermined the existing cultures. The missionaries tried to change the culture of the people and superimpose the culture of the Western powers - What was called a "civilizing" policy by Sir George Grey (ITEC, 1998).

Eventually this education took the form of racially divided Provincial and National systems – education systems that standardized a differentiated education for Black and White. Each system was separate with a separate aim and Black education was aimed at keeping the African at a lower subservient level instead of nurturing leadership skills (Christie, 1985).

2.4.3 Pre-Apartheid Education (1910-1948)

Education for African children was mainly in the form of state aided mission schools under the control of a missionary manager. During this period local needs and differences were not taken into account. Education in this stage was still not compulsory except for the church-goers' children but there was an increase in the number of African children attending schools. This number, however, was still very limited, as statistics show that 70% of African children did not attend school (ITEC, 1998). Many could not attend due to lack of facilities.

This period saw the introduction of Departmental Visiting Teachers (DVT's) who saw to it that effective teaching and learning happened in schools (ITEC, 1998). This system ensured that the dominant culture was enforced, and eventually this created an elite black middle class known as the *intelligentsia*, who are now associated with the ruling class. The vast majority of black students, however, received an inferior education ITEC (1998). In Bizana schools were visited by inspectors and their approach was perceived to be judgemental. Since schools were attached to the church, parents and learners had to abide by the church policies. As schools were still governed by missionaries, parents and teachers had little or no say in their children's education. For instance in the Eastern Cape Lovedale Mission school only formed a Governing Council and a Student Representative Council in 1946 (ITEC, 1998).

During this time limited parent protest emerged. Parent organizations protested against principals that formed the basis of education. Parents also wanted the right to have a say in the education of their children (Guda, 20 May 2007, pers. com).

2.4.4 Apartheid Era Education

South Africa experienced a severe entrenchment of inequality of Black and White education during this era. At this time the African population attended missionary or church schools. The first apartheid State President of the Republic of South Africa (Verwoerd) felt threatened by the fact that Blacks were attending church schools. He was of the view that Mission schools were turning Africans into “Black Englishmen” (ITEC, 1998).

To counter-act this, the Bantu Education Act of 1953 was promulgated and it assumed control of African public education. This Act further entrenched inequality. Mission schools lacked funding and as a result they closed down. During the apartheid era, White schools were initially funded 14 times more than Black public schools (in 1975-76), after which the gap narrowed to some extent. By 1982-3 the gap was 1:8, although the figures from 1975 onwards did not include the 'independent homelands', which is where the most neglected schools were situated (Christie, 1985: 110, 111). As a consequence Black schools had to function with inadequate resources and this compromised the quality of education for Black South Africans. Black students were not taught in their mother tongue whereas Whites were taught in English and Afrikaans. Schooling was made compulsory for Whites only, with compulsory education introduced for Coloured and Indian people later on.

As we know education is a highly contested terrain and is not value free. The state used it to promote apartheid policies. Because of the repressive nature of those policies Black students eventually revolted against the medium of instruction and inferior quality education and in 1976 education became a site of struggle, marked most sharply by the Sharpeville Student Unrest (Christie, 1985). This resulted in the People's Education movement which argued for curriculum changes in schools, and demanded educational equality. According to (Christie, 1985) and (Kraak, 1999), the People's Education Movement was influential in setting the agenda of learner-centred education, and a curriculum based on principles of equity and national equivalence. The People's Education Movement created a formal structure called the National Education Crisis Committee (NECC) in 1986 (Christie, 1985), which later led to the National Education Policy Initiative (NEPI). These structures worked to create new policy formulations prior to, and following the unbanning of the ANC in 1990 when it was clear that a new government would replace the apartheid dispensation. The NEPI policies were also based on the assumptions that all South Africans should have equal access to education and their policy proposals supported these principles (NEPI, 1993). With the advent of a new democracy in 1994, the ANC produced a White Paper on Education and Training in 1995 (RSA, 1995) based on its educational policy research. This White Paper on Education and Training was influential in that it introduced a National Qualifications Framework and an outcomes-based education system, and was based on principles of access, equity, and redress. This provided the building blocks for a national statutory curriculum after 1994.

2.5 EMERGENCE OF A NATIONAL STATUTORY CURRICULUM AND

ASSESSMENT STANDARDS (POST 1994)

2.5.1 Background information

As indicated in item 2.4.4 the status of the current education system in South Africa has been influenced by the rapid transformation that was sparked by the student riots of 1976. This happened because the pre-1994 education system was characterized by resistance to the injustice of apartheid that made up the social fabric of society. The post-apartheid educational changes were also influenced by the fragmented education system involving no less than 17 education departments based on different racial groups, provinces and status in society (Naiker, 1999). This system undermined the values of a national education system as it was based on fundamentally unequal frameworks and approaches, and has resulted in economic differentiations between those that are well educated (the haves) and those that are not well educated, who tend to be the majority of the black population living in rural areas, who also bear the brunt of poverty today.

Thus, the new educational dispensation was strongly shaped by a politics of transformation and nation building. It was also characterized by negotiations in unifying a fragmented and unequally segregated education system into one national system. The need to establish a national statutory curriculum led to the introduction of Outcome Based Education and a National Qualifications Framework (RSA, 1995) as indicated above. As reported in Chapter 1, some immediate processes were put in place to reduce the worst racial stereotyping from the curricula and materials while other progressive policies such as continuous assessment were introduced and a more comprehensive curriculum development process took place heralded by the introduction of C2005 in 1997. The curriculum development process was a stakeholder-based curriculum reform process and involved major national stakeholders in the process, including human rights education groups and the Environmental Education Policy and Curriculum Initiatives (Lotz-Sisitka, 2002).

The introduction of a national statutory curriculum in 1997, signaled the ANC led government's commitment to the creation of a single unified and integrated education system and the eradication of the structural and institutional divisions of the past (RSA, 1995). According to the White Paper on Education and Training (ibid.) an integrated approach to education and training was to be one of the vital principles that would lead and direct educational provision in a new educational dispensation. This led to an education system led by National government (where policy is made and proclaimed), and implemented through a system of 9 Provincial governments (who are responsible for policy implementation). The central 'unifying factor' in the education system across these 10 departments is the statutory curriculum and other national policy instruments such as the

South African Schools Act (SASA, 1996). A major objective of the new government was to deracialize the education system and to eliminate from public schools and universities any form of discrimination or criterion based on ethnic origin.

Thus, the first National Curriculum ever implemented in South Africa, called Curriculum 2005, (C2005) was launched in March 1997, with implementation in grade 1 scheduled for 1998, and grade 7 in 1999, introducing a 'phasing in' through progressive phases to reach all sectors of schooling by 2005. This was necessary to allow time for teacher training and textbook production, although the latter was somewhat neglected (Curriculum Review, 2000).

According to (Harley and Wedekind, 2002) the new curriculum had three design features. First, it was outcome-based, and this feature was positioned so centrally that outcomes-based education (OBE) virtually became synonymous with C2005. The second dimension of curriculum reform was the promotion of learner-centred pedagogy, which was linked to OBE. However (Harley and Wedekind, 2002:198) explain that “emphasis on a learner-centred pedagogy had its roots in a particular history of educational contestation that was relatively independent of OBE”. They explain further that “... it was linked to a progressive discourse on human rights, including children's rights, and specifically to the Freirean-inspired Peoples' Education movement of the 1980's that linked democracy in society with notions of democracy in the classrooms” (ibid.). The third of these design features was an integrated knowledge system encompassing eight learning areas. This created the structure of the grade 1-9 curriculum. The eight learning areas were:

- Language, Literacy and Communication
- Mathematical Literacy, Mathematics and Mathematical Science
- Human and Social Sciences
- Economic and Management Sciences
- Natural Sciences
- Technology
- Arts and Culture
- Life Orientation

The curriculum had other design features such as Phase Organizers (to facilitate integration) and Assessment Standards, Performance Indicators) for guiding assessment. Potential tensions between broader social change goals such as economic development, on one hand, and equity and redress on the other, “appear to have been elided by the cumulative contribution of the three design features”

(Harley & Wedekind, 2002:198). These design features were also the subject of the Curriculum Review (2000), requested by Prof. Kader Asmal (the then Minister of Education) when it became obvious that the social change objectives of the new education system were being undermined by the complex structure of the new curriculum (ibid).

Values such as non-racialism, non-sexism, democracy, social justice, and cultural tolerance were key principles embedded in the curriculum (Kallaway, 2002:88), and have been identified by the DoE as cornerstones for nation building (DoE, 2002). According to (Hoadley and Jansen, 2002: 27), a national curriculum such as Curriculum 2005 outlines a nation's educational priorities and shapes the boundaries of teaching. As such it determines what is possible and what ought to be done in a classroom. A national curriculum also provides a framework outlining the minimum knowledge, skills, and values that learners require, and provides teachers with guidelines on what ought to be taught, by when and how. Hoadley and Jansen argue that, with the introduction of C2005 and OBE, a change has taken place in how things are prescribed. "While the new curriculum prescribes intended learner outcomes, and does so largely in the form of performance or assessment criteria, the old curriculum prescribed intended teacher inputs, and did so in terms of content knowledge" (Hoadley and Jansen, 2002:27).

Curriculum 2005 therefore introduced a completely new model for education, with new guidelines for teachers which were outcomes-led, rather than input defined. Hoadley and Jansen (2002:82) further explain that C2005 "appears to be a hybrid model" as Curriculum 2005 is defined by the (DoE, 1997) as being learner-centered, where learners theoretically have a share in determining the pacing, selection, and sequencing of their learning. The consequence of this is that it requires a teacher to act as a facilitator most of the time. On the other hand, Learning Outcomes are explicit statements of externally prescribed performance criteria, and it is up to the teacher to ensure that the learners arrive there, which gives teachers a more structured, instructive role to fill. Hoadley and Jansen (2002) therefore point to an internal paradox in C2005 and its design, which was also raised by the (Curriculum Review, 2000). This paradox is entrenched further by the tendency that evaluation based on pre-defined 'outcomes' will often be inclined to overvalue products and undervalue learning processes, which seems to contradict a learner-centred, process approach to teaching and learning.

As shown by the discussion above, the introduction of OBE in the context of C2005 was not without critique. This critique was difficult to bring to the fore, given the fact that proponents of OBE have made claims that OBE has the potential for being an emancipatory and liberating initiative, and that OBE has the potential to address issues of social change (Jansen and Christie,

1999:134). These claims are made because of the ideological underpinnings of the Curriculum, which are built on the principles of equity, redress, non-discrimination, democracy access and justice (DoE, 1997). Within a context of idealism and hope for social transformation after 1994, claims were made that “for the first time, high quality education will be available to everyone in South Africa irrespective of age, gender, race, colour, religion, ability or language” (ibid.). Naicker, (1999:87) affirmed that the curriculum provided a starting point for a learning environment to be created that “... promotes the full personal, academic and professional development of all learners irrespective of race, class, gender, disability, religion, culture, sexual preference, learning styles and language”. One of the fundamental premises of OBE is that it allows all to be successful, as reflected in the claims by Mamary and Champlin (1982, cited in Desmond 1996:105) who claim that in OBE.

- ... almost all students are capable of achieving excellence in learning provided that students:
- Have sufficient time to learn
 - Experience challenge with little threat
 - Make decisions without fear of irreversible failure or criticism
 - Have a supportive learning environment
 - Have favourable learning conditions and quality instruction
 - Have increased time on learning through active involvement in the learning process
 - Have their performance expectations and be [sic] expected to achieve them.

However, by 1999 it was obvious that the idealism that characterized C2005’s development was not adequate for sustaining its implementation, and when substantial failures were being reported in the President Education Initiative research project (Taylor & Vinjevold, 1999), and elsewhere (e.g. Jansen & Christie, 1999), Prof. Kader Asmal (the then Minister of Education) called for a review of the curriculum. Following this, the curriculum was reviewed, streamlined and strengthened (Curriculum Review Report, 2000). This led to a revised NCS, which had only 3 design features:

- Learning Outcomes,
- Assessment Standards, and
- Learning Areas (DoE, 2002a).

The introduction of Assessment Standards is significant as it introduces a standards-based discourse in which educational ‘standards’ are outlined at national level in the statutory curriculum, are used to ensure equivalence and equity across the system. All learners are assessed according to these national standards, and they therefore become a significant ‘driving’ force in designing teaching and learning experiences and opportunities. The revised NCS continues to be an embodiment of the

nation's social values, and its expectations of roles, rights and responsibilities of the democratic South African citizen as expressed in the Constitution (DoE, 2002a). Outcomes-Based education (OBE) philosophy and practice, informed by the nationally agreed upon Critical and Developmental Outcomes (DoE, 2002a) remained the underlying educational philosophy, and was retained through the review, on instruction from the Minister that OBE should be retained as the educational philosophy agreed upon by the South African government in the White Paper on Education and Training in 1995 (RSA, 1995; Curriculum Review Report, 2000). The revised NCS was released for public comment and finally released as policy in 2002 (DoE, 2002a) and was first implemented in 2004 in the Foundation Phase. In 2005 it was implemented in the Intermediate Phase. In 2006 it was implemented in the Senior Phase, thus following a phase-based approach to implementation. Once again new textbooks and other guidance materials needed to be produced and the Department of Education provided one week of Orientation Training for all teachers around the country. Thus, at the time of this study, the Senior Phase teachers in my school were implementing this curriculum for the first time, along with other Senior Phase teachers in South Africa, having undergone only one week of Orientation Training provided by the DoE in 2006.

Through its Outcomes-Based Education (OBE) approach to teaching, learning and assessment, South Africa introduced a national teaching methodology that was meant to transform teaching and learning in South Africa after the era of apartheid. Apartheid curricular, based on an oppressive value system which stressed racism, sexism, tribalism, individualism and elitism, have led to a patterning of identity based on racist and exclusivist images of identity. The OBE curriculum also intended to address other inequalities such as those associated with previous patterns of resource ownership and exclusion. South Africa has a history of socially unjust conservation laws which benefitted the minority, to the detriment of others (Lotz-Sisitka & Raven, 2001). The majority of South Africans were disadvantaged in terms of access to natural resources, and disproportionately affected by environmental degradation such as soil erosion and water pollution, and unhealthy living areas and workplaces, and as such environmental education was seen as an important process for enabling learners to contribute actively and competently to sustainable development (Lotz-Sisitka & Raven, 2001). An ethic of environmental care and environmental citizenship was therefore centrally embedded in the NCS, based on earlier work in the context of Curriculum 2005 that defined environment as a cross cutting issue in the curriculum. The NCS states explicitly that:

The curriculum aims to develop the full potential of each learner as a citizen of a democratic South Africa. It seeks to create a lifelong learner who is confident and independent, literate, numerate and multi-skilled, compassionate, with a respect for the environment and the ability to participate in society as a critical and active citizen (DoE, 2002a:8).

The NCS is underpinned by principles that are meant to ensure that broad-based aims of the

education system are attended to. These are social justice, a healthy environment, human rights, and inclusivity. All Learning Area Statements reflect the above principles and practices, as defined in the Constitution (DoE, 2002a:9). Lotz-Sisitka (2002:111) argues that “These developments represent a significant shift in environmental education curriculum work particularly the uncoupling of the notion of environmental education as a thing in its own right to a foregrounding of environment in the national curriculum”. The above principle of the NCS led to the design and inclusion of an environmental focus in each of the eight Learning Areas. Lotz-Sisitka (2002:111) further comments that “... these developments also illustrate the shift that has taken place: from seeing environment (and sustainable development) as a peripheral or marginal issue in the curriculum to seeing it as a central issue in the curriculum policy”... In 2000 Prof. Kader Asmal (the then Minister of Education) established a National Environmental Education Programme (NEEP) to strengthen environmental learning in the school system (Lotz-Sisitka & Raven, 2001).

2.5.2 The National Environmental Education Programme (NEEP)

The NEEP was initially instrumental in facilitating cooperation amongst different school-based environmental education initiatives in the country (Lotz-Sisitka & Raven, 2001), and built on an eight year alliance between government and civil society known initially as the Environmental Education Policy Initiative (EEPI, 1992-1996) and then the Environmental Education Curriculum Initiative (EECI, 1996 -2000), which shaped the environmental content and focus of C2005 and the NCS.

In 2000 large scale donor funding was raised to support the National Environmental Education Policy-General Education and Training was launched (NEEP-GET). Other than supporting policy development and capacity building, the National Environmental Education Policy-General Education and Training (NEEP-GET) also aimed at fostering cooperation between the Department of Environmental Affairs and Tourism, and Department of Water Affairs and Forestry as well as the Department of Health and other partners supporting environmental education in schools, such as SANBI. This project supported teachers to develop lesson plans with a healthy environment focus (NEEP-GET, 2004) and helped to develop a deeper understanding of the environmental focus in the different learning areas. It also trained subject advisors and continued to work with partners to support schools to enhance the environmental learning processes in schools. The NEEP-GET also piloted active approaches to learning (NEEP-GET, 2005a) and supported teachers to use the environment as a resource for learning. Unfortunately the project was only run as a pilot for three years, and was not taken to scale, and even though capacity was built within the provincial Departments of Education, it did not reach all districts (NEEP-GET, 2005a). However, NEEP-GET

partners such as SANBI continued to support schools, as shown by SANBI's investment in school gardens and curriculum change in the Greening the Nation Project (see Chapter 1).

One of the initiatives in the Eastern Cape NEEP-GET in the Cintsá East area and in Port St Johns was to work with schools to make use of their school gardens for learning and also for food security and learning about nutrition with support from WESSA (NEEP-GET, 2005b). Permaculture approaches to school food gardening were introduced and adopted in schools participating in this initiative. However, there was little information on what was grown in the gardens, and what is seen as 'good gardening practice' (NEEP-GET, 2005b). To shed further light on this, I briefly discuss gardens and gardening practices before discussing gardening and the Life Orientation Learning Area, which will outline aspects of the curriculum discourse considered in this study (see also Chapter 4).

2.6 GARDENS AND GARDENING PRACTICES

According to (Brooks, 1977), in ancient times the garden was basically an enclosure made of thorn or scrub to keep out some animals and keep in domestic ones. When nomadic communities settled such enclosures became places for growing food and other plants. Brooks reports that early formal gardens were seen amongst others in the following countries: Egypt, India, Greece, Rome, Italy, and Japan. Formal gardens were seen in Egypt around 3000 B.C. and that Egyptians grew onions, which were their staple diet and other vegetables and herbs for their medicinal value. During the next thousand years, this basically formal style of gardening characterized gardening in many places around the world. The Romans and Greeks brought the garden into the centre of the house, making it an important part of domestic life. This small scale home gardening process changed dramatically in the early 15th century, when the Italian renaissance led to an increase in trade, and hillside gardens developed later leading to larger vegetable farms (ibid). This in turn, led to a spread of this practice across the world as colonial powers settled in various places such as South Africa, where the Dutch first introduced the practice of growing vegetable plants from Europe (ibid.). There is also evidence of crop production in early African history as explained by Isichei in her book on '*A History of African Societies to 1870*':

Most African peoples have a strong ideological commitment to 'pure pastoralism', but most are to varying degrees agro-pastoralists (p. 58)...It is important to realize that a wide range of vegetables were cultivated as well as the carbohydrate staple. The ancient Egyptians grew leeks, onions, cucumbers, peas, beans, radishes, melons, dates, grapes and figs, as well as carbohydrate staples, barley and emmer wheat. The people of West Africa's yam belt cultivated a variety of soup ingredients, such as the fluted pumpkin, with its edible seeds and leaves (p. 60) ...

Today gardens in Bizana are mainly used for the production of vegetables like potatoes, cabbage, and spinach and to a large scale staple food which is maize. Most school gardens also grow these crops, and with the Greening of Schools Project school gardens have been given a variety of indigenous plants, orchards and vegetables. Indigenous plants serve to beautify the school and assist teachers in their lessons whilst vegetables and fruits assist in fighting poverty and HIV/AIDS. (Alexander, 1999:34) is of the view that growing vegetables allows access to food that is fresh and full of vitamins, and he notes that the nutrient content of vegetables starts deteriorating from the moment they are picked. Today there is also much emphasis on organically and sustainably produced vegetables (PELUM, 2007), such as those promoted in some of the Eastern Cape NEEP-GET schools. I have personal experience of organic vegetable cultivation at home, and I have found that fresh, home grown vegetables taste good, and provide good quality food. Besides gardening in plots of land, vegetables can also be grown in containers, and container vegetable growing can be practiced by those who would want to grow their own fresh produce but either have no garden, or a garden area that is too limited for vegetables. Homey (1984) argues that growing vegetables in containers can be rewarding as well as productive, because the cost of growing them is often less than the conventional way (Homey, 1984). I have established my own tyre vegetable garden. In using tyres as containers as I have discovered that there is less equipment needed, crops can be more efficiently supervised, there is little or no time-consuming weeding to be done, fertilizing and watering take less time and better pest and disease control can be achieved. Many types of vegetables can be grown in containers. In some cases there are cultivars better suited to container growing than others. Vegetables with large root systems need larger containers than those with less vigorous ones. Plants with indeterminate growth habits, such as pole beans, most cucumbers, melons and some tomato cultivars need a support system. The main requirements for container vegetable gardening are: good drainage, some way of disposing of surplus drainage water, and an accessible water supply, enough space, and enough sun (Homey, 1984). Drainage is one of the most important points in successful container growing. Containers must have adequate drainage holes in their bases and the growing medium should also have good drainage properties, yet be adequately water retentive. Such gardening practices are relevant to the Life Orientation Learning Area as it expects learners to actively engage in health promotion activities, and to act to ensure personal, social and environmental health and well-being (DoE, 2002b).

2.7 THE LIFE ORIENTATION LEARNING AREA AND ITS EXPECTATIONS

The Life Orientation Learning Area Curriculum Statement (DoE, 2002b) expects that teachers will prepare lessons guided by the Learning Outcomes in the NCS (R-9) and the associated Assessment Standards. It expects teachers to consider the philosophy of the Department of Education and the

NCS policy when planning lessons. The Life Orientation Learning Area Curriculum Statement also expects teachers to interpret the Learning Outcomes differently in different contexts (DoE 2002b), and it expects teachers to use a variety of methods to achieve the same Learning Outcomes. Teachers are also expected to pay attention to the national standards that have been set, as articulated in the NCS (R-9), and to assess learners accordingly and pay attention to conceptual progression within the Learning Area as outlined in the Assessment Standards for each grade. Teachers are also expected to consider human rights, social justice, and inclusivity in their lesson plans and to cultivate a human rights culture in their classrooms. It further expects teachers to consider environmental health risks such as polluted water, health risks and poor waste management practices, and to assist learners to develop and implement an environmental health programme. The Life Orientation Learning Area Curriculum Statement (DoE 2002b) expects teachers to design learning programmes that are participatory, learner-centred and activity-based in nature, to involve learners in activities related to health and safety, and environmental health programmes. It expects teachers to involve learners in problem solving activities, to develop problem solving skills and to expose learners to challenging situations, like poverty, hunger, unemployment and HIV/AIDS.

In addition to the above, the Learning Area statement expects teachers to accommodate and use community links and relationships in planning their lessons to address cultural diversity issues and enrich teaching through use of local cultures, and to draw on oral tradition vested in elderly and other members of the community. Lastly Life Orientation Learning Area expects teachers to give attention to values and ensure that the activities allow learners to develop an understanding of values and how to make “morally accountable” decisions. It further expects teachers to expose learners to community norms and values such as caring for biodiversity and the environment (DoE, 2002b). It therefore sets a challenging task for teachers and learners, and requires teachers to be able to contextualize the Curriculum Statement expectations at school level in meaningful ways.

To understand this challenge of contextualizing National Curriculum Statements at school level, I have drawn on Bernstein’s theory of recontextualisation (as discussed briefly in Chapter 1). I now provide a more detailed discussion on this theoretical vantage point, as used in this study.

2.8 THEORETICAL VANTAGE POINT

2.8.1 A Pedagogic Discourse

As indicated from the discussion above, the National Curriculum Statement has a complex history,

and its formulation process has not been uncontested. Some people have predicted that OBE will be a failure and others have critiqued it for being too complex. However, there is still relatively little work on what actually happens when the policy statements are worked within schools, and this is the focus of this study and its interest in recontextualisation.

Apple (2003) is of the view that there is no linear model of policy formation, distribution and implementation. Ketlhoilwe (2005:61) supports this argument by saying that “policy is not simply received and then implemented but it is rather subjected to interpretation and then recreation”. According to (Bernstein, 1990:170) pedagogical theory is doubly distorted in that “... it is distorted firstly in the interest of the dominant group, as they construct the pedagogic discourse and distorted secondly in the interest of the subordinate group” (in the recontextualisation process). According to (Parker, 2004:7) Bernstein's concept of the pedagogic device provides a way of describing the

...internal construction of any pedagogic communication of knowledge through three hierarchical and interrelated sets of rules:

- **Distributive rules**
which regulate access to different forms of knowledge; they establish who gets access to what knowledge
- **Contextualizing rules** which construct the 'what and how' of pedagogic discourse, and
- **Evaluative rules**
which construct pedagogic practice, the criteria to be transmitted and acquired (ibid.).

In this study, I will only focus on the contextualizing rules, to interpret how the statutory curriculum (the NCS) is recontextualised in my school using gardens in the teaching of Life Orientation. To do this study, I have had to analyze the Official Pedagogic Discourse as contained in the Life Orientation Learning Area, and how this discourse is recontextualised in lessons at school level. According to Bernstein, the Official Pedagogic Discourse (OPD) is produced in the Field of Production, normally by policy experts and field-based experts from universities who generate new knowledge in society. This explains why statutory curriculum policies are normally made at national level, and normally involve a mixture of education policy experts and university professionals. Through deliberations on ‘what counts’ as being valid educational knowledge (Lotz-Sisitka, 2002), theory or policy is produced by experts from universities working with professionals at the macro-level in what (Bernstein, 1990) has referred to as the Field of Production (FOP). The South African NCS was produced through such a process in the Field of Production. In the case of South Africa, the process of producing the National Curriculum Statement was led by the Department of Education at national level, and involved a range of University experts as well as other stakeholders such as unions, NGO's and other educational experts such as DoE officials. (Lotz-Sisitka, 2002) describes how the Environmental Education Policy Initiative and

Environmental Education Curriculum Initiatives were formed to ensure that environmental education expertise was represented in this process.

2.8.2 The recontextualising field (ORF & PRF)

The products produced in the FOP (i.e the National Curriculum Statements) are then transmitted to what (Bernstein, 1990) refers to as the Field of Recontextualisation at the meso-level which is made up of departmental officials and government agents such as subject advisors and curriculum advisors who train and support teachers. Bernstein refers to this field as the Official Recontextualising Field (ORF). In our case, various support materials for teachers are produced in the ORF, such as the materials produced for the NCS Orientation Programmes and other guideline materials for the Learning Areas. Assessment guidelines are also produced by DoE officials, and shared with teachers, and example being the National Protocol on Assessment (DoE, 2006). There are also other educational professionals such as NGO's, textbook writers and teacher educators who help with recontextualising the discourse in what Bernstein refers to as the Professional Recontextualising Field (PRF). They normally try to help teachers make sense of and implement the OPD. Examples here would include the Greening packs produced by SANBI to help teachers use the gardens for curriculum purposes, or textbooks produced by publishers for use by Life Orientation teachers. In the process of transmission, the discourse undergoes a primary delocation from the FOP and is relocated to the ORF and PRF. In other words these recontextualising fields constitute a field where new knowledge discourses, generated in the FOP, are transmitted and relocated.

Departmental Officials and Subject Advisors are employed by the Department of Education at provincial and district levels to interpret the OPD (policy or theory) and to assist teachers to do the same. They have a responsibility for conducting workshops to train the trainers of teachers, and to train teachers directly, as was the case in the NCS Orientation Training Programmes provided for teachers in our province in 2006. As they interpret the official discourse it undergoes a primary delocation, and may undergo either subtle or extreme changes. Thus the Official Pedagogic Discourse is appropriated from the Field of Production and is recontextualised, simplified and transformed into a new pedagogic discourse. For example, in the NCS Orientation Programme special guidelines were produced for Life Orientation Teachers to show them how they should approach planning for Life Orientation. This planning framework was not included in the OPD and therefore represents a mediation or change of the discourse.

The discourse is not transferred as is by the recontextualisers, they tend to select and appropriate

certain aspects of the discourse. The selected aspects of the discourse are those that the recontextualisers deem to be essential for the consumption of the acquirers. For instance the official discourse in the Life Orientation curriculum may require teachers to consider the following:

- Outcomes-based discourse
- Standard-based discourse
- Social justice discourse
- Environmental discourse
- Learner-centred discourse
- Problem-based discourse
- Social and individual wellbeing discourse
- Cultural discourse
- Human rights discourse (see Chapter 4)

Ramsarup's (2005) study which used Bernstein's recontextualising concepts to research what happens to the environmental discourse in the NCS at macro, meso and micro levels, illustrated how ORF practitioners (government officials) selectively appropriate those aspects of the OPD that they seem most familiar with, and 'leave out' or simplistically work with other discourses. Her study indicated that because DoE Officials are not familiar with environment discourses, these tend to be neglected. Her study indicated that agents in the PRF (NGO's and teacher educators), who were more familiar with environmental discourse, on the other hand emphasized these discourses, at the expense of other aspects of the discourse such as cultural discourse (which they neglected). Her research showed that Officials in the ORF tended to emphasize outcomes-based discourse and human rights discourse (main policy narratives) while the environmental education recontextualisers in the PRF emphasized the environmental discourse and the learner-centred discourses due to their closer relationships with teachers and learners (Ramsarup, 2005).

2.8.3 Field of Reproduction (FOR)

Once the OPD is available teachers are normally oriented to the discourse by subject advisors where they interpret the discourse to the micro-level. However, teachers can, and are encouraged to work directly with the National Curriculum Statement documents, which are freely available on the internet, and were also distributed to schools by the DoE. They are also, however, given various other documents and training opportunities that help to translate the discourses. The discourse that eventually gets transmitted to the classroom is therefore not likely to be the original discourse as produced in the FOP, as it undergoes a series of delocations and relocations, each time changing this way or that way. Ramsarup (2005) in her study of a teachers' practice in the FOR explains how

a technology teacher changed the environmental intentions of the Learning Outcome to address his interest in facilitating entrepreneurship skills amongst his learners, because of his concern for learners' poverty. Her analysis shows how the discourse in each of the recontextualising fields, including the Field of Production, is relocated through selective appropriations and ideological transformations that take place. The ideological transformations are determined by the values, experience and the knowledge that the teacher has, and often influence the selective appropriations that teachers make. Bernstein (2000:116) explains that the process of recontextualising entails a principle of delocation which involves selective appropriation of a discourse from the field of production and a principle of relocation of that discourse as a legitimate discourse within the contextualizing field. Bernstein further explains that in these processes of delocation and relocation the original discourse can undergo ideological transformation according to the specialized interests in the contextualizing field (ibid).

Cornbleth (1990) also explains that curriculum is a contextualized social process and that curriculum is influenced by socio-cultural and structural factors. When teachers engage in recontextualising, they may be affected by a range of socio-cultural and structural factors. Socio-cultural factors include amongst others language, belief systems and prior knowledge and experience, whilst structural factors include amongst others departmental hierarchy, buildings and other physical resources. All of these factors have a direct influence on the way the Official Pedagogic Discourse is recontextualised and their influence should not be underestimated, especially in a context such as ours which has been shaped by past inequalities leading to an environment affected by poverty and other social and environmental challenges in our school communities, as outlined in the historical review above.

2.9 CONCLUSION

This chapter starts by reviewing some key issues associated with environmental education in the context of formal education, identifying bias, reliance on a statutory curriculum and assessment practices and the nature of the formal education system itself as three issues affecting environmental education in schools. It then discusses the history of gardening and associated cultural practices, and provides an overview of the emergence of South Africa's first national curriculum, and its subsequent revision. The chapter considers how environment is included in the curriculum and briefly reviews why gardening can be a useful focus for Life Orientation learning. The chapter ends with a discussion of the curriculum recontextualisation process drawing on the theoretical concepts provided by (Bernstein, 1990) and prior research by (Ramsarup, 2005) as these will be the lenses that I will use to research how environmental Learning Outcomes are recontextualised at school

level in the Life Orientation Learning Area. The next chapter discusses the methodology used in this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research design decisions that informed the study as I investigated the curriculum recontextualisation process when using school food gardens in the Life Orientation curriculum. It outlines the research orientation and the methods employed to produce data. An interpretive research process was used to design the research activities which were interpreted using the Bernstein framework describing the recontextualising process. The chapter also discusses issues pertaining to ethics, validity and trustworthiness.

3.2 RESEARCH ORIENTATION AND METHODOLOGY

The research was conducted as an interpretive case study. I first discuss the interpretive approach to research, and then I discuss case study research, after which I describe the research methods and analysis process used in the study.

3.2.1 Interpretive research

Terre Blanche, Painter and Durrheim (1999:6) postulate that “the interpretive approach is characterized by a particular ontology, epistemology and methodology”. In explaining this further, they state that

researchers working in this tradition assume that people's subjective experiences are real and should be taken seriously (ontology), that we can understand other's experiences by interacting with them and listening to what they tell us (epistemology), and that qualitative research techniques are best suited to this task (methodology) (ibid.).

They further state that interpretive research “... relies on first-hand accounts, tries to describe what it sees in rich detail and presents its 'findings' in engaging and sometimes evocative language” (ibid.).

For purposes of this study I have chosen to use an interpretive approach. This choice of orientation is informed by the fact that it describes and interprets peoples' feelings and experiences in human terms rather than through quantification and measurement and can therefore reflect the feelings and

experience of the teachers, learners and my own feelings and experiences. Janse van Rensburg (2001a:17) attests to the fact that it is easier for people to take steps to improve their practice when they clearly understand their situation. Interpretivist researchers reflect an interest in contextual meaning-making, rather than generalized rules.

For such contextual meaning-making, (Janse van Rensburg, 2001;16) suggests in-depth study of small groups so that the researcher can give detailed attention to naturalistic settings using in-depth case studies, often involving just a single case. She further explains that “Interpretivists would look for rich, detailed information of a qualitative nature through in-depth interviews, observations or interpretation of documents, artifacts etc (ibid)”. It is for this reason that I chose to conduct a case study in a school using focus group interviews with both learners and teachers and observations, to obtain a detailed account of what was happening in the curriculum recontextualisation process.

3.2.2 Case study

Case study involves the study of complex educational events in their context. I tried to study circumstances as they unfolded, and every aspect of the specific context is considered to be equally significant. Case study is not simply the study of a single person, group or situation. “It is used to illustrate, describe or evaluate a specific period of time, a context, a set of events, a process or programme” (Macintyre ,1999:77).

Yin (1994:15) describes the case study as a way of investigating an empirical topic by following a set of pre-specified procedures. My study took place in the context of a case (Bizana Village Junior Secondary School). As defined by (Bassegy, 1999:75) “a case study is the study of a singularity which is chosen because of its interest to the researcher and the reader of the report”. (Stenhouse,1985 as cited by Cohen et al., 2000), identified four types of case studies: ethnographic, action research, evaluative and educational while (Bassegy, 1999) identified three types of case studies namely: theory seeking, story telling and picture drawing, and evaluative.

This case study is an interpretive educational case study that seeks to understand the story of how the OPD (NCS) is recontextualised in the field of reproduction (the school). Cohen et al., (2000 citing Geertz, 1973) advocated that case studies strive to portray “What it is like to be in a particular situation, to catch the close-up reality and thick description of participants' lived experiences of thoughts about and feelings for a situation” (Cohen et al., 2000:182). The rationale for choosing case study was based on the fact that I wanted to develop a deeper understanding of how teachers were using gardens as a resource for teaching Life Orientation in grades 7, 8 and 9, and how the

curriculum recontextualising process was taking place. My focus in this study then was on both teachers' and learners' subjective experiences of reality, and how meaning-making occurred as informed by socio cultural context.

3.3 DATA GENERATION TECHNIQUES

3.3.1 Focus group interviews

As one of the methods to generate data, I decided to use focus group interviews, which is a form of group interview (Cohen et al., 2000) where participants are selected because they have certain relevance to the topic of the research (Kreuger and Casey, 2000). Macintyre (1999:78) explains that "... the use of group interaction to discuss, produce data and provide insights that would not be available in single interview situations is a feature that distinguishes focus groups".

Focus groups as defined by (Cohen et al., 2000:288) "are contrived settings, bringing together a specifically chosen sector of the population to discuss a particular given theme or topic, where the interaction with group leads to data and outcome". Reasons for choosing a focus group were that they yield insight that might not otherwise have been available in a straight forward interview, they are economical on time, and produce a large amount of data in short period of time.

I drew up a set of questions to guide the focus group interview with the teachers (see Appendix 1). The purpose of the questions was to find out more about teachers experience of OBE, Life Orientation teaching and use of the school gardens. I also drew up a set of questions to guide the focus group interview with the learners (see Appendix 2). The purpose of this focus group interview was to find out whether learners are used to learning in the school garden, and what they think about the use of the school gardens, and also to find out what they understand about the environment. I used the data from the focus group interviews to provide more insight into the recontextualising process (see Chapter 5). I interviewed 6 learners and 3 teachers using this method. There was one focus group interview for learners and one for teachers. These focus group interviews were held on the 09th May 2007.

Gillham (2000:18) indicates that it is difficult to get a representative sample where there are big numbers, and he recommended random sampling. As suggested by Dane (1990:292), I asked all learners in Grade 8 to write their names on pieces of paper, put those pieces of paper in a hat and picked 6 of them. Through this strategy all learners in the class were given a fair chance to participate. I interviewed 6 learners in a separate group from that of the teachers including a

member of the School Management Team (SMT) who happened to be the Deputy Principal. Questions were first given to the selected group of learners a day before the interview and the purpose of the interview was explained. Permission had already been sought from the parents of the learners that were to be participants in the interview. This allowed learners to acquaint themselves with the questions before the interview. The other reason for issuing questions in advance was to try to minimize time.

These interviews were tape-recorded and permission was asked and I discovered that learners responded easily and freely when making their contributions. I also got different views from different learners. Kreuger and Casey (2000:11) highlighted that "... focus groups present a more natural environment than that of an individual interview because participants are influencing and influenced by others, just as they are in life".

3.3.2 Semi- structured interviews

Yin (1994:84) considers interviews as one of the most important sources of case study information. He observed that case study interviews are "... of an open-ended nature in which you can ask key respondents about events ... Semi-structured interviews enable participants to project their own ways of defining the world". Cohen et al. (2000, citing Denzin, 1970 and Silverman, 1983) argue that semi-structured interviews permit flexibility and they also enabled participant to raise and pursue issues and matters that might not have been included in a structured interview process.

Research interviews may serve three purposes according to (Cohen et al., 2000, 268):

Firstly interviews may be used to gather data that has a direct bearing on the research objectives. Secondly we may use interviews to test hypotheses or to suggest new ones, or interviews may be used in conjunction with other methods in a research undertaking. Interviews may be used to follow up unexpected results, or to go deeper into the motivations of respondents and their reasons for responding as they do.

The purpose of the semi-structured interviews in this study was to probe teachers' experience of using the school food garden as a resource for teaching and learning (see Appendix 3). (Gillham, 2000:21) explained that "... in a semi-structured interview the researcher introduces the same kind of topics as in a focus group, but the researcher can probe and clarify them in more depth because the researcher only has to attend to an individual". To ensure that you give full attention to the person you are interviewing, Gillham (ibid.) suggests the use of a tape-recorder (with the respondent's permission of course). I used a tape-recorder and followed Gillham's advice of transcribing the interview to produce data immediately afterwards while memories and impressions

are still fresh. I found this advice to be very helpful and effective as the important information could easily have been forgotten after some time. I interviewed each of the three teachers involved in the study and I produced a semi-structured interview schedule to guide the interviews (see Appendix 3). I also interviewed an elderly member of the community to find out what her views are about gardening, and using the school gardens for learning (see Appendix 4), and the SANBI manager at the O.R. Tambo Cultural Village, as he was responsible for the school greening programme (see Appendix 5). These interviews also provided useful data for interpreting the recontextualising process (see Chapter 5).

3.3.3 Observation

I also used observation in this research. Observation is perceived by Lankshear and Knobel (2004: 220), as a process that “involves carefully planned, deliberate and systematic examinations of what is taking place, who is involved and when and where everything is happening”. Through observation, the researcher is able to gather “live data from live situations” (Cohen and Manion 2004:305). The researcher is afforded an opportunity to access and understand a situation that is being described. Patton (2002) explains that observation data permits the researcher to understand to an extent that which is not entirely possible using only the insights of others obtained through interviews. Lankshear and Knobel (2004) stress the importance of establishing a methodical approach to collecting observation data from the outset. Observation is viewed by (Freeman, 1998: 94) as “... closely watching and noting classroom events, happenings or interactions, either as a participant in the classroom or as an observer of another teacher's classroom. Observation can be combined with field note recordings and logs or journals”.

In this study I was a participant-observer although I was not actively involved in the lessons. I used an observation schedule in which I captured the details of what was happening in each of the three lessons that formed the main focus of this study, in the form of field notes. I also used the tape-recorder as an additional tool of observation for lessons 1, 2 and 3. I transcribed the tapes (see Appendix 6, 7 & 8) to capture what was happening and what was said in the lessons. In this way I was able to follow the dialogue in the classroom, and to document in detail what was happening in the lessons.

3.3.4 Document Analysis

Patton (2001) observed that documents prove valuable sources of evidence in research, not only because of what can be learned directly from them but also because they stimulate a path of inquiry,

and open up new possibilities for investigation in the research. The following documents were analysed in this research:

- Teacher lesson plans (for three lessons) (see Appendix 9,10 & 11),
- Learners' work (for three lessons) (see Appendix 12, 13 & 14),
- Policy documents- NCS (R-9) (the NCS Overview Statement (DoE, 2002a) and the Life Orientation Learning Area Statement (DoE, 2002b), and
- Photographs (of what happened in the lessons).

I managed to analyze the teachers' lesson plans. These documents provided me with great insight into the lesson observations and the teachers' thoughts and intentionality in framing the lessons. I could also understand how the teacher interpreted the Learning Outcomes and how they were integrated across other Learning Areas, and how the teachers were recontextualising the OPD.

Similarly, the learners' work also gave an indication of what the results of the recontextualising process were, and also provided further insight into what actually took place during the lessons.

3.4 DATA ANALYSIS

Freeman (1998: 90) explains that "... the process of drawing responses out of the data, or finding them in the data, is called data analysis". Separating the gathering of the information from working with it to find a response (i.e. the analysis process) is a key part of the structure and discipline of the research process. One of the purposes of analysis is to "... find explanations which fit our understanding and therefore seem emotionally plausible" (Altrichter, Posch & Somekh, 1993: 122).

Miles and Huberman (1984:50) highlight the importance of reviewing data immediately after it has been collected through tape-recordings, observation notes, documents and writing a summary, both to provide easy access to the data later and to get an overview of what it offers concerning the research question. Immediately after generating the data, I organized it, lesson by lesson so that I could use it to compile the three recontextualising stories reported in Chapter 4.

However, simply organizing the data is not enough, and getting 'conceptual leverage' on data, as advocated by Schartzman and Strauss (1973:117) involves organizing the data into categories (coding). Two methods can be employed in categorizing data namely deductive and inductive. In the former categories are chosen from the researcher's theoretical knowledge and the data is then searched for the relevant passage. In the latter categories are derived from the data to identify

relevant insights related to the theory. In this research I used both strategies.

In order to understand fully what was being recontextualised in the three lessons (i.e. the OPD), I had to start by analyzing the Official Pedagogic Discourse using an inductive approach, as it appears in the NCS (the statutory curriculum). As this study focuses on Life Orientation, I reviewed both the NCS Overview Statement and the Life Orientation Statement. Through a careful reading and re-reading of the documents, I identified the following features of the Official Pedagogic Discourse:

- Outcomes-based
- Standards-based
- Rights-based
- Cultural-based
- Social justice-based
- Environmental-based
- Problem-based
- Learner-centred
- Social and individual well-being-based, and
- Values-based

I used these as categories to describe the features of the OPD and consolidated this data into an Analytic Memo (See Appendix 15) which was used as the basis for a description of this in Chapter 4. Because I was trying to understand recontextualising process in the three lessons, I then used these features of OPD to code and analyze each of the three lessons. I developed an analytic memo for each lesson (see Appendix 16) which I used as the basis for describing the lessons in Chapter 4. These features of the OPD therefore provided categories for coding the lesson data, and a framework for reporting on what was taking place in the lessons. This helped me to explain how the discourse was selectively appropriated and ideologically transformed. Thus the analysis of the lessons followed a more deductive approach. This analysis is presented in Chapter 4.

Following this I synthesized the main findings of the study by using Bassey's (1999) concept of analytical statements. Through reviewing the data reported in chapter 4, I was able to identify a set of analytical statements which helped me to reflect on the data in Chapter 4, and to structure Chapter 5. These analytical statements were structured to address the research question. They are:

- **Analytical Statement 1:** The Official Pedagogic discourse in Life Orientation allows for

creative use of school gardens for Life Orientation teaching and learning.

- **Analytical Statement 2:** Teachers selectively appropriate aspects of the Official Pedagogic Discourse when teaching Life Orientation using school gardens.
- **Analytical Statement 3:** Teachers ideologically transform aspects of the Official Pedagogic Discourse when teaching Life Orientation using school gardens.
- **Analytical Statement 4:** Factors such as time, class size, planning, assessment practice, group dynamics, resources and teachers knowledge and experience of the NCS and use of gardens influences the recontextualising process.
- **Analytical Statement 5:** The complexity of the Official Pedagogic Discourse influences the recontextualisation process.
- **Analytical Statement 6:** Learners like working in the garden but teachers do not like using the gardens for teaching

As mentioned in Chapters 1 and 2, I used aspects of Bernstein's theoretical framework to interpret the data and this helped me to structure the analysis, as described above.

3.5 ETHICAL CONSIDERATIONS

Researchers are unconditionally responsible for the integrity of the research process. The power to produce knowledge requires responsibility for integrity in its production. Similarly, the power relations inherent in researcher-researched interactions require responsibility to ensure the dignity and well-being of the researched (O Leary, 2004, p. 50).

Hollway and Jefferson (2004:83) indicate that "... ethical issues in social-science research are concerned with ensuring that the interests of participants in research are safeguarded". Dane (1990: 58-59) highlights the need to protect the right of the participants from physical and psychological harm.

Before undertaking this study, letters requesting permission from the Deputy Principal of the school and the School Governing Body were written (see Appendix 16).

Individual teachers who were asked if they were willing to participate in the research, and they agreed to complete and sign consent forms (see Appendix 17). According to Cohen et al. (2001:51) "all participants in a research process should sign consent forms so as to protect and respect the right of self determination as well as placing some of the responsibility on the participants should anything go wrong with the study".

Bassey (1999) describes attending to the ethical concerns as involving respect for democracy, respect for truth and respect for persons. In attending to respect for persons and democracy, I explained clearly to the participants that they had the right to leave the project at any time, should they so decide and that they would retain the right to re-evaluate their decision to participate in the research (Dane, 1990).

I wrote letters to the parents of learners who were to participate in the interviews and permission was granted by parents (see Appendix 19). I explained clearly in advance to the learners, teachers and managers of the school concerned that I would keep the information they provided confidential and that I would also use pseudonyms to avoid exposure. Hollway and Jefferson (2004:90) concluded that “if information is treated and used in such a way as to be secure and to ensure the anonymity of participants, the ethical responsibility usually ends there”. When sensitive information about participants is collected, it is desirable to ensure anonymity of the participants. Dane (1990: 51) explains that “anonymity exists when no one, including the researcher, can relate a participant's identity to any information pertaining to the project”. As the participating teachers were involved in this study were known to me, and are associated with my school, it was not possible to achieve this level of anonymity in the research.

When I attended respect for truth, I had to approach data openly and even-handedly, in a spirit of inquiry not advocacy, deploying a theoretical framework which was laid out and justified, making only such judgments as I could support with evidence, and not ignoring evidence when it suited me. Respect for truth is closely linked to validity and trustworthiness, which I discuss next.

3.6 VALIDITY AND TRUSTWORTHINESS

“Validity is not a commodity that can be purchased with techniques ... Rather validity is like integrity, character and quality, to be assessed relative to purposes and circumstances” (Brinberg & Mc Grath, 1985, cited in Maxwell, 1992:281). Trustworthiness is about how the enquirer persuades his or her audiences that the findings of an enquiry are worth paying attention to, and worth taking account of. To ensure trustworthiness, the researcher needs to consider what arguments can be mounted, what criteria invoked, and what questions can be asked that would be persuasive in the issue?

Guba (1985:290) identifies four questions that most enquirers pose to themselves:

- Truth value: How can one establish confidence in the truth of a particular enquiry for the subjects with which and the context in which the enquiry was carried out?

- **Applicability:** How can one determine the extent to which the findings of a particular inquiry have applicability in other contexts with other subjects?
- **Consistency:** How can one determine whether the findings of an enquiry would be repeated if the enquiry were replicated with the same or similar contexts?
- **Neutrality:** How can one establish the degree to which findings of an enquiry are determined by the subjects and the condition of enquiry and not the biases, motivations, interests or perspectives of the enquirer?

There are five types of validity identified by Maxwell (1992:285): descriptive, interpretive, theoretical, generalizability, and evaluative validity. In this study I tried to ensure descriptive validity by attending to the factual accuracy of the account. I tried to ensure primary descriptive validity which (Maxwell, 1992:286) describes as "... the descriptive validity of what the researcher reports having seen or heard or touched, smelled", as well as secondary descriptive validity which Maxwell (ibid.) describes as "...the account of things that could in principle be observed, but that was inferred from other data". I also tried to ensure interpretive validity by capturing and reporting data that reflects the participants perspectives, and is "derived to a substantial extent from the participant's own language, as interpretative accounts are grounded in the language of the people studied" (Maxwell, 1992:289). I did this by using thick descriptions of what occurred, and I also triangulated the data through comparing and relating data from various techniques such as focus group interviews, observations and document analysis to develop a fuller picture of what took place in the lessons. Cohen et al. (2000:233) posits out that "triangulation may be defined as the use of two or more methods of data collection in the study of some aspect of human behaviour". By analogy, triangular techniques in the social sciences attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one stand point and in so doing, by making use of both the quantitative and qualitative data (ibid.).

3.7 CONCLUSION

To undertake this study I used an interpretive case study research design to investigate activities using school gardens in Life Orientation in my school by observing lessons taught by Life Orientation teachers. In this process I used various techniques to generate data, which included observations, focus group interviews, semi-structured interviews and document analysis. This decision was informed by the fact that I wanted to study practice in a particular situation with a view to understanding it more fully to inform future improvements and changes. This chapter also explains how the interpretive case study research data was interpreted using both inductive techniques and deductive techniques of analysis. Through drawing on Bernstein's theoretical perspectives in the analysis, I was able to develop a more in-depth understanding of what took place in the curriculum recontextualisation process. This allowed me to gain in-depth knowledge of how the Life Orientation Learning Outcomes and Assessment Standards are being recontextualized in

our school. Thus in analyzing the data I firstly developed categories to describe the Official Pedagogic Discourse, and these were then used to interpret each of the lessons, as described in the next chapter.

CHAPTER 4

OFFICIAL PEDAGOGIC DISCOURSE AND ITS DELOCATION AND RELOCATION

4.1 INTRODUCTION

This chapter presents the findings and describes the three contextualizing stories showing how an Official Pedagogic Discourse is delocated and relocated through selective appropriations and ideological transformations from the Field of Production in the Field of Reproduction.

The chapter starts with an analysis of the Official Pedagogic Discourse (see section 4.2). This will be followed by an analysis of how the Official Pedagogic Discourse was changed in the three recontextualising stories. The first recontextualising story is Lesson 1 on Health Promotion with Grade 8 learners (see section 4.3); the second recontextualising story is Lesson 2 on Health Promotion with Grade 7 learners (see section 4.4); and the third story is Lesson 3 on the importance of vegetables with Grade 9 learners (see section 4.5). As explained in chapter 3, each story is told by using the features of Official Pedagogic Discourse that I identified through analyzing the NCS (Overview Statement) and the Life Orientation Learning Area Statement.

4.2 THE OFFICIAL PEDAGOGIC DISCOURSE OF THE LIFE ORIENTATION LEARNING AREA STATEMENT

To make sense of what happened in the three recontextualising stories, my starting point was to analyze the curriculum document NCS (R-9) which is used by educators as the Official Pedagogic Discourse. In the Overview Document, the Department of Education indicates a new role for teachers as recontextualisers when it states that teachers are responsible for the development of Learning Programmes (DoE, 2002). As indicated in Chapter 2, the Department of Education has also distributed the NCS documents to schools, and teachers are encouraged to understand these documents, and to recontextualise them at school level. Other recontextualisation support is provided by the Department of Education such as Orientation Training for the NCS, and guideline documents. Textbooks are also provided to the school, although these do not always arrive on time (NMF, 2005) and distribution is erratic. In this study I focused on the National Curriculum Statement for Life Orientation, as this is the one we are using for the planning of Learning Programmes, Work Schedules and Lesson Plans, according to the DoE framework for planning (DoE, 2006). The Life Orientation Learning Area Curriculum Statement formed the focus of this

analysis, as this is my field of interest as explained in Chapter 1.

Life Orientation is a new Learning Area in the sense that it was not taught previously in any of the 17 education departments in South Africa (see Chapter 2), and is therefore new to most teachers. The focus group interview with teachers confirmed that this was a new Learning Area. The Grade 8 teacher had only been teaching Life Orientation for 7 months, while the Grade 7 teacher had only been teaching Life Orientation for one year, and the Grade 9 teacher had taught Life Orientation for four years. He had received training for OBE, the RNCS and the NCS (all three versions of the post-apartheid curriculum). Teachers had also only received training for this Learning Area in the form of a few workshops. Few of the teachers had used the garden for Life Orientation learning before, and only one teacher (the Grade 9 teacher) said he had used the garden once the year before. All three teachers expressed a lack of confidence with the process of designing Lesson Plans stating “I can but I am not quite sure” (FGP 1); “Yes, but there are some grey areas” (FGP2); and “I can but I am not confident” (FGP3) (see Appendix 1).

Because of the research interest in gardens and Life Orientation, I started examining the Learning Area Statement to check whether there was an environmental discourse within the policy document. Having established the existence of the environmental discourse it was my responsibility to further examine the other dimensions of the Official Pedagogic Discourse, as these are all interrelated. For example, if only environmental discourse is emphasized at the expense of human rights discourse or outcomes-based discourse, the curriculum is only partially interpreted and implemented. I conducted this study with a focus on Grades 7, 8 and 9. The statement for the Life Orientation Learning Area supports environmental learning by emphasizing:

- Making informed decisions and healthy choices, particularly relating to health promotion (including environmental health),
- Knowing and exercising one's rights and responsibilities,
- The holistic development of the learner as an individual in society (NEEP-GET, 2004: 22).

Learning Outcome 1 of the Life Orientation Learning Area focuses specifically on making informed decisions about personal health, community health and environmental health, that is, a healthy environment that supports human health. In the Senior Phase the emphasis is on identifying and addressing environmental issues. I now turn to a more detailed analysis of the features of the Official Pedagogic Discourse. I identified the following interrelated discourses which together constitute the OPD:

- Outcomes-based discourse

- Standards-based discourse
- Rights-based discourse
- Social justice discourse
- Environmental discourse
- Learner-centred discourse
- Problem-based discourse
- Social and individual well-being discourse
- Cultural discourse
- Value-based discourse

While some of these such as the outcomes-based, standards-based, rights-based, social justice, environmental, learner-centred and value-based discourses are applicable to the whole NCS (all the other learning areas); others are specific to the Life Orientation Learning Area such as the social and individual well-being discourse and the cultural discourse. I now present a more detailed discussion on each of these, providing evidence for including these within an analysis of the OPD. I also consider what the implications of this discourse are for using school gardens, as this is the subject of this research.

4.2.1 Outcomes-based discourse

Evidence of outcomes-based discourse as a key dimension of the Official Pedagogic Discourse is found in the fact that Outcomes-based education is described as being one of the defining principles of the NCS. The Life Orientation Learning Area Statement states:

Outcomes based education forms the foundation of the curriculum in South Africa. It strives to enable all learners to achieve to their maximum ability. It does this by setting outcomes to be achieved at the end of the process. The outcomes encourage a learner-centred and activity-based approach to education. (DoE, 2002b:1)

The Learning Area is further structured according to five Learning Outcomes which are to guide all Learning Programmes, Work Schedules and Lesson Plans. They are the main unit of analysis, and set out the end points for all learning processes in Life Orientation. The three Learning Outcomes are:

- **Learning Outcome 1: Health Promotion**
The learner will be able to make informed decisions regarding personal, community and environmental health.

- **Learning Outcome 2: Social Development**

The learner will be able to demonstrate an understanding of, and commitment to constitutional rights and responsibilities, and to show an understanding of diverse cultures and religions

- **Learning Outcome 3: Personal Development**

The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world

- **Learning Outcome 4: Physical Development and Movement**

The learner will be able to demonstrate an understanding of, and participate in, activities that promote movement and physical development.

- **Learning Outcome 5: Orientation to the World of Work**

The learner will be able to make informed decisions about further study and career choices. (DoE, 2002b: 7)

These Learning Outcomes are underpinned by a set of Critical and Developmental Outcomes, which guide the entire education and training system in South Africa, thus creating a nationally agreed upon outcomes-based framework for education and training. The Learning Outcomes in the NCS (R-9) are therefore oriented towards achievement of these broader Critical and Developmental Outcomes. The purpose Statement of the Life Orientation Learning Area states that the NCS “builds its Learning Outcomes for the General Education and Training Band for Grades R-9 (for schools) on the critical and developmental outcomes that were inspired by the Constitution and developed in a democratic process” (DoE, 2002b:1). These outcomes require learners to identify and solve problems, work together effectively in teams and groups, communicate effectively, collect and evaluate information, organize and manage themselves effectively, use science and technology responsibly with concern for the health of people and the environment, and understand the world as a set of interrelated systems (amongst others) (DoE, 2002b).

Further definition is given to each of the Learning Outcomes (LO) through use of Assessment Standards (AS), which provide guidance on the kind of processes and content for lesson planning. For example, LO1 AS1 for Grade 7 states that “Learners should propose ways to improve the nutritional value of own personal diet” (DoE, 2002b:40). As indicated in this example, the Learning Outcome and the Assessment Standards include reference to process (i.e. what the learner should be doing e.g. proposing ways ... and the content e.g. nutritional value of own diet). The OBE principle means that “...the *process of learning* is as important as the *content*” (NEEP-GET, 2004:9, emphasis original).

Another dimension of the outcomes-based discourse in the NCS (R-9) is its reliance on the creativity and innovation of teachers who are expected to interpret and translate the Learning Outcomes into learning opportunities for learners that will allow them to achieve at the required standard. This is evident in the statement from the NCS (R-9) Orientation document which states

that “Adopting an outcomes-based approach also allows for creativity and innovation on the part of teachers, who can interpret the outcomes differently in different contexts” (DoE, 2006:28). Teachers are expected to use different methods to achieve same outcomes. Thus the discourse appears to accommodate and respond to diversity.

This discourse is included in the Purpose Statement of the Life Orientation Learning Area Statement, which suggests that: “The Life Orientation Learning Area aims to empower learners to use their talents to achieve their full physical, intellectual, personal, emotional and social potential.”

Outcomes-based education discourse expects teachers to prepare lessons guided by the Learning Outcomes and the associated Assessment Standards as dictated by the NCS (R-9). In doing this, teachers are to implement the outcomes-based education philosophy of the Department of Education and the NCS policy as OBE is one of the principles of the curriculum.

Outcomes-based discourse in the Life Orientation Learning Area has implications for using school gardens in that they can provide a context for learning that can be health promoting, that can contribute to physical and social development of the learners, as there are opportunities for physically work in the garden, and for building their relationships with each other as they work together and exchange ideas. Using school gardens can also potentially help learners develop team work, and growing and learning about fresh food could allow learners practical ways of improving nutritional value of their own personal diets. As such, gardens can create an accessible context for learning and for interpreting the Learning Outcomes in different ways.

4.2.2 Standards-based discourse

As indicated above Learning Outcomes are accompanied by Assessment Standards which provide definition, and which indicate levels of progression, grade by grade, which all learners are meant to achieve in progressive sequence (grade by grade –see Appendix 20). This provides evidence that the NCS is framed by a standards-based discourse. Evidence is provided in the lists of Assessment Standards provided in the Life Orientation Learning Area for each grade. Expectations are different for Grades 7, 8 and 9 learners and the standards-based discourse emphasizes the importance of enabling progressively more complex, deeper and broader expectations of learners, in accordance with one of the NCS principles which emphasize progression (DoE, 2002a).

This discourse expects teachers to interpret and pay attention to the national standards that have been set, as articulated in the NCS (R-9), and to use these for planning teaching and learning, and to

assess learners accordingly, thus creating a ‘national standard’ for assessment, as all learners around the country are to be assessed against these Assessment Standards. A standards-based discourse such as this, expects teachers to pay adequate attention to conceptual and skills progression within the Learning Area.

Standards-based discourse has implications for using school gardens in that gardens can provide a context for learning that can assist learners to achieve the assessment standards as outlined in the Life Orientation Learning Area. Assessment Standards such as the one in LO 1, Grade 7 that expects learners to “propose ways to improve the nutritional value of own diet” can for example be achieved through encouraging learners to identify and grow plants in the school food garden that can improve the nutritional value of their diets.

4.2.3 Rights-based discourse

As indicated in Chapter 2, the NCS is influenced by the Constitution of South Africa, and by nation building and social transformation objectives. It therefore explicitly emphasizes the need to include human rights in the curriculum, thus introducing a rights-based discourse into the curriculum. Evidence of the rights-based discourse as a dimension of Official Pedagogic Discourse is found in the fact that the curriculum principles state that human rights should be integrated into the Learning Area.

In the Life Orientation Learning Area Statement there is evidence of this discourse in Learning Outcome (LO) 1 which focuses specifically on making informed decisions about personal health, community health, and environmental health. The right to a healthy environment is enshrined in the Bill of Rights in the South African Constitution, and is reflected in the LO Statement. It is also explicit in LO 2, which states that the learner will be able to demonstrate an understanding of and commitment to constitutional rights and responsibilities, and to show an understanding of diverse cultures and religions. This discourse is also evident in AS1 of LO2 for Grade 7 wherein learners are to “discuss the application of human rights as stated in the South African Constitution”, and in the Grade 8 AS for LO2 which states that the learner has attained the outcomes when he or she “discusses violations of human rights and plans counter-strategies,” and in Grade 9 where learners have achieved competence when he or she “debates issues with regard to citizens' rights and personal choices.” (Doe, 2002b:42,43). Further evidence of this dimension of the Official Pedagogic Discourse is found in the Purpose Statement which states that:

Learners will develop skills to relate positively and make a contribution to family, community and society, while practicing the values embedded in the Constitution. Learners

will exercise their constitutional rights and responsibilities to respect the rights of the others and to show tolerance for cultural and religious diversity in order to build a democratic society. (DoE, 2002b: 4)

The discourse expects teachers to incorporate human rights issues in their lesson plans, and to cultivate a human rights culture in their classrooms. The discourse further expects teachers to first understand and accept that all learners can learn and as such plan accordingly and provide extra support for those learners with learning barriers.

Rights-based discourse has implications for using school gardens as this discourse can encourage teachers to address gender stereotypes, which means that boys and girls can share the different tasks equally. In school garden activities, learners with learning barriers can be mixed with other learners and their self-esteem can be developed. School food gardens can also help learners to consider what a healthy environment could mean in their school community context, thus giving effect to this right.

4.2.4 Social justice discourse

Closely associated with the human rights discourse in the OPD, as outlined in the curriculum principle, is social justice discourse. The curriculum principle emphasizes the importance of foregrounding social goals in the curriculum and states that the curriculum should aim to be "... sensitive to issues of poverty, inequality, race, gender, age disability and such challenges as HIV/AIDS" (DoE, 2002a:2). The principle also emphasizes the relationship between human rights and social justice, a healthy environment and social justice and inclusivity and social justice.

The social justice discourse is evident in LO 2 AS 1 of Grade 8 which discusses violations of human rights and plans counter strategies. In the same LO 2 AS 1 of Grade 9 expects learners to be able to debate issues with regard to citizens' rights and personal choices. Further evidence of this dimension of the Official Pedagogic Discourse is found in the Purpose Statement of the Learning Area which says that "Learners will learn to exercise their constitutional rights and responsibilities, to respect the rights of others and to show tolerance for cultural and religious diversity in order to build a democratic society." (DoE, 2002b:4). As can be seen from this statement, social justice issues are very closely aligned with the human rights discourse of the curriculum, and in fact, seem to lack specific definition, as the principles seems to a) mention a few social justice issues such as poverty and b) emphasize the relationship between an unhealthy environment, human rights and social justice issues. It does not, however, explicitly define what is meant by social justice, leaving this to teachers to define in different contexts.

Social justice discourse has implications for using school gardens as they can assist with care of those in need of food (e.g. HIV/AIDS patients) or children who are in need of food as a result of poverty in the home and community.

4.2.5 Environmental discourse

As mentioned above, environmental discourse is closely related to the human rights and social justice discourses that characterize the OPD, and as such is included in all of the Learning Areas. As indicated above, the Life Orientation Learning Area supports environmental learning in different ways. In explaining the environmental discourse in the Life Orientation Learning Area, the (NEEP-GET, 2004: 22, 23) states that:

The anchor idea in Life Orientation is “self-in-society”. While recognizing the uniqueness of the individual, Life Orientation recognizes that learners are not entirely separate from the communities and society in which they grow up ... Life Orientation helps them [learners] to understand themselves in relation to the world they live in ... This Learning Area also develops life skills that are useful for dealing with environmental issues, and encourages the development of values such as respect for living things and compassion towards people and the environment. The Learning Area also introduces learners to a range of career opportunities, including careers in the environmental field (e.g. environmental managers, environmental health officers, environmental lawyers, environmental journalists etc.)

Evidence of environmental discourse as a dimension of the Official Pedagogic Discourse is found in the fact that the NCS (R-9) provides opportunities for environmental learning in each of the Learning Areas. In Life Orientation, LO1 AS2 of Grade 7, proposes that learners should “evaluate actions to address an environmental health problem,” while a LO1 AS2 in Grade 8 proposes that learners should “critically analyze the causes of common diseases in relation to socio-economic and environmental factors,” and the Grade 9 AS2 for LO1 proposes that learners should “develop and implement an environmental health programme.” (DoE, 2002b: 40, 41). Further evidence of this dimension of the Official Pedagogic discourse is found in the Purpose Statement which states that “The Life Orientation Learning Area will enable learners to make informed morally responsible and accountable decisions about their health and the environment.” (ibid: 4)

This discourse expects teachers to consider environmental health risks such as polluted water, health risks and poor waste management practices, and to assist learners to develop and implement an environmental health programme.

The environmental discourse has implications for using gardens in that teachers could use the

gardens as an extended classroom and teaching resource, where learners can implement an environmental health programme (e.g. growing of nutritious food).

4.2.6 Learner-centred discourse

As indicated above, the outcomes-based discourse emphasizes both process and product, and leaves interpretations of outcomes and assessment standards to teachers in context, thus allowing for a learner-centred approach (at least to some extent). Evidence of learner-centred discourse as a dimension of the Official Pedagogic Discourse is found mainly in the kinds of skills learners are meant to develop, such as ‘making decisions’, ‘proposing and evaluating actions’, ‘plans an action’, ‘critically analyzes’, ‘examines issues’, ‘develops and implements a programme’, ‘investigates factors’ etc. (these are only linked to LO 1 and its Assessment Standards) which imply that teachers need to involve learners in the processes in learner-centred ways, or at the very least in activity-centred, participatory approaches to teaching, which de-centre the teachers role from a more traditional role of knowledge transfer.

Evidence of this discourse is found in the Grade 9 LO 1 AS 2 and AS 5 which propose that learners should “develop and implement an environmental health programme”; and “discuss ways to apply insights gained from participating in an activity related to national health or safety.” (DoE, 2002b: 41)

The statement on Outcomes-Based education (cited above) in the NCS specifically states that the outcomes “encourage a learner-centred and activity-based approach to education” (DoE, 2002b:1) It explicitly expects teachers to involve learners in activities related to personal and social health and well-being, and environmental health.

Learner-centred discourse has implications for using school gardens as gardens can help learners to develop interpersonal skills, teamwork and responsibility. The gardens can also produce a site for active learning and learners can be involved in activities that promote personal and social health and well-being, as well as environmental health in the school gardens.

4.2.7 Problem-based discourse

The NCS is also characterized by a problem-based discourse. This is evident in the Critical and Developmental Outcomes that guide the NCS, specifically in the Critical Outcome that states that “learners should be able to identify and solve problems and make decisions using critical and

creative thinking” (DoE, 2002b:1)

The Life Orientation Learning Area also emphasizes problem-solving by incorporating a range of problem-solving skills such as evaluating actions, describing strategies, planning actions, critically analyzing causes, examines issues, discusses ways to apply insights, critically evaluates (extracted from the AS in LO 1 DoE, 2002b:40, 41) into the Learning Outcomes and Assessment Standards, and by emphasizing issues as a focus for learning. Evidence of this dimension of the Official Pedagogic Discourse is found in the Purpose Statement of the Learning Area, which states that “Learners will be encouraged to acquire and practice life skills that will assist them to respond to challenges and to play an active and responsible role in the economy and in society.” (DoE, 2002b:4)

Further evidence of an explicit problem based discourse as a dimension of the Official Pedagogic Discourse is found in the fact that the LO3 AS6 in Grade 8 expects learners to “draw up an action plan to apply problem-solving skills in a personal context”, while AS6 for the same LO in Grade 9 states that learners should “critically evaluate own application of problem solving skills in a challenging situation.” (DoE, 2002b: 45)

This discourse expects teachers to involve learners in problem-solving activities, to develop problem solving skills, and to expose learners to “challenging situations.” School gardens can be used as a site for problem solving activities, or as a solution to problems (e.g. growing of food or selling of food for health purposes or to respond to problems of poverty and food insecurity for example).

4.2.8 Social and individual well-being discourse

The Life Orientation Learning Area is specifically concerned with the well-being of the ‘self-in-society’ and the health of the learner and his or her community and environment, as indicated in LO1, LO2 and LO3. The purpose statement of the Learning Area explicitly foregrounds this discourse by noting that:

The Learning Outcomes of the Life Orientation Learning Area equip learners to live productive and meaningful lives in a transforming society. Their focus is *the development of self-in-society*. ... learners have to develop a sense of confidence and competence in order to live well and contribute productively to the shaping of a new society. (DoE, 2002b:5)

Further evidence of social and individual well-being as a dimension of the Official Pedagogic discourse is found in the fact that the LO 1 AS 2 in Grade 8 proposes that learners should be able to

“critically analyze the causes of common diseases in relation to socio-economic and environmental factors” and AS4 for the same LO in Grade 9 proposes that learners should be able to “critically evaluate resources on health information, health services and a range of treatment options, including HIV/AIDS.” (DoE, 2002b:40, 41)

The Learning Area statement indicates that “Many social and personal problems are associated with lifestyle choices and high-risk behaviours” and the statement supports the assumption that “...sound health practices and an understanding of the relationship between health and environment, can improve the quality of life and well-being of learners” (DoE, 2002b:5).

This discourse expects teachers to find learning opportunities to address life challenges like poverty, hunger, unemployment and HIV/AIDS. As mentioned above, school gardens can be used for some of this learning.

4.2.9 Cultural discourse

The Life Orientation Learning Area statement is also characterized by a cultural discourse, as shown in the Purpose Statement of the Learning Area which states that “Learners will learn to show tolerance for cultural and religious diversity in order to build a democratic society.” (DoE, 2002b: 4)

Evidence of cultural discourse as a dimension of the Official Pedagogic Discourse is found in the fact that LO2 AS 4 and 5 propose that learners should be able to “explain how recognition of diverse cultures can enrich South African society; explain the role of oral traditions and scriptures in a range of the world's religions; critically evaluates changes in cultural norms and values in relation to personal and community issue; critically investigates issues of diversity in South Africa and ways in which to promote understanding in diverse cultures.” (DoE, 2002b: 42, 43)

The discourse expects teachers to accommodate and use community links and relationships in planning their lessons to address cultural diversity issues and to enrich teaching through use of local cultures. For example traditional healers can be asked to explain cultural and medicinal use of plants. This discourse also expects teachers to make use of oral traditions vested in elderly and other members of the community. In the case of gardens, they can help to explain and teach learners about different types of plants and their uses, particularly for health promotion.

Cultural discourse has implications for using school gardens in that gardens can be used to learn

more about plants, cultural values and knowledge of indigenous ways of knowing. Plants of medicinal and cultural importance and use can be planted by learners in the school gardens. In cases where schools already have indigenous gardens, indigenous knowledge can be solicited from the community (traditional healers). This can also strengthen school-community relationships and promote social development which is an important outcome in Life Orientation.

4.2.10 Value-based discourse

Evidence of value-based discourse as a dimension of the Official Pedagogic Discourse is found in the emphasis on human rights, social justice, inclusivity and a healthy environment as discussed above. However, the Life Orientation Learning Area explicitly emphasizes the learning of values, perhaps more than the other Learning Areas. The Purpose Statement of the Learning Area states: “Learners will respect the rights of others and show tolerance for cultural and religious diversity in order to build a democratic society.” It also expects learners to “make informed, morally accountable decisions about their health and environment.” (DoE, 2002b: 4).

Further evidence of an explicit focus on the learning of values is found in the Learning Outcomes and Assessment Standards. LO 1 AS 4 for Grade 7 states that the learner is seen to be competent when he or she “Discusses the personal feelings, community norms, values and social pressure associated with sexuality.” (DoE, 2002b: 40).

This discourse expects teachers to give explicit attention to values and to ensure that activities allow learners to develop an understanding of values and how to make “morally accountable” decisions. It also expects teachers to expose learners to community norms, and values related to sexuality, their health and the environment.

Value based discourse has implications for using school gardens in that they can be used to develop skills such as identifying, teamwork and classifying and values like responsibility, caring for self, others and the environment, respect and tolerance for others' cultures and religion. The gardens can also provide a site for learning about environmental decisions and values such as caring for biodiversity.

4.2.11 A complex discourse with high expectations of teachers

As can be seen from the analysis above, the OPD in South Africa is a complex discourse, with many different dimensions that set high expectations of teachers. This is recognized by the DoE in the NCS where they state that:

All teachers and other educators are key contributors to the transformation of education in South Africa. The NCS envisions teachers who are qualified, competent, dedicated and caring. They will be able to fulfill the various roles outlined in the Norms and Standards for Educators. These include being mediators of learning, interpreters and designers of Learning Programmes and materials, leaders, administrators and managers, scholars, researchers and lifelong learners, community members, citizens and pastors, assessors and Learning Area or Phase specialists. (DoE, 2002b:3)

To recontextualise this NCS effectively would require knowledge and experience of all of the above discourses, and the skill to create meaningful learning opportunities in the context of learners' needs, and the curriculum requirements. As indicated by the (DoE, 2002a, 2002b) the NCS requires a teacher that is creative and innovative, and willing and able to develop Learning Programmes, Work Schedules and Lesson Plans that reflect OBE principles and the full range of discourses outlined above, which make up the OPD. This is bound to be a challenge for teachers given the history of their exclusion from curriculum development matters under apartheid and colonial education regimes, and the 'newness' of the NCS (Chapter 2).

However, as indicated in Chapter 2 (and Appendix 1) teachers have been given some training (if only through workshops) in OBE and the NCS, and some aspects of the discourses might therefore be familiar to teachers (e.g. teachers have an understanding of cultural factors in society, they can also respond to issues of learners health, safety and well-being and so on). Historically, teachers like (me) have human rights knowledge and social justice issues, so it is possible that teachers will be engaged with the discourses in the OPD in some way or other. Added to this, they have prior teaching experience and knowledge which they can also bring to their interpretations of the new OPD. In this study I examined how this discourse was being transformed at school level, within the current context of transformation in the education system. In the next sections, I examined the use of school gardens for Life Orientation learning using three recontextualising stories, as indicated in Chapter 3.

4.3 RECONTEXTUALISING STORY 1: LESSON 1

4.3.1 An overview of Lesson 1 (see Appendix 6, 9 and 12)

Lesson 1 was based on Health Promotion, with a Grade 8 group of learners. The teacher worked selectively with the topic of common diseases and nutrition. The class was divided into seven mixed groups of boys and girls. The groups were uneven in that in some groups there were more boys than girls. The teacher started by asking learners questions on sexually transmitted diseases and how to control them. She further asked questions about common diseases such as scurvy,

Kwashiorkor and cholera. The second phase of the lesson was based on knowledge of foodstuffs such as minerals and vegetables. The teacher solicited information from the learners regarding the types of vegetables that they know. It was at this stage that she took the learners to the garden to observe the types of vegetable crops and fruit trees in the garden, where learners were asked to identify the different vegetable crops and were also taught how to care for them. The boys were then asked to get some tools to clear the ground and girls remained passive spectators. The written work associated with the lesson was focused on sexually transmitted diseases, with specific reference to transmission of HIV/AIDS (Appendix 12), which actually seemed to be linked to another lesson plan.

In the next sections I report on aspects of the lesson that pertain to the categories used to describe the Official Pedagogic Discourse. In doing this, I identify instances of selective appropriation and ideological transformation, which show how the recontextualising of the OPD takes place in practice. It was difficult to identify evidence of selective appropriations and ideological transformations associated with every category, so only those that are relevant are covered here.

4.3.2 Selective appropriations and ideological transformations of the OPD

4.3.2.1 Outcomes-based discourse

The teacher adopted outcomes-based discourse for this lesson as she planned to work with LO 1: Health Promotion. According to the lesson plan (see Appendix 9), learners were expected to make informed decisions regarding their personal, community and environmental health as per the requirements of this Learning Outcome. However, the teacher selectively appropriated aspects of this Learning Outcome, by asking learners questions probing their understanding about infectious and common diseases and about what decision they can make regarding their personal health (see Appendix 6) as shown in the lesson dialogue below.

Teacher: What type of sexually transmitted diseases do you know of?

Learner: Gonorrhoea, syphilis

Teacher: What mechanisms can be used to prevent sexually transmitted infections (STI)?

Learner: Use condoms, abstain

Teacher: What disease is caused by lack of proteins in our bodies?

Learner: Kwashiorkor

Teacher: How can we prevent it?

Learner: We can prevent it by eating healthy food

Teacher: How can we tell if the food we eat is healthy?

Learner: Our food must have fruit and vegetables

Teacher: What disease affects people who do not eat healthy food?

Learner: Scurvy

Teacher: How do we protect ourselves from having scurvy?
Learner: By eating food that has vitamin C.
Teacher: Any other disease that you know?
Teacher: It's cholera. What is cholera?
Learner: *Utyatyazo*. [Diarrhoea].
Teacher: It's continuous diarrhoea. What causes cholera?
Learner: *Ngamanzi amdaka* [unclean water].
Teacher: What should an infected person do?
Learner: She can pour teaspoon of jik in 20L water or boil water before using it.
Teacher: What else can we do to remain healthy?
Learner: By eating healthy foods.

She left out the decisions that learners were to make regarding environmental and community health, thus only teaching to one aspect of this outcome. After some discussion on food stuffs and minerals (see Appendix 6), she took the learners to the garden so that they could identify the crops and fruit trees. This was meant to afford learners an opportunity to identify the crops and how to care for them. This was meant to attend to the process dimension of the learning outcome i.e. it was meant to be an active learning experience for the learners.

4.3.2.2 Standards-based discourse

The teacher also indicated her awareness of the standards-based discourse, indicating in her lesson plan that she was going to use three Assessment Standards whereby learners would:

- Critically analyze the causes of common diseases in relation to socio-economic and environmental factors,
- Demonstrate informed, responsible decision-making about health and safety, and
- Examine healthy and safety issues related to violence and propose alternatives to violence as well as counter-strategies (Appendix 9).

However, in the lesson the teacher focused on the causes of common diseases rather than their critical analysis in relation to socio-economic and environmental factors. The teacher did not give learners a chance to demonstrate informed, responsible decision making about health and safety, she merely mentioned the diseases and their causes.

As indicated in the Lesson Plan (Appendix 9), the teacher planned her lesson in such a way that learners would be engaged in three activities, which as can be seen in the Lesson Plan (Appendix 9) were focused on an understanding of the S.A. Bill of Rights. In my observation of the lesson there was nothing said about those activities, and the lesson and the activities did not do justice to the Assessment Standards proposed. This represents a significant transformation of the OPD. The Assessment Standard that seemed to have partially been attended to by the teacher, is the one in

which learners are to “examine healthy and safety issues related to violence and propose alternatives to violence as well as counter strategies”. The latter aspect of this AS was not attended to.

The teacher did not teach the other lessons because of the national teachers’ strike that took almost a month. Even before that national strike there were class disruptions that had taken place within the district as a result of a misunderstanding between the District Manager and one teacher union and thereafter the schools closed. Those disruptions impacted negatively on the teaching programme and therefore have a bearing on the recontextualisation of the OPD.

4.3.2.3 Social justice discourse

The teacher’s engagement with social justice issues was not evident in her lesson plans. However, observation of the lessons provided some useful insight into this aspect of the OPD in practice. The teacher took the learners to the garden wherein she divided them into groups. These groups were constituted by boys and girls separately. Boys were given spades, fork spades and a hand hoe whilst a few girls were given rakes. From this exercise, it appeared that the teacher was allocating physical tasks to boys and dexterous or domestic or light work to girls. In my view, this was a sexist practice displayed by the teacher whether consciously or not. Boys were made to dig, and the girls stood and watched the boys working. This instilled in girls the value that hard work was only meant for boys and so was gardening. The teacher did not ensure equity in the lesson due to stereotypes. She maintained that boys are inherently strong and as such fit for hard work whilst girls are weak and can only do light work. Even with her interactions with learners in the garden, her inclination was biased more to the boys. When I inquired from the teacher after the lesson as to why her focus was so much on the boys, she ascribed it to a cultural norm which regards males as stronger than females and as such fit for hard work and that she finds it easier to communicate with boys than girls as boys were more receptive, welcoming and open (Appendix 6).

4.3.2.4 Environmental discourse

The teacher's engagement with environmental issues was not evident in her lesson plans except for the use of LO 1, which includes a focus on environmental health. As reported above, from the observations made, the teacher did not afford learners a chance to critically analyze the causes of common diseases in relation to socio-economic and environmental factors despite the fact that she apparently intended to do this as she cited this Assessment Standard in her Lesson Plan. The teacher selectively worked only with personal health problems experienced (Appendix 6). This led to a

neglect of the environmental focus as intended by the OPD. In the gardening practice, however, she gave the learners an activity to clear the garden, and this could be interpreted as some activity related to caring for plants although it was not made explicit.

4.3.2.5 Learner-centred discourse

Despite the Learning Outcomes and Assessment Standards requiring learners to “make decisions,” “critically analyze,” “demonstrate,” “examine issues and propose alternatives,” the teacher took on the role of being a knowledge resource. She did not allow learners a chance to engage in any of the processes outlined above. She was quick to answer the same questions that she asked giving learners very limited time to respond.

An intention to engage learners in group work and learner activity were notable in that learners were seated in groups rather than rows, but the purpose of the group formation was not very clear in that the teacher applied whole class teaching with very little active processing of information by learners. The teacher did not show enthusiasm and vigour. When I probed this state of affairs the teacher indicated to me that she was firstly an unqualified temporary educator, and secondly that she had never attended any workshop on the NCS. It would seem that her unqualified status and lack of experience with the NCS influenced the recontextualisation of the OPD which was indicated in her Lesson Plan, but did not come through in her lessons, or in her teaching style or practice.

4.3.2.6 Problem-based discourse

For learners to demonstrate their critical thinking and decision making skills it was necessary for learners to be engaged in activities that would challenge them. Instead of the teacher engaging learners in challenging situations or problem simulations, she merely listed food stuffs on the chalkboard, and these were linked with vegetables. It was at this stage that learners were taken out of the classroom to go to the garden and identify some of the vegetable crops that were mentioned. There were some vegetables like cabbage and spinach in the garden. Learners were also given an opportunity to look at the fruit trees like peach, orange and apples. The teacher asked learners to identify and name the vegetable crops and fruit trees that they saw in the garden but did not ask learners about other crops that were also there which have cultural importance. This activity did not seem to have any problem-solving component to it, although she did ask some questions which could have led to problem solving investigations, as shown in the lesson dialogue below:

Learner: We need to plant vegetables and fruits
Teacher: Where exactly?

Learner: In hospitals, schools, homes

Teacher: To ensure that what we plant survives what can we do?

Learner: Use *umgquba* (manure) to save expenses on fertilizers

Teacher: What can we do with excess vegetables and fruits?

Learner: We can sell them.

The written work on sexually transmitted diseases (Appendix 12) was a broader content-based controlled test finding out about whether learners understood what HIV/AIDS stands for, how HIV/AIDS can be transmitted, and how it is not transmitted, and also what the stages of HIV/AIDS are. The work was marked with no feedback given to learners on how to correct wrong answers.

4.3.2.7 Value based discourse

A key concern for environmental education is the care for environment. Education for the environment gives the learners an opportunity to explore their personal responses to the environment and environmental issues, and to develop individual attitudes and values. In the gardening activity, the teacher appeared to be encouraging learners to care for the school property including the garden. Values are often also expressed by what is not done, and in my observations I noticed that the teacher selected only the vegetable and fruit garden and did not focus at all on the indigenous gardens. When I asked her why she did not take the learners to the indigenous garden she said she was challenged by the fact that she did not know a single plant there, more so that there were no labels. She further said that the indigenous garden was not communicative. In this case, potential for valuing indigenous plants was therefore reduced by the teacher not having enough knowledge to support learners to have this learning experience.

4.4 RECONTEXTUALISING STORY 2: LESSON 2

4.4.1 An overview of Lesson 2 (see Appendix 7, 10 and 13)

Lesson 2 was also focused on Health Promotion and was conducted with a Grade 7 class. The teacher planned the lesson using the NCS Learning Outcomes and Assessment Standards, and used a handout in the classroom. The classroom was divided into six groups of eight learners in each group. Each group was given a handout which showed pictures of air and water pollution. The entire lesson revolved around these pictures. The teacher asked questions on cleanliness as a way of introducing the lesson, but these questions appeared to have little to do with the topic of air or water pollution or the picture. Examples of questions asked were:

Teacher: The class is dirty, what makes it dirty?
Learner: Broken desks.
Teacher: What do you see when your class is dirty?
Learner: Papers.
Teacher: Who must make it healthy?
Learner: Principal.
Teacher: How is the principal to make the class healthy?
Learner: Pay money (see Appendix 7).

In the next sections I report on aspects of the lesson that pertain to the categories used to describe the Official Pedagogic Discourse. In doing this, I identify instances of selective appropriation and ideological transformation, which show how the recontextualising of the OPD takes place in practice. As in Recontextualising Story 1 (see section 4.3 above), it was difficult to identify evidence of selective appropriation and ideological transformations associated within every category, so only those that are relevant are covered here.

4.4.2 Selective appropriations and ideological transformations of the OPD

4.4.2.1. Outcomes-based discourse

The teacher indicated an awareness of the outcomes-based discourse in the OPD, by planning his lesson for grade 7 based on LO1: Health Promotion which states that “The learner will be able to make informed decisions regarding personal, community and environmental health.”

He asked learners to identify environmental health problems that they experience at school and suggest counter strategies to deal with those problems. The NCS (8-9) Orientation Programme states that “Adopting an outcomes based approach also allows for creativity and innovation on the part of the teachers who can interpret the outcomes differently in different contexts (DoE, 2006: 28)”. In this case the teacher selectively appropriated environmental problems only experienced at school.

4.4.2.2 Standards-based discourse

The teacher indicated an awareness of the standards-based discourse, by stating in his Lesson Plan that he would use AS1-5 (Appendix 10). This does not conform to the assessment guidelines for this particular grade as there are only 4 Assessment Standards for grade 7. What the teacher did here was to apply Assessment Standards for grade 8 in grade 7. This was contrary to the dictates of NCS (R-9) which states that “The performance of learners should be measured against the Assessment Standards of the Learning Outcomes in that particular grade.” (DoE, 2002:2) This teacher

selectively worked only on one aspect of the AS1 he listed, and chose an AS from Grade 8 “plans an action in which the laws and / policies for protecting environmental health are applied to address an environmental health issue”, using an AS from a grade higher than the one he was actually teaching (Appendix 10). In the lesson he did not discuss laws and policies at all and only concentrated on environmental health issues in the school (Appendix 7). When I asked the teacher why he used AS for a higher grade he was apologetic and stated that he was not very sure of what he was doing as result of lack of proper training.

4.4.2.3 Social justice discourse

Again the social justice aspect of the discourse was not evident in the lesson planning, but in the observations. The teacher asked a number of questions based on social justice issues related to cleanliness, but the social justice issues were not thoroughly dealt with in the lesson. Some examples of questions in the lesson that raise social justice issues are:

Teacher: If your father have been working *kule migaqo eya ko Mpisi [in those dirt roads that go to Mpisi and Monti]* (What happens)? He gets affected. There are others caused by smoke. We said its TB and Asthma. What is asthma?

Learner: *Sisifuba [Asthma]*.

Teacher: *Kukho nantoni phaya?* [What else is there]?

Teacher: Bronchitis, *Abantu bakhohlela kakhulu [People are coughing a lot]*.

Teacher: *Ngela xesha la moto ikhupha esa smoke kuthiwa yi carbon* [What comes out of the exhaust pipe in a car is called carbon dioxide].

Learner: Carbon dioxide

Teacher: No, *yi carbon monoxide*.

Teacher: It's Carbon and sulphur monoxide. Those gases are dangerous for us.

Whilst the questions were more obvious, the teaching practices associated with social justice were less explicit. The class was divided into mixed groups of girls and boys, but the focus of the teacher was mainly on girls as if they were more conversant with cleanliness issues. More praise and encouragement was given to female learners, while males mostly received reprimands. The teacher-learner interactions in the classroom thus indicated subtle bias related to gender-based views of cleanliness and health.

4.4.2.4 Environmental discourse

LO1 AS2 (for Grade 7) says that the standard will be achieved when the learner “Evaluates actions to address an environmental problem.” In his lesson the teacher used a handout with pictures showing air pollution caused by aeroplanes, motor cars, fires and chimneys. The teacher further showed and talked about water pollution using the same picture which showed littering but did not

take the learners outside the classroom for them to actually see littering or instances of water pollution, even though there were lots of papers all over the school premises and water pollution can be observed in the community. It seems that the teacher did intend to engage learners more actively, as activity 2 in the Lesson Plan indicated that learners should find out about environmental health problems and read about air pollution (Appendix 10). The teacher selectively worked only with a picture or hand out that showed various causes of air and water pollution. He asked the learners to mention the causes of air and water pollution (Appendix 7). This is a sample of a few questions that were asked by the teacher in this regard:

Teacher: If we have smoke from fires, factories, cars and aeroplanes, what happens to the air?

Teacher: If your father has been working as labourer in road construction, what happens?

The teacher did not either ask or tell the learners anything further about actions to avert or address these problems nor to evaluate these actions. As a result, the OPD changed in that the focus was not on evaluating actions to address an environmental problem, even though this was the stated expectation. The intentions of the OPD, as stated in the Purpose Statement which says that “Life Orientation will enable learners to make informed, morally responsible and accountable decisions” was not clearly articulated or achieved, as the teacher selectively used pictures and kept the learners indoors and did not afford learners an opportunity to go outside to see or act on litter and poor waste management, which would have been a valuable learning process to extend the classroom questioning and the study of the picture. They could have proposed, tried out and evaluated various actions to solve this environmental problem. For example, they could have experimented with various solutions to the dust problem (e.g. planting vegetation in dusty areas) or they could have established a system for better waste management in the school.

4.4.2.5 Learner-centred discourse

The teacher managed to keep the attention of the learners by asking a number of questions in order to probe the issues related to a healthy environment, and the teacher explained most of the concepts in the learners’ mother tongue. The seating arrangement of learners was one that is compliant with the dictates of the Official Pedagogic Discourse.

I noted a tendency of accepting everything the learners said as valid knowledge irrespective of the accuracy or relevance to the programme. The teacher did not give learners corrective feedback when they offered responses to his questions, as shown in the following lesson dialogue extracts (Appendix 7):

Teacher: What else makes you unhealthy?

Learner: Smoking.

Learner: Alcohol.

Learner: Drugs.

Teacher: Anything else?

Learner: Drinking, Sir.

Teacher: Drinking what?

Learner: Drinking beer.

Teacher: We have a smoke from what? From a car, aeroplane, fire, factory.

Teacher: Okay, alright now. What is wrong with that smoke from the car, aeroplane and factory?

Teacher: What's wrong with it?

Learner: It causes heart disease.

Teacher: You make fire at home does it cause heart disease?

Learner: TB.

Teacher: What make smoke to cause heart disease in that area?

Teacher: If we have smoke from fires, factories, cars, aeroplanes, what happens to the air?

Learner: It causes a brain damage.

Teacher: The air that we breathe is polluted. Air is ...class!

Teacher: Have you seen the smoking in a burning veld? If you may go through that smoke for a long time what happens?

Learner: *Uzokhohlela* (you'll cough).

Teacher: Smoke will affect *iintoni*...lungs *zakho* because of that smoke. (Your lungs will be affected).

Teacher: And then *yintoni enye futhi*? If your lungs are affected what kind of disease will you suffer from?

Learner: TB.

The same pattern was visible in the learners' work (Appendix 13), where they were asked to answer questions similar to those discussed in the class. Again the teacher did not seem to probe learners' answers or to correct or question what the learners were writing.

For example, a learner answered a question on water pollution, air pollution and gardens like this:

Because water from stream are death. Another thing is animals are wee-wee to the water and toilet. And all those things can make diseases.

Is TB like those people who are smoke are affected us like when you near to him/her something is going to happen to you going to cough or sneeze so you get the TB diseases when

It is important to have gardens to the schools if we have gardens to the school that will make our lives more comfortable (Appendix 13).

In each case the teacher marked the answers correct, and did not probe any of the answers further or suggest improvements. In the first answer the teacher underlined the words 'death' and 'wee-wee' but the link between the animal behaviour and the toilet was not questioned, and in the second case

the relationship between TB and air pollution was not clarified, and in the third answer there was no questioning of why a garden would make lives in the school more 'comfortable'.

I also noticed in the observations that learners were not writing while the teacher was writing on the board. Some of the learners consequently got bored and started to disrupt the class (Appendix 7). Whilst the teacher did what he could at the time through using pictures and questions, my observation was that learner-centredness as an Official Pedagogic Discourse is difficult to realize where there are large classes with limited space.

4.4.2.6 Problem-based discourse

The lesson as planned by the teacher did not really focus on learners being engaged in any problem-solving activities as such other than teasing out those factors which cause an unhealthy environment. As indicated in the above discussion, the teacher did not engage the learners with much other than the picture interpretation, questions and writing on the board. There was written work done by learners during this lesson and the time expired after they had to go out to the outdoor activity. As indicated above, the written assignment involved further questions and answers, along the same lines as the classroom discussion (Appendix 13), and did not therefore change the way that the teacher was interpreting the OPD.

The learners were therefore not able to make use of the school garden for problem solving activities that could have been relevant to the Life Orientation Learning Area.

4.4.2.7 Value-based discourse

The teacher in this Pedagogic Discourse selectively appropriated cleanliness as way of dealing with LO1 on Health Promotion, and in dealing with cleanliness; he was also trying to instill values as shown by this quote:

Teacher: Anything else, What about the dust, and the dirtiness of the class?

Learner: We have to clean the dust

Teacher: Alright we'll see what to do to keep the class healthy. We have to clean dust and dirtiness. Remember cleanliness is next to Godliness. (Appendix 7)

By declaring that pollution is wrong, the teacher was doing more than venting his feelings about pollution. As shown in the dialogue below, the teacher was guiding the learners to think about issues, and to consider different options and choices through a reasoned dialogue:

Teacher: Ja we must paint toilets so that they look nicely. What about the dirty papers and the dust?

Learner: Collect papers and burn them

Teacher: What happens if you don't burn them?

Learner: They spread all over the place

Teacher: Where do we actually have to burn the papers?

Learner: We must burn the papers in the pit

Teacher: Are we doing that?

Learner: Sometimes we do, sometimes we don't

Teacher: If we go outside shall we see papers?

Teacher: Let's take the dust. What can we do to prevent the dust?

Learner: We make concrete slabs on the school premises.

Teacher: The money you pay for school fund is far less than the needs

Learner: Plant grass

Teacher: Which is easier, planting grass or making concrete slabs?

Learner: Planting grass and plants.

Teacher: Is it helpful to have plants in our premises?

Learner: Yes Sir

Teacher: How is it helpful?

Learner: Plants give out oxygen

Teacher: And what do you give out as a human being?

Learner: I give out carbon dioxide

Teacher: Plants need that carbon dioxide. What do plants do with carbon dioxide?

Learner: Plants breathe in carbon dioxide

Teacher: Plants use carbon dioxide for making their food. The food we eat from plants is made out of carbon dioxide. Let's make sure that we keep those plants even at home.

In this dialogue extract is evidence that the teacher was guiding the learners to choose between either planting grass or putting down concrete slab to counteract the dust problem (Appendix 10). The fact that learners were able to say that they would rather choose to plant grass rather than laying a concrete slab, is an indication that learners valued planting and to them planting was regarded as worthwhile as opposed to concrete-slabbing. As indicated by the assessment standard, ideally every pupil ought to participate in seeking and defining the 'right' or best solution among the many possibilities. Through the lesson, the teacher managed to emphasize the relation between values and behaviour or actions, and personal responsibility. I noted that some learners picked up papers that were under their desks which indicated that some value aspects had been addressed in the lesson.

4.5 RECONTEXTUALISING STORY 3: LESSON 3

4.5.1 An overview of Lesson 3 (Appendix 8, 14)

Lesson 3 was focused on the Importance of Vegetables, with a Grade 9 group of learners. The teacher started the lesson in the classroom but ended up taking the learners to the school garden. In the classroom the teacher divided the learners into six mixed groups of boys and girls. He focused on vegetables and their functions. He further discussed their classification. The teaching approach

used initially in the lesson was a traditional telling method and learners were, for a quarter of the period listening to the teacher, as the teacher was central in the lesson. The teacher did not prepare a Lesson Plan within an OBE framework and it did not therefore explicitly engage with the OPD (Appendix 8). This was surprising as the Grade 9 teacher has been teaching Life Orientation for the longest period (4 years), and he has received training in OBE, the RNCS and the NCS (Appendix 1). He is also the teacher that has used the school garden before in his teaching. The lesson itself was brief and it ended with the learners going to the garden to prepare soil for vegetable planting.

Although this lesson was not structured in the OBE framework as the teacher did not use the Learning Outcomes and Assessment Standards to guide his lesson, I will still report on the lesson using the categories to describe the Official Pedagogic Discourse as in the other two recontextualising stories, as this will shed light on whether teachers are working with aspects of the OPD even if their lessons are not explicitly planned within the official curriculum framework.

4.5.2 Official Pedagogic Discourse in the lesson

4.5.2.1 Outcomes-based discourse

The teacher did not show that he was using Learning Outcomes to provide guidance on the kind of process and content for his lesson planning. However, LO 1 focuses on Health Promotion, and AS 1 in Grade 7, indicates that learners need to be able to “propose ways to improve the nutritional value of own personal diet” (DoE, 2002b:40), which was the closest aspect of the OPD that I could identify relevant to the lesson that was actually taught. The Lesson Plan contained a list of content to be taught (see extract below), and two activities: one was to establish a vegetable garden and the other was to complete a table listing different food groups and examples with their functions (see Appendix 11 and 14).

Vegetables are extremely important for the people of our country.

This is because they are protective food.

They provide fibre which helps the food to pass the food digestion system.

Vegetables contain proteins, which are body building foods

- Beans and peas are very rich in proteins
- Vegetables contain vitamin A which helps us to grow
- They also have vitamin C, which helps to heal wounds
- Vegetables also contain energy-rich food such as sugar and starch- carbohydrates /sweet potatoes
- Vegetables are rich in minerals such as calcium and phosphorus which are needed to build strong bones and teeth

Vegetables can be classified under the following headings:

- Legumes – Beans and peas

- Leaf crops- Lettuce and spinach
- Root crops- Carrots and beetroot
- Fruit bearing crops- Tomatoes and pumpkins
- Tuberous crops- Potatoes
- Cabbage crops- Cauliflower and cabbage (see Appendix 11).

The lesson was content and practice based, and initially the teacher listed a number of foodstuffs provided by vegetables without asking learners to respond. He listed the following content associated with vegetables:

Teacher: Vegetables provide fibre.

Teacher: Vegetables contain proteins which are body building e.g. Beans.

Teacher: Vegetables help us to grow.

Teacher: Vegetables have vitamin C which heal wounds.

Teacher: Vegetables are rich in minerals.

Teacher: Vegetables can be classified according to the following:

- | | |
|---|----------|
| • | Legumes |
| • | Leaf |
| • | Tuberous |
| • | Fruit |

Teacher: Who can give us examples?

Learner: Beans and peas.

Teacher: O.K. Legumes are beans and peas. Who can give us examples of leaf crops?

Learner: Cabbage.

Learner: Spinach.

Teacher: Another one,

Learner: Spinach and Lettuce.

Teacher: What about fruity vegetables?

Learner: We have tomatoes and pumpkins.

Teacher: We also have tuberous crops which are they?

Teacher: Give me one examples.

Learner: Cucumber.

Teacher: After five minutes each group is going to report (Appendix 8).

From this we can see that the teacher worked closely with the content in his lesson plan in the lesson.

4.5.2.2 Standards-based discourse

The lesson plan submitted by the teacher did not indicate what Learning Outcomes and Assessment Standards were being used. As indicated above, it looked like he might have had the Grade 7 AS for LO 1 in mind when planning the lesson. The AS for the same LO in Grade 9 requires learners to be able to “illustrate and evaluate the influence of ecological, social, economic, cultural and political factors on own personal choice of diet” or “develop and implement an environmental health programme” (DoE, 2002b:41). Neither of these was being addressed by the lesson. When I asked

the teacher about the use of AS in the Lesson Plan, he looked confused and did not give a straight answer. I asked him whether he attended workshops on implementation of the new curriculum and he responded positively (see also Appendix 1), but he stated that he never came to grips with the new approach. When I asked him about the OBE Lesson Plan he said that he is not quite sure about it but would submit one later on. Eventually he did submit the lesson plan, but there was no correlation of the lesson that I observed with what was submitted.

4.5.2.3 Rights-based discourse and social justice discourse

Rights based discourse expects teachers to bring human rights issues into their lesson plans, and to inculcate a human rights culture in their classrooms. As indicated above, the teacher did not prepare a Lesson Plan that conforms to the dictates of the NCS (R-9). His Lesson Plan looked more like guiding content notes in which he indicated two activities that the learners were supposed to do (see Appendix 11). However, as in the other lessons, this discourse was visible in the context of the gardening practice during the lesson. When the teacher took learners to the garden he grouped the boys together with girls and asked them to prepare the soil for planting vegetable seedlings. The teacher was careful to ensure that tasks were evenly distributed among male and female learners. Some of the groups were dominated by boys. The teacher tended to focus more on girls than the boys. When girls responded he asked the class to applaud them and did not give the same treatment to boys. When the girls seemed to be reluctant to do manual work in the garden the teacher did not seem to be bothered at all. But when it came to watering the seedlings, the teacher insisted that girls had to fetch water and bring it to the garden and water the seedlings.

4.5.2.4 Environmental discourse

Although it did not seem as if the teacher was using this curriculum guidance for his planning, the teacher asked learners to plant spinach and cabbage. He therefore selectively appropriated knowledge of western vegetables and did not introduce or discuss indigenous vegetables or *imifuno* nor did he discuss the vegetable gardening as an environmental health programme activity.

4.5.2.5 Learner-centred discourse

As indicated above, the NCS emphasizes learner-centred and activity-based education. In the beginning of the lesson, the teacher did not consider this discourse. He was the main player in the lesson (See Appendix 8). Even in the garden where the learners were engaged in an activity on gardening, the teacher was busy measuring the plots rather than allowing learners to design and

measure the plots themselves. There was an indication that the teacher did not have full confidence that the learners would be able to work by themselves without his direction. I observed that learners developed some skills in measuring and planting through watching and working with the teacher, and through following his instructions.

4.5.2.6 Social and individual well-being discourse

The Lesson Plan content prepared by the teacher showed information that addressed personal well-being as he outlined how vegetables contributed to the health of learners by for example stating that beans are rich in proteins, while vegetables have vitamin C which helps to heal wounds and that the calcium and phosphorous in the vegetables are needed to build strong teeth and bones. This was, however, not appropriate to the standards that were defined in the OPD which required learners to “illustrate and evaluate the influence of ecological, social, economic, cultural and political factors on own diet”.

4.5.2.7 Problem-based discourse

As mentioned earlier, the teacher was not using the NCS discourse to guide his lessons, but he did assign learners a task of preparing soil for vegetable planting. Each group was asked to report. In some groups there was reluctance in executing the task. There were language problems that the teacher did not address, problems like:

Learner: Is to fencing and to clean like raking, to makes seeds beds (See Appendix 8).

The teacher selectively focused on the practice of soil preparation and did not dwell on the economic problem solving possibilities associated with the growing of vegetables, or other aspects indicated in the Grade 9 AS (as outlined above). The teacher did not emphasize the importance of vegetables in terms of responding to such challenges as HIV/AIDS, which is a pandemic affecting society in South Africa.

4.5.2.8 Culture-based discourse

The cultural dimension of the Official Pedagogic discourse expects teachers to accommodate and use community links and relationships in planning their lessons. The teacher did not make use of this extended resource. The teacher took the learners to the garden to prepare soil for planting. Despite the fact that there was an indigenous garden within the school premises, the teacher did not

utilize it. He selectively worked with information on the importance of vegetables without saying anything about indigenous plant knowledge. As indicated above, the focus was only on western vegetable crops. The teacher did not ask learners about what they use as vegetables in their culture. For instance the teacher did not ask about *imifino* [wild leafy vegetables] like *irwaba*, *unomdlomboyi*, *uvele-Ludeke*, *ububazi*, *imithwane*, *isolo lentaka* which are prevalent in the area. This was a lost learning opportunity.

4.5.2.9 Value-based discourse

As in the sections reported above, there was no explicit use of the OPD, but there was evidence of engagement with values-based discourse in the fact that the teacher commanded a fair amount of respect among all learners. This is influenced by learners' cultural background and norms. I also heard some of the learners appreciating the beauty of the garden after they had prepared it.

4.6 CONCLUSION

This chapter provided an analysis of the OPD in the Life Orientation Learning Area, and it reported on three lessons that I observed, where teachers were teaching Life Orientation in the Senior Phase. As indicated in Chapter 1, my interest was to examine how the school gardens could be used in the curriculum recontextualisation process. Looking closely at the NCS through an analysis of the OPD, indicates that the OPD seeks to bring about a new approach to Lesson Planning, teaching and learning, and it has explicit transformation goals, as outlined in the NCS (R-9) Overview Document (DoE, 2002a:8) where it is stated that:

The curriculum aims to develop the full potential of each learner as a citizen of a democratic South Africa. It seeks to create a life long learner who is confident and independent, literate, numerate, and multi-skilled, compassionate, with respect for the environment and the ability to participate in society as a critical and active citizen.

To do this the OPD is constructed to include a range of new discourses that need to be recontextualised in schools. From the three lesson observations that I conducted to examine how teachers might use school gardens to recontextualise the OPD in the Life Orientation Learning Area in Grade 7, 8 and 9, it seems that these discourses are not well understood at school level (in the school that I was observing in), and that the way the discourse is recontextualised is influenced by various factors which I discuss in the next chapter.

CHAPTER 5

SCHOOL FOOD GARDENS AND HEALTH PROMOTION IN THE NCS: MAKING MEANING OF THE RECONTEXTUALISING PROCESSES

5.1 INTRODUCTION

This chapter discusses the data presented in the previous chapter by drawing together insights gained from the three recontextualising stories and the analysis of the OPD, as well as the literature in Chapter 4 and the contextual interviews with teachers, learners, the SANBI manager and the community member (Appendix 1 – 5). This provided me with a richer understanding of the data presented in Chapter 4, and it helped me to address the research question. I begin by reminding the reader of my research question:

How are school gardens used by teachers to recontextualise the Official Pedagogic Discourse of the Life Orientation Learning Area related to health promotion in the Senior Phase?

The goals are:

- To review the Official Pedagogic Discourse related to health promotion in Life Orientation Learning Area Statement (see section 4.2),
- To identify expectations and possibilities for using gardens in the Life Orientation Learning Area (Appendix 1-5 and this chapter),
- To investigate the implementation of environmental Lesson Plans for Life Orientation (see sections 4.3, 4.4 and 4.5),
- To review lesson planning and implementation to identify the delocation and relocation processes involved in curriculum recontextualising (see sections 4.3, 4.4 and 4.5 and discussed in more depth in this chapter).

The discussion in this chapter is guided by the use of a set of analytical statements which are:

- **Analytical Statement 1:** The Official Pedagogic Discourse in Life Orientation allows for creative use of school gardens for Life Orientation teaching and learning.
- **Analytical Statement 2:** Teachers selectively appropriate aspects of the Official Pedagogic Discourse when teaching Life Orientation using school gardens.
- **Analytical Statement 3:** Teachers ideologically transform aspects of the Official Pedagogic Discourse when teaching Life Orientation using school gardens.
- **Analytical Statement 4:** Factors such as time, class size, planning, assessment practice, group dynamics, resources and teachers knowledge and experience of the NCS and use of gardens influences the recontextualising process.
- **Analytical Statement 5:** The complexity of the Official Pedagogic Discourse influences the recontextualisation process.
- **Analytical Statement 6:** Learners like working in the garden but teachers do not like using the gardens for teaching

5.2 ANALYSIS OF THE USE OF SCHOOL FOOD GARDENS FOR RECONTEXTUALISING THE OPD IN LIFE ORIENTATION

5.2.1 Analytical Statement 1: The Official Pedagogic Discourse in Life Orientation allows for creative use of school gardens for Life Orientation teaching and learning

School gardens provide possibilities for values, skills, teamwork, and development of environmental ethics, anti-bias activities, and nutrition which are all central to the OPD of the Life Orientation Learning Area which seeks to develop the *self-in-society* (see section 4.2).

Use of school gardens to recontextualise the OPD in Life Orientation, can help learners to work towards the critical outcomes as there are opportunities for problem solving, critical thinking, team work development, self organization and management, and a sense of responsibility. As shown in all three of the recontextualising stories, teachers did not maximize this potential, and in each case it was the teacher's teaching style and methods that seemed to hamper recontextualising of this aspect of the OPD. In the case of Lesson 2, it was the content chosen as well as the teaching style that hampered use of the school gardens to achieve the critical outcomes. One of the respondents in the teacher questionnaire confirmed that the use of school gardens has potential to develop skills like decision-making, group work, fostering responsibility and teaching problem solving skills (see Appendix 3), although only group work seemed to get attention in the lessons.

As shown in two of the three lessons (Lesson 1 and 3) there is potential for teachers to use the

school gardens for LO 1: Health Promotion, as school gardens allow learners to find out more about how fresh food can help them improve the nutritional value of their own personal diet. The gardens can also help develop skills for LO 4: Physical Development, as learners can develop physically as they work in the gardens. As shown in two of the lessons, the selective appropriations (choices about content and method) made by the teachers significantly changed how the Learning Outcomes were taught, and in the third lesson, where the Learning Outcomes were not used, the Assessment Standards were not met at all.

Considering the standards-based discourse when using school food gardens for Life Orientation can provide structure, depth and direction for lesson planning. As shown in all three lessons, this aspect of the OPD is not clearly understood by teachers, nor is it implemented. As in the Grade 9 case, failure to use the Assessment Standards can mean that learners are taught information and skills that are not expected of them at the level, and they miss out on learning more complex content and skills that are required at the Senior Phase.

As indicated in Chapter 4, the OPD seeks to promote human rights, social and environmental justice. The OPD is sensitive to issues of diversity such as poverty, inequality, race, gender and disability. As shown in all three of the lessons, school food gardens provide a rich place of learning for addressing gender stereotypes as work can be shared equally between boys and girls (Mukute, 1999; Asafo-Adjei, 2004). Learners are also able to consider what a healthy environment could mean in their school context, thus giving effect to this right. Social justice as a dimension of the OPD enables teachers to use school food gardens to assist with care of those in need (e.g. HIV/AIDS) patients. Teachers should find learning opportunities for challenges like poverty, unemployment and HIV/AIDS. In all three of the lessons, these learning opportunities were not maximized. In lesson 1 however, the teacher did create opportunities for the learners to consider challenges such as diseases.

As indicated in Chapter 4, the OPD also supports cultural discourse through which the learners could draw on community and cultural knowledge of plants for health promotion. This was not addressed in any of the three lessons, and despite there being an indigenous garden, even the most experienced teacher did not even make mention of cultural discourse (e.g. *imifino*) to help learners learn more about plants, their cultural values and indigenous ways of knowing. Gardens create space to involve community members in the learning processes (traditional healers) and if community members are involved in the learning processes school-community relationships improve (Asafo-Adjei, 2004; Mvula-Jamela, 2007). This too was a missed learning opportunity.

The environmental discourse allows teachers to use school gardens as an extended classroom and teaching resource and can provide opportunities for learners to implement an environmental health programme, as expected by the OPD. In Lesson 1 the teacher concentrated on plant identification, and in Lesson 3 the teacher concentrated on soil preparation. Neither of these made full use of this opportunity, and they did not involve learners in making decisions about their own health or environmental health, even though this was a key expectation of the Learning Outcome on Health Promotion. In Lesson 2 the teacher focused on air pollution and did not encourage learners to participate in the implementation of an environmental health programme which was possible.

School gardens also provide a site where learner-centred and activity based education can take place, as learners can develop interpersonal skills, teamwork, and responsibility as they plan for, and take charge of their plots. Asafo-Adjei's (2004) research shows how learners can be involved in a learner-centred process of finding out what plants they want to / can plant based on community knowledge, and how they can be involved in planning and monitoring all stages of the planting process, as well as finding out more about cultural and economic aspects associated with food plants. One of the interviewees in the learners focus group (FP2) pointed out that learners can become responsible as they use school gardens (Appendix 2). In the three lessons, various opportunities for making the lessons more learner-centred were missed as explained in Chapter 4. For example, the teacher in lesson three did all the measuring of the plots by him instead of allowing the learners to plan how they would measure the plots, and then let them measure the plots themselves. In each case, the teaching style of the teachers transformed the OPD from a learner-centred discourse to a teacher-centred discourse.

The problem based discourse dimension of the OPD allows for the development of problem solving skills as discussed in section 4.2. Learners in the focus group interview were able to identify various problems in their environment, and they also had suggestions as to how the problems could be resolved (Appendix 2), so it would seem possible to involve learners in such processes. School gardens can be used as a site for problem-solving activities or as a solution to problems (e.g. growing of food or selling of food for health purposes or to respond to problems of poverty and food insecurity) for example. Learners in the focus group confirmed that the garden could be used to address issues of nutrition, thereby reducing hunger and poverty when they stated that "I like working in a garden because it assists us at home not to spend money buying vegetables like potatoes from the market" (FP4) and "We like it because ... you can plant crops and sell them to the community so that you can clothe yourself" (FP3, Appendix 2).

School gardens can also be used to develop values such as caring, teamwork, respect and tolerance

for others' cultures, mutual respect for genders and so on. In describing values (Berkowitz, 1998 cited in Jusso, Beckmann & Jansen: 84) theorized that “As a noun, value entails a belief that something is worthwhile or not”. He further posited that “only human beings can appreciate, impart meaning and attach value to objects, the self, others, the Creator and the world as well as to ideas, feelings and thoughts. Being human therefore implies imparting meaning to and attaching value to phenomena and using that to judge the value of other similar or different phenomena, thus making the human being a “valuing-being.” In the interviews with the learners and the community members, it appeared that they attached value to the gardens. When learners were asked of what use are gardens, FP6 said “plants beautify and decorate our school” (Appendix 2). This was confirmed in an interview with the elderly member of the community (Appendix 4). The SANBI manager indicated that schools valued the vegetable gardens more than the indigenous gardens (Appendix 5). This was also shown in the teachers’ choices of what to focus on in the gardens. Gardens also provide a site for learning about environmental decisions and values like caring for biodiversity, but this was not dealt with at all in the lessons.

As indicated in the discussion above, the OPD allows for creative use of the school garden in Life Orientation, but due to the recontextualising process, and despite teachers, learners and community members recognizing this potential, most of this potential was not realized in the lessons. Ncula (2007) and Mvula-Jamela (2007) and Asafo-Adjei’s (2004) studies have all shown that gardens can be used for recontextualising the OPD. As shown in Chapter 4, this potential is affected by the way that teachers selectively appropriate aspects of the OPD, which I discuss in the next analytical statement.

5.2.2 Analytical Statement 2: Teachers selectively appropriate aspects of the Official Pedagogic Discourse when teaching Life Orientation using school gardens.

As discussed in chapter 4, the Learning Outcomes and the Assessment Standards provide the core of the OPD. As indicated in the Life Orientation Learning Area statement in the Assessment Section “The teachers task is to teach in order to help learners satisfy the requirements of the Assessment Standards in the Curriculum; the learners’ task is to learn or do what the Assessment Standards expect” (DoE, 2002b:52). As indicated in Chapter 2 and 4, Assessment Standards in any Learning Area describe the minimum level at which learners should demonstrate the achievement of a Learning Outcome and the ways or range of demonstrating the achievement. Assessment Standards are grade specific.

In Lesson 1 the teacher reflected limited appropriation of the assessment standards in that the

teacher did not plan any activities or assessments to establish whether learners were achieving the standard expected. The teacher selectively appropriated common diseases and nutrition as content topics from the Assessment Standards. She further selectively appropriated foodstuffs like minerals and vegetables. The Learning Outcome and Assessment Standards were consequently reduced to just identifying different vegetable crops.

In Lesson 2 the teacher selectively appropriated the concept of environmental pollution from LO 1 on Health Promotion, and then interpreted it as air pollution and its causes and ignored littering, and he further reduced the topic to health issues in and around the school. He further selectively appropriated content on the causes of pollution without allowing learners to evaluate actions to address the environmental problem, or to make decisions about personal, community or environmental health. He furthermore selectively used pictures and did not take learners out of the classroom. The teacher neither discussed with learners any actions to avert or address environmental problems nor did he discuss strategies to evaluate these actions. He also chose to avoid using the school garden, although he did mention its importance in his questions during the lesson.

In Lesson 3 the teacher selectively used soil preparation and did not dwell on the economic problem solving possibilities associated with vegetables, or on the other aspects that he could have dealt with had he considered the AS for Grade 9, as discussed in Chapter 4. As such a learning opportunity that could have addressed the AS was lost. Some learners would have benefitted from knowing that gardening can provide an economic solution to nutritional needs and issues such as poverty and hunger. The teacher did not emphasise the importance of vegetables in relation to responding to such challenges as HIV/AIDS which is a pandemic in society, even though he did emphasise the nutritional aspects of vegetables. He selectively worked out his lesson on the importance of vegetables without saying any thing about indigenous plant knowledge.

There was no indication in the lessons that teachers were aware of social justice discourse, learner-centred, environmental, cultural and problem-based discourses. In Chapter 4 I reported that the teachers did not maximize the values learning potential of the indigenous gardens. When I probed this with the Grade 8 teacher, she said she did not know the names of the plants as there were no labels. This led to a recontextualising of the OPD at a superficial level, and led to missed learning opportunities.

In Chapter 2 I reported on the Eislen commission on Native Education in the Union of South Africa

of 1951 which reported that gender stereotypes were also advanced by Bantu Education which viewed men as heads of families and regarded them as being stronger than women, hence boys were assigned to do gardening and girls had to choose between home economics or needlework. The community member in his interview also indicated that this situation existed when he was at school. From the evidence presented in Chapter 4, it would seem that the allocation of tasks by the teacher in school gardens could have been linked to this background. As shown in Chapter 4, the task allocations in the gardens were also informed by cultural aspects that are embedded within the teacher's beliefs or views, where some chores are meant for males while others are suitable for females. The data shows that implicit stereotyping can occur in school garden activities, based on teachers' views of gender roles. In Chapter 2, I drew on Mukute (1999) who discussed this as a long standing cultural dynamic in gardening activities.

In two of the lessons, the teachers selectively appropriated western forms of vegetables and did not introduce or discuss indigenous vegetables. The OPD encourages teachers to draw on competing perspectives and different worldviews from which to understand and make meaning of phenomena (DoE, 2002). A curriculum based on this view requires that these different perspectives and worldviews be recognized as the OPD is recontextualised. As indicated in the discussions above, selective appropriations of working in the vegetable gardens, and focusing on western vegetables only, reduced opportunities for learning about indigenous plants and *imifino*. Indigenous knowledge systems incorporate ways of doing and thinking associated with indigenous local communities in our country, region and continent, and can be socially affirming in a transforming society (Asafo-Adjei, 2004), and can also contribute to sustainable agricultural practices (Mukute, 1999)

As indicated in Chapter 4, all three of the teachers selectively appropriated a content-based approach to teaching, despite the Learning Outcomes and Assessment Standards emphasizing a range of skills which require more active involvement of the learner (as discussed in Chapter 4). This transformed the learner-centred discourse of the OPD to a teacher-centred discourse. In Chapter 2, I reported on the complex development and transformation processes in South Africa. I drew on (Harley and Wedekind, 2002) who commented that "learner-centred pedagogy had its roots in a particular history of educational contestation that was relatively independent of OBE". I also drew on (Hoadley and Jansen, 2002) who explained that the learner-centred discourse of the OBE curriculum in South Africa is paradoxical and difficult to implement. From the evidence presented in the three lessons, it would seem that this discourse is not well understood by teachers, yet is important for achieving the objectives of the OPD.

As shown in the discussion above, the selective appropriations made by teachers significantly

change the OPD. This was also found in the study by Ramsarup (2005) where she explained how departmental officials, teachers and NGO staff all changed the OPD through the selective appropriations they make, which are linked to a) their prior knowledge and experience and b) their beliefs and practices. Her research showed that ideological transformations sometimes occur, which I discuss next.

5.2.3 Analytic Statement 3: Teachers ideologically transform aspects of the Official Pedagogic Discourse when teaching Life Orientation using school gardens

In two of the lessons which I observed, I realized that the Official Pedagogic Discourse associated with social justice and human rights were ideologically transformed as a result of taken for granted assumptions about gender roles. The teacher presenting lesson 1 indicated subtle bias related to gender based views of cleanliness by giving more praise and encouragement to girls and more reprimands to boys. Teacher 2 divided his class to unevenly distributed groups dominated by boys. He tended to focus more on girls than the boys (see chapter 4). This reflected a culture that disregarded gender sensitivity.

In chapter 2, drawing on the work of Mukute (1999:20), I reported on the cultural history of gardening where the work was traditionally distributed between husband and wife if the husband was a full-time farmer. In this case men were considered to be fit for ploughing and women for gathering fire wood and tendering children. Both women and men took the responsibility of planting and protecting trees although men took on the heavy work of clearing and destumping the bush if fields had to be cleared. The tendency to associate men with hard work and females with light work is also evidenced in the teacher's approach in allocating tasks to boys and girls when using gardens. In some of my observations I noted that boys were working hard digging and girls were leaning against the fence and a few of them were raking the plots. The teacher could not see anything abnormal about that in fact it was quite normal to her to have boys doing hard work as a cultural norm. From this it would seem that cultural habits influence the recontextualising of the Official Pedagogic Discourse.

As indicated in the discussions above, various factors influenced the recontextualising process, and there are many possibilities to improve the recontextualising of the OPD using school gardens, which I discuss next.

5.2.4 Analytical Statement 4: Factors such as time, class size, planning, assessment practice, group dynamics, resources and teachers knowledge and experience of the NCS and use

of gardens influences the recontextualising process.

5.2.4.1 Size

I observed three classes in this study. All three classes were overcrowded and hence class management was challenging to the teachers. One of the respondents in the teacher interview pointed out that one of the reasons why teachers do not use school gardens for teaching is due to the large numbers of learners in their classes (See Appendix 3). It is rather difficult to manage huge groups of learners in the garden.

5.2.4.2 Time

When I checked the teachers' timetables in all three classes which I observed I realized that the time allocated for Life Orientation was two periods a week. A teacher in the teacher interview complained about limited time for gardening. Another respondent complained that the time table does not provide time for gardening at all (Appendix 3).

5.2.4.3 Planning

Without proper planning there can never be effective teaching and learning. The need to workshop teachers on Lesson Plan development was highlighted by one respondent in the teacher interviews (See Appendix 3). The recontextualising story of the Grade 9 lesson indicates that despite receiving training, teachers are still struggling to use the DoE approach to Lesson Planning where they are meant to use Learning Outcomes and Assessment Standards. The Grade 8 Lesson Plan similarly showed that the teacher planned the lesson, but the activities did not correspond with the proposed Assessment Standards, and the actual activities taught did not correspond with the activities in the Lesson Plan. The activities that were proposed by the Grade 7 teacher in the Lesson Plan did not relate with what the learners were actually doing during the period. It would seem therefore that Lesson Planning, which is accompanied by a *good understanding* of what is contained in the Learning Outcomes and Assessment Standards is a significant factor in the recontextualising process. Poor lesson planning in all three stories affected the recontextualising of the OPD. The OPD requires that teachers plan as a group so that they can integrate the lesson or topics with other Learning Areas. There was no evidence that this kind of planning was taking place in the school.

5.2.4.4. Assessment practices

From the discussions above, it was clear that none of the teachers had a good understanding of the Assessment Standards and their central role in the implementation of the OPD. As mentioned in Chapter 4, one teacher used an AS on a standard higher than the grade he was teaching, the other teacher selectively appropriated only some aspects of one of the AS she listed, and the other teacher did not use them at all. Assessment in the OPD is regarded as an integral part of teaching and learning and should be part of every lesson and teachers should plan assessment activities to complement learning activities. All three teachers used assessment activities that tested content related to the content-based lessons that they were teaching, and did not assess other skills required by the AS. This shows that assessment practice can also transform the OPD. Assessment is also an ongoing process, and in Lesson 2, I observed that the teacher was not correcting learners' misinterpretations during the lesson. Ongoing assessment is needed to monitor learner progress throughout the year (DoE, 2002). Assessment also informs decision-making in education, and helps teachers to establish whether learners are performing according their full potential and are making progress towards the required levels of performance as outlined in the NCS. Assessment is at the heart of the South African statutory curriculum (see Chapter 2). As indicated in Chapter 2, the statutory curriculum and assessment practices can influence environmental education practice.

5.2.4.5 Group dynamics

The seating arrangements in all three classes indicated that teachers were using or intended to use group teaching. During my observations I noticed that learners were also divided into groups constituted by boys and girls. Teachers had divided these groups such that each group was representative of both sexes. With the Grade 9 lesson I noticed that most groups were dominated by boys. When I asked the teacher as to why this was the case he responded by saying that in his class there were more boys than girls. This state of affairs confirmed what I reported in chapter 2 about gender stereotypes in society that lead to higher enrollment of boys in school than girls. Discussions in chapter 4 indicate that some teachers are not aware of group dynamics and they do not seem to be aware of the social justice and human rights discourse. This was evident in the observations made both in the classroom and in the garden.

5.2.4.6 Deeper understanding of curriculum discourse

As indicated in the discussions above, all three of the teachers did not have an in-depth understanding of the OPD. This was shown by the way they interpreted the LO's, the poor use of AS, and in one case the lack of use of the OPD in planning the lessons. It was also evident in the

teacher-centred, content-centred lessons that were taught i.e. in the teaching styles of the teachers, despite the use of group work, and some efforts to involve learners in activities in the garden. As indicated above, the human rights, social justice, cultural and environmental discourses are also not explicitly dealt with. The study highlighted that educators would benefit from further professional skills that will enable them to teach towards the vision and orientation of the OPD. The issue of inadequate teacher professional development for OBE has been widely reported in research by Taylor and Vinjevold (1999), the (Curriculum Review, 2000); the NEEP-GET project (2005), and by critical researchers such as Jansen and Christie (1999) who have all argued that unless adequate attention is given to teacher professional development, OBE is likely to fail (Jansen and Christie, 1999). As indicated by all three of the teachers participating in the study, none of them felt confident to develop NCS Lesson Plans, and all were unsure as to how this should be done, despite having received training in the form of workshops (Appendix 1). As indicated in this study, this factor influences the recontextualising process.

5.2.4.7 Better resources

The responses received from the participants indicated that there is a serious shortage of resources like text books where 4 learners share one book. Teachers complain that text books are never supplied according to the number of learners per class. In terms of garden-equipment more than 60 learners were sharing the use of 3 spades, 2 rakes, 6 fork spades, and 3 watering cans without spray nozzles and 1 hand-hoe. There was also evidence of shortage of human resources, as the Grade 8 class was being taught by an inexperienced and unqualified School Governing Body appointed educator. Notwithstanding the fact that there is a shortage of resources, a negative attitude amongst teachers also seemed to influence the situation, because even though there were few tools, they could still be utilized with creative attention to group-based sharing of resources. The issue of lack of resources also has a bearing on the school management. For instance the case of the employment of an untrained, inexperienced educator to handle a Learning Area at a Senior Phase is a management issue which needs reviewal as it impacts negatively on curriculum recontextualising.

In Chapter 2 I reported that resources were historically not evenly distributed through all schools especially Black schools. Today a significant legacy of this former neglect remains in our schools (NMF, 2005), and rural schools are particularly poorly resourced, despite increased spending on education since 1994. In the case of the lessons in the gardens, a lack of adequate resources affected the recontextualising process, as teachers had to manage large classes of learners, and there was a shortage of garden tools. Learners had to take turns to use them because they were very few, which prolonged the lesson.

In addition to these factors, the complexity of the OPD is also a contributing factor to the recontextualisation process, which I discuss next.

5.2.5 Analytical Statement 5: The complexity of the Official Pedagogic Discourse influences the recontextualisation process

Most teachers in this study struggled to implement the OPD as a result of lack of understanding and clarity on Lesson Planning. As mentioned in Chapter 4, the OPD is a complex discourse, with high expectations for teachers. Despite having four years experience of teaching Life Orientation, and despite having gone to a number of different training programmes offered by the DoE, the Grade 9 teacher did not use the official curriculum for his lesson presentation. I asked him three times to submit a Lesson Plan to me, and after many excuses he submitted a roughly scribbled lesson guideline (Appendix 11), to show how he was going to present his lesson. I took time to show him how he could plan an OBE Lesson Plan, but due to time constraints he did not revise the first one due to the national teachers' strike.

From this study I observed that the Learning Outcomes and Assessment Standards of the Life Orientation Learning Area create many opportunities for learners to obtain skills, knowledge and values and attitudes. In order to meet this requirement of the OPD when using the school gardens, learners have to construct and reconstruct knowledge about the use of gardens in relation to health promotion. This would only seem possible when teachers know exactly what they are doing, and if they understand the scope, depth and requirements of the OPD.

It is not only understanding of the OPD that influences the recontextualisation process, but also how learners and teachers think about using the gardens for learning, which I discuss next.

5.2.6 Analytical Statement 6: Learners like working in the garden but teachers do not like using the gardens for teaching

From the evidence gathered through focus group interview with the learners, it seemed that learners have a positive view about gardening and they like it. This observation came as a surprise to me as my assumptions were that learners do not like gardening. When I asked them about how they viewed gardening, one learner indicated "I think one can make a living on gardening" (FGP3, see

Appendix 2). This kind of a response indicated how the use of gardens can provide solutions to challenges such as unemployment and hunger. Another reflected on the economic potential of the garden when he stated “I like working in a garden because it assists us at home not to spend money buying vegetables like potatoes from the market” (FGP4), while another reflected that the garden provides practical opportunities for knowledge use and application when she stated “It’s not time wasting to do gardening, for instance you can prove what your teacher taught you in class when you get to the garden” (FGP5, see Appendix 2). This response indicated how school food gardens can assist in linking what has been taught in the classroom with what actually happens in reality, and can make the link between content and context as shown in the studies by Mvula-Jamela (2007; Asafo-Adjei, 2004).

From the teacher interview it was evident that learners like gardening (see Appendix 3). One teacher responded by saying that learners like gardening very much. This response confirmed the view that learners have a positive attitude towards gardening. When I asked learners as to how they would encourage other learners to use gardening, FP5 responded by saying that she would first explain to learners the benefits they would get from using gardens and then motivate them. This response indicated that learners perceived that there are benefits to be derived from this activity.

Despite the fact that SANBI has provided schools with gardens the evidence found in the teacher focus group interview and individual teacher interviews suggests that teachers are not using the gardens for teaching. This attitude that some teachers display towards gardening stems from the fact that gardening has in the past been used to punish offenders (see Chapter 2). It also stems from the perception that some teachers have relating to gardening, that it is meant for the illiterate. This attitude has far reaching effects as it affects the recontextualising of the OPD. Gardens are intended to be used as an additional resource for teaching for all learning areas. The unfortunate part is that teachers seem not to be using them. A respondent commented that this was because there is no time allocated for gardening in the time table (Appendix 3). As mentioned above, teachers are also challenged by huge class enrollments which make it difficult for them to control learners in the garden. Two respondents confirmed that they seldom used gardens for their lessons (FP2, FP3, Appendix 1), and was also confirmed by the community member, who observed that teachers do not like using the school gardens for teaching. This could also be an indication of teachers’ knowledge of the environmental discourse in the OPD, as they do not see gardening as part of the Learning Area. They feel that there should be a special period in the time table for gardening or environmental education.

5.3 CONCLUSION

In this chapter I have presented a more in-depth, critical discussion of the data presented in Chapter 4 to gain a deeper insight into the research question. I used a set of analytical statements to guide this discussion. The study has shown that there are many different factors that influence the recontextualising process, a key factor being teachers' knowledge of the OPD, and the complexity of the discourse that makes up the OPD. The history of education in South Africa has also influenced the situation as it is today. In the next chapter I will present a short summary of the study, reflect on the research process, and make recommendations.

CHAPTER 6

SUMMARY AND RECOMMENDATIONS

6.1 INTRODUCTION

In this chapter I summarize the study, and reflect critically on the methods used during the research. I also make recommendations in relation to the research question. As it was a small scale interpretive case study of three lessons in one school, the recommendations are only made for the case, as I am not able to generalize more broadly from the case. However, the study might have provided some useful insights for others researching similar questions, and also provides a starting point for further research, which I also comment on in this chapter.

6.2 RESEARCH QUESTION

As indicated in Chapter 3, this study was conducted as an interpretive case study which examined the Official Pedagogic Discourse of the Life Orientation Learning Area, and the lesson planning and implementation practice of three teachers in a Bizana school. The school is located in an urban centre in a predominantly rural area in the rural Eastern Cape, and is a school that has been influenced by the history of education in South Africa, as it is a former Black school that was disadvantaged by earlier policies. Like other schools, it is a school in transformation, and teachers are implementing the revised National Curriculum Statement in the school, some for the first time. The study was conducted through observing a Grade 7, 8 and 9 Life Orientation lesson, and through focus group and semi-structured interviews. I also analysed learners work, and teachers Lesson Plans. I started the research by conducting a detailed analysis of the Official Pedagogic Discourse which was used to provide a framework for analyzing the data from the lessons (see Chapter 3 and 4).

As indicated in Chapter 1 and 5, the focus of this research is on how teachers use school gardens to recontextualise the Official Pedagogic Discourse of the Life Orientation Learning Area in the Senior Phase. To have a clear understanding of how the curriculum is recontextualised, I used Bernstein's theory of pedagogic discourse which states that the Official Pedagogic Discourse (OPD – in this case the NCS) is first delocated once it is transferred from the field of production (FOP) and relocated in the recontextualising field and the field of reproduction (FOR) - the classroom. As the discourse is relocated it undergoes transformation. This transformation is influenced by the practitioners' prior-knowledge, experience, culture and beliefs. This study showed that the

transformations are also influenced by contextual and historical factors. To understand how transformation of the environmental discourse takes place, Bernstein's conceptual constructs of selective appropriation and ideological transformation were used to identify more specifically how the discourse was changed. Each lesson was viewed in terms of selective appropriation and ideological transformation which took place.

As reported in Chapter 4 and 5, in Lesson 1 the teacher showed an awareness of the Official Pedagogic Discourse by selecting a Learning Outcome and Assessment Standards to guide the lesson. She selectively appropriated only certain aspects of this discourse, narrowing the learning opportunities intended by the OPD. While she showed an awareness of the standards-based discourse her practice did not reflect any real engagement or interpretation of this as she did not plan any activities or assessments to establish whether learners were achieving the standard expected. She also appeared to be unaware of the social justice discourse, the learner-centred, environmental and problem based discourses. She was also, due to a lack of adequate knowledge, not able to maximize the values learning potential of the indigenous garden, but she did use the activity to address some of the values dimensions of the curriculum (OPD). It would seem therefore that the OPD was recontextualised at a very superficial level (mainly by indicating outcomes and Assessment Standards in lesson planning) and then more through content-based teaching. This recontextualising process was influenced by the fact that the teacher was temporary, that she had had no NCS training, and by her prior experience of teaching and her own knowledge.

In Lesson 2 the teacher showed an awareness of the outcomes-based and standards-based discourses but as in Lesson 1, the teacher selectively appropriated this discourse and interpreted the outcome to focus on cleanliness and pollution in the school context, which he dealt with using questions and pictures. This teaching strategy led to a limited interpretation of the learner-centred discourse, as learners were not given adequate opportunities to “evaluate actions” as intended by the Assessment Standard being used. The teacher also showed a very poor understanding of the standards based discourse as he chose the wrong Assessment Standards for the grade, and did not develop assessment activities to reflect the expectations of the standards. Through the way he taught the lesson, the environmental discourse, as intended by the OPD was transformed and changed, and learners could not actually address a problem, nor could they evaluate actions. This influenced the way the problem-based discourse of the OPD was interpreted. The teacher's own values appeared to influence the social justice discourse and its interpretation, as well as what was dealt with in terms of values. As in Lesson 1 the recontextualising processes were influenced by the teacher's exposure to and knowledge of the NCS, and his own prior-knowledge and experience of teaching.

In Lesson 3 the teacher did not use the outcomes-based or standards-based discourse to plan or teach his lesson. There was however evidence of some of the OPD discourses being attended to, such as the human rights, social justice and values-based discourses. It is possible that these discourses were being recontextualised from other broader discourses other than the NCS (since the teacher did not seem to be familiar with the NCS), even though he had been teaching Life Orientation for four years, and had attended OBE training in various forms. In this lesson recontextualising of the OPD was once again influenced by the teacher's knowledge of the OPD, his prior teaching experience, and values, his own knowledge, as well as other factors such as time, resources and class size. He also indicated that he was unsure about the new approach to the NCS.

These findings are confirmed by Young (1981 cited in Stevenson, 2007:149) when he says “Besides the organizational pressures, teachers' views about knowledge and teaching are likely to influence what form of knowledge is selected and how that knowledge is then organized and transmitted in the classroom”.

In Chapter 5 the findings of the study are synthesized. It is evident from data collected that the Official Pedagogic Discourse in Life Orientation allows for creative use of school gardens for Life Orientation teaching and learning, but that this is not being maximized by teachers. It was also evident that Teachers selectively appropriate aspects of the Official Pedagogic Discourse when teaching Life Orientation using school gardens. For instance the Grade 8 educator who took learners to the garden to observe, identify types of vegetable crops did not make use of the indigenous garden because she did not know the plants. The Grade 7 educator selectively appropriated pollution and its causes. It therefore became clear that teachers select certain aspects which they are familiar with and that they think are essential for the learners. As shown in all the lessons however, there seems to be a tendency to oversimplify the content, and to only touch the surface of topics, which leaves learners with fragments of information that has little depth. This is also a consequence of teachers not understanding the requirements of the Assessment Standards. It was also evident that teachers ideologically transform aspects of the Official Pedagogic Discourse when teaching Life Orientation in the Senior Phase using school gardens. For instance the cultural norms and experience of the Grade 8 and 7 teachers influenced the way they treated boys and girls in their lessons, which transformed the social justice and human rights discourses. The study also showed that a number of other factors influence the recontextualising process, including size of class, time, available resources, teacher's knowledge and experience, assessment practice and group dynamics, and that attention to these can improve the way that gardens are used as a resource for learning.

A key issue identified in this study is the complexity of the Official Pedagogic Discourse which does not make it easy for the teachers to easily and successfully recontextualise it without additional recontextualising support from teacher educators and other professional recontextualisers. When teachers were asked to do Lesson Plans with an environmental focus all three of them indicated a lack of confidence in themselves (See Appendix 1). The Lesson Plans also showed a lack of a clear understanding of the planning requirements and the OPD. Even those that had attended OBE, RNCS and NCS workshops were not confident to plan OBE lessons. When I discussed this with them, they complained that this was also the case with their trainers (who could not respond to their questions) in all the workshops that they had attended, indicating that recontextualisers in the ORF and PRF were also unclear as to how to work with the OPD. When asked about the five principles of NCS all three could not respond as if this was a completely new concept and this indicated ineffectiveness of the workshops as teachers' responses indicated a lack of understanding of NCS principles.

While teachers acknowledged that learners like working in the garden, they do not seem to be interested in using the gardens in their teaching. Learners, on the other hand indicated that they enjoyed working in the garden, and they identified its potential for learning. Learners too, identified that their teachers do not like using gardens (FP2, Appendix 2). The research findings revealed that teachers do not use gardens for their teaching, a finding confirmed by the learners. The SANBI Programme Manager and the community member also confirmed the teachers' lack of commitment to gardening despite the fact that gardening was promoting environmental education and integration across learning areas, and despite the fact that the schools had been given gardens as a resource for learning and teaching. In discussing this, teachers indicated that while they were willing to use the gardens for teaching, the time allocation within their time table was too limited to allow them to go to the garden, and they indicated that no time was allocated for gardening in the school time table. As teachers tended to associate gardening with agriculture only, this reflected that teachers were not familiar with the environmental discourse of the NCS. As shown in the lessons, the poor use of the gardens may also have been influenced by teachers teaching styles, which were predominantly content and question based.

In summary, the research findings revealed that there was lack of a deeper understanding of the Official Pedagogic Discourse, and that there is a need for either a change in this discourse, or additional professional development for teachers for it to work effectively. The fact that learners reported that they have not been taken to the garden since the beginning of 2007, is an indication of lack of understanding of the link between gardens and curriculum on the part of the teachers. This was also an indication that gardens are not used as a resource for teaching despite the fact that

gardens are readily available. One other thing that was evident was that working in the garden was looked down upon by teachers as boring, a sign of servitude, an activity for the uneducated, and as hard manual labour. This could be traced back to the history of gardening in South African schools prior to 1994, as discussed in Chapter 4 . Within the new dispensation, there seems to be a dire need for professional development if the (OPD) is to be interpreted and analyzed properly so that its implementation at the meso and micro-levels becomes clear and effective.

6.3 RECOMMENDATIONS

In this section I make recommendations that are practically useful with reference to improving the way curriculum is recontextualised at a classroom level. The recommendations are based on the findings of the study, as outlined above and in Chapter 5: They include:

6.3.1 Resource provision

I recommend that all schools be provided with adequate resources to enable them to implement the curriculum. The issue of shortage of text books is hampering the education of a child and as such cannot be over-emphasized. The fact that schools have been provided with indigenous gardens by SANBI is a good idea but it becomes difficult for teachers to use them if the plants are not labeled. I therefore recommend that all schools provided with indigenous gardens must also be provided with plant labels so that gardens become meaningful, as well as information on the plants. This study further recommends that care be taken when appointing teachers to implement the curriculum by appointing suitably qualified practitioners to ensure effective implementation of the OPD.

6.3.2 Professional development of teachers

The study recommends that school managers and education officials embark on an intensive staff development to ensure that teachers develop a better understanding of the OPD and how to implement it effectively. Key to this would seem to be skills to interpret the Learning Outcomes and Assessment Standards, planning of lessons, and assessment practices. Such professional development should also include approaches to build teachers knowledge of what is expected, so that lessons can be taught with more depth than was the case at the time of conducting this study.

6.3.3 Assist teachers to use the school gardens

The results of study highlight that teachers do not like using gardens; and that they are not clear as

to how the gardens can be used to develop the environmental dimensions of the OPD. Further workshops to expose teacher's strategies for using the gardens as a resource for learning and teaching could encourage them to use the gardens in their teaching.

6.3.4 Timing and group work

The issue of huge class numbers needs more time allocated for gardening so that classes can be divided into small manageable groups. I recommend that some reasonable time be allocated for gardening so as to equip learners with the much needed skills that could be obtained through the use of gardens in Life Orientation. Perhaps teachers could combine the two periods for Life Orientation for activities in the gardens. It is further recommended that marks be given for gardening so that learners are motivated and they can take gardening more seriously. This consideration should be made because some learners may require the skills of food production for their livelihood, given the situation in which they find themselves in the rural areas.

6.3.5 The OPD and its complexity

The OPD needs to be simplified and user-friendly, and intensive training of the teachers especially in lesson planning needs to be undertaken in order to ensure that there is effective teaching. This finding is reported in Chapter 5 and it calls for more in-service training of the teachers. It would appear that the usual one day or week workshops are not giving the intended results. There was also a general feeling amongst teachers that the NCS demands a lot of paperwork at the expense of actual practice. Teachers complain that they spend most of the time producing a pile of documentation which is intimidating to those faced with huge class enrolments. While this is the case, it would seem that the documentation they are producing (i.e. Lesson Plans) are not comprehensive or clear. The study recommends that the school continues to focus on effective ways of interpreting the NCS starting with the development of a better understanding of how to interpret the Learning Outcomes, Assessment Standards and how to develop Lesson Plans. While the study cannot make broader, more general recommendations than is the case with other generalisable studies due to its case-based nature, it seems that the Department of Education needs to pay attention to the complexity of the OPD, and should not leave the teachers with all the problems of implementing the OPD.

6.3.6 Recommendations for future research

This study was limited to one school (case study) and as such its results may not be generalized.

This research was focused in the use of school gardens in teaching Life Orientation in the Senior Phase with health promotion in mind. The following possibilities exist for further research:

- Similar studies can be undertaken in more than one school to see whether the patterns uncovered in this study are widely present. Such studies can also be undertaken in the Intermediate Phase.
- Studies that investigate the use of gardens for recontextualising the OPD in other Learning Areas can also be undertaken to explore the full potential of using gardens as a resource for learning.
- Further studies to investigate teachers' knowledge of the OPD and how they interpret and recontextualise it, with specific reference to the professional development they receive in the PRF can also be undertaken.
- Research can also be undertaken to focus on the use of indigenous plants in the Life Orientation Learning Area. Based on the cultural discourse of the OPD, I would recommend the involvement of traditional healers and other members of the community in this kind of research.
- Research needs to be undertaken into the recontextualisation processes in the ORF and PRF, as teachers complain that the information they get from their trainers is not sufficient or does not create the desired confidence, hence one may find that even an experienced teacher who has attended a number of workshops still struggles with the implementation of the current curriculum, as shown in this study.
- Research needs to be undertaken to further explore how teachers can change their teaching style from content-based and question strategies to include other, more learner-centred approaches. The garden provides a site for employing interactive and problem solving methodologies that also allow close cooperation between schools and the broader community especially when it comes to the issue of indigenous foods and gardens.

6.4 REFLECTIONS ON THE STUDY

The study could not have been a success without the contributions made by both learners and teachers concerned. The elderly members of the community and SANBI coordinator also

contributed immensely to this study. The study was not an easy study to conduct, as I myself had to come to grips with the NCS and its OPD before being able to really understand what was happening in other teachers' classrooms. I also had to understand the concepts associated with recontextualising the curriculum, which was not an easy task, as Bernstein's texts are difficult to read and understand, but the study by Ramsarup (2005) helped me to understand how such a study could be done. The teachers' strikes also hampered the process as it affected teachers' participation in the study, and it influenced the recontextualisation process. The focus group interviews with learners, community member, teachers and the SANBI manager provided very useful information which helped me to interpret the recontextualisation process with more depth, as did the historical and contextual review in Chapter 2.

6.5 CONCLUSION

This study set out to understand how teachers use school gardens for recontextualising the NCS of the Life Orientation Learning Area, with specific reference to health promotion. As indicated above, the study revealed a number of interesting and unexpected findings, particularly relating to learners' positive view of using the gardens. I have learned a lot about the curriculum transformation process in South Africa, and the expectations of the NCS for teachers. I have also learned more than before I was exposed to this study, about how teachers can be supported to work with the NCS in schools, and use the school gardens although it seems this is not an easy task. I have also learned how to conduct classroom based research, and I found that a number of contextual factors influence this process such as the teachers strike, and teachers' attitudes and confidence. As indicated in Chapter 2, South Africa has embarked on an ambitious social transformation process to be achieved partly by education in general, and environmental education, in particular. This study has shown that there is a need to support teachers to participate in this process with confidence and competence.

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PERSONAL COMMUNICATIONS

Guda, B.M. (2007, May, 20). Retired Education Inspector for schools, DoE, Bizana.

Gwabavu, N. A. (2007, July, 26). Retired teacher, Bizana Village J.S.S. Bizana.

Ndunge, M. (2007, August, 25). Retired Principal, Ntukayi S.S.S. Bizana

Zondani, V. (2007, June, 25). SANBI Coordinator, O.R. Tambo Cultural Village, Bizana.

APPENDIX 1: FOCUS GROUP INTERVIEW WITH TEACHERS

1. For how long have you been involved in the teaching of Life Orientation?.....
 - .FGP 1 7 months
 - FGP 2 1year
 - FGP 3 4years

2. Which grades are you teaching?.....
 - FGP 1 Grade 8
 - FGP2 Grade 7
 - FGP3 Grade 9

3. What kind of training did you receive in this Learning Area?.....
 - FGP 1 No training
 - FGP 2 Workshop
 - FGP 3 Workshops

4. Which workshops have you attended?.....
 - FGP 1 None
 - FGP 2 RNCS, NCS
 - FGP 3 OBE, RNCS, NCS

5. How often do you take your learners to the school food garden?.....
 - FGP 1 I have never taken them to the garden
 - FGP 2 I don 't use the garden
 - FGP 3 I only used the garden once last year

6. How is gardening connected with your Learning Area?..
 - FGP 1 It is connected through Health promotion
 - FGP 2 It is connected through Prevention of Diseases
 - FGP 3 Through Health Promotion

7. Of what help is gardening to your Learning Area?.....
 - FGP 1 It teaches decision-making
 - FGP 2 It teaches responsibility
 - FGP 3 It teaches problem-solving and group work

8. If you are not using gardens as a resource for your teaching, is there any possibility of using them in future?.....
 - FGP 1After these discussions I think I can use the garden
 - FGP 2 I did not see the need to use gardens but now I can see the importance but there is still the issue of huge numbers
 - FGP 3 These discussions have opened my eyes, I will now use the gardens but the issue of time allocation will need to be considered.

9. Why do you intend using the garden in future?.....
 - FGP 1 To link environment in the lesson
 - FGP 2 To utilize it as a resource
 - FGP 3 To develop skills like teamwork, and instill human rights

10. What learning outcomes within your Learning Area relate to gardening?.....FGP 1 Making informed decisions

11. Can you design Lesson Plans that have an active learning

focus, drawing from the NCS principles?.....FGP 1 I can but I am not quite sure

FGP 2 Yes but there is some grey areas

FGP 3 I can but I am not confident

12. What environmental problems are being addressed

by school food gardens?.....FGP 1 Poverty

FGP 2 Unemployment

FGP 3 HIV/AIDS

APPENDIX 2: FOCUS GROUP INTERVIEW WITH LEARNERS

1. Of all the Learning Areas that you are doing, which one is your favourite?
 - FP 1 Life Orientation
 - FP 2 English
 - FP 3 Maths
 - FP 4 EMS

2. When last did you go to the garden for your lessons?
for our lessons.
 - FP 3 We never go to the garden

3. How often do your teachers take you to the garden?
 - FP 2 Our teachers do not use gardens at all

4. Which subject teachers normally take you to the school garden for their lessons?
 - None

5. How do you view working in the garden?
 - FP 3 I think one can make a living on gardening.
 - FP 4 I like working in a garden because it assists us at home not to spend money buying vegetables like potatoes from the market.
 - FP 3 We like it because it while awhile time, you can plant crops and sell them to the community, so that you can clothe yourself.
 - FP 5 It's not time wasting to do gardening, for instance you can prove what your teacher taught you in the class when you get to the garden

6. Who is responsible for the school food garden?
 - FP 1 Principal

7. If you were teaching Life Orientation how would you involve learners?
 - FP 5 I would explain to them the benefits of having a garden and try and motivate them. May be your mother would like you to plant cabbage and if you participated in that activity at school you would not have a problem.

8. What skills do you think learners would obtain by using gardening?
 - FP2 I think learners can become responsible.

9. What types of gardens does your school have?
 - FP 5 Fruit gardening
 - FP 3 Vegetable garden
 - FP 2 Plants garden

10. Of what use are these gardens?
 - FP 6 Plants beautify and decorate our school.
 - FP 4 Vegetables can be given to the hungry

11. What is your understanding about environment?
life .

FP 1 It's about land, people and animal

12. What problems is the environment faced with?
unclean water.

FP 6 Diseases caused by

FP 4 Untidiness like littering.

FP 2 Soil erosion

13. How can you deal with those environmental problems?

FP 1 We can ask all those vendors to collect
papers in the afternoon and burn them
so that they do not spill all over the place.

APPENDIX 3: TEACHER SEMI-STRUCTURED INTERVIEW QUESTIONNAIRE

1. NAME OF SCHOOL: .Fundani ma-Afrika J.S.S.
2. WHAT LEARNING AREAS DO YOU OFFER? Life Orientation/ Natural Science
3. IN WHICH GRADES DO YOU OFFER THEM? Grades 7, 8, 9.
4. WHAT EDUCATIONAL QUALIFICATIONS DO YOU HAVE? BA, FDE
5. HOW OLD ARE YOU? 36 yrs.
6. WHAT IS YOUR MARITAL STATUS? Married
7. FOR HOW LONG HAVE YOU BEEN TEACHING? 4yrs
8. WHICH AREA OF YOUR SUBJECT REQUIRES USE OF GARDENS AS A RESOURCE.
A balanced diet
Diseases
9. MENTION TYPES OF GARDENS THAT YOUR SCHOOL HAS: Fruit garden
Vegetable garden
Indigenous garden.
10. HOW DO YOU INVOLVE LEARNERS IN THOSE GARDENS? They weed
They water
They transplant
11. WHEN LAST DID YOU USE THE SCHOOL GARDENS IN YOUR LESSONS? I seldom use the gardens.
12. IF YOU ARE NOT USING GARDENS IN YOUR LESSONS, WHAT PREVENTS YOU FROM USING THEM? Limited time
13. IN YOUR VIEW OF WHAT USE ARE SCHOOL GARDENS? Developing skills
Decision-making
Teaching group work
Fostering responsibility
Teaching problem solving skills
14. WHAT IS YOUR GENERAL ASSESSMENT IN SO FAR AS THE USE OF GARDENS FOR TEACHING IN YOUR SCHOOL? Teachers are not making use of gardens for teaching. This is because of

allocated for gardening in the time-

ignorance and the fact that there is no time

table. Another problem is huge numbers of learners

15. IF YOU WERE IN CHARGE OF THE SCHOOL, WHAT WOULD YOU DO WITH THOSE GARDENS?

their gardening in the timetable.

I would ensure that all teachers make use of school gardens in subjects. I would make sure that time is allocated for

16. WHAT TYPE OF ASSISTANCE DO YOU THINK YOU NEED IN ORDER TO BE ABLE TO USE THE GARDENS:

Workshops on developing lesson plans?

17. WHAT IS THE GENERAL ATTITUDE OF OTHER STAFF MEMBERS REGARDING USE OF GARDENS:

Most of them come from rural areas, so they have a positive attitude towards gardening. There are also those who don't want to have anything to do with gardening.

18. IN YOUR VIEW HOW DO LEARNERS VIEW THE USE OF GARDENS?

Learners like gardening a lot. They enjoy learning in the garden the

In the garden, working together and solving problems with others. In the atmosphere is not as tense as in the classroom.

APPENDIX 4: INTERVIEW WITH ELDERLY MEMBER OF COMMUNITY

1 .How old are you now?----- 66 years-

2 .What role did you play in the community during your youth time? School teacher and Function leader

3. What training did you receive?----- NPL and Needlework

- 4 .How was gardening during your time?----- Gardening was included in the curriculum and only boys were doing Gardening called agriculture, Girls were doing Needlework and Home Craft/ Home Economics
5. How did environmental education feature in the curriculum?-----Not sure whether it was associated with Nature study otherwise it's a new concept altogether
6. How often did you go to the garden as a learner?----- Twice a week
7. What skills did you gain?----- ... Sewing as I did not do gardening
8. How did gardening come about?----- Came with Christian Education as a subject on its own
-
9. Which vegetable crops were prevalent during your time— Cabbage, Carrots, Spinach, Turnip, beetroot
-
10. Which vegetables are popular now?----- Same vegetables as mentioned above
11. What would you advise teachers in terms of gardening?-----I observed that teachers are lazy to do gardening , I would advise the m to adopt a positive attitude towards it.
12. In your view are teachers making use of gardens as a resource for teaching?---No teachers are lazy to take learners to the gardens.
Gardens are not used by teachers as a resource for teaching.
13. What is your understanding about 'Greening'?----- Its a project that provides schools with vegetable plants, indigenous plants and fruit trees and it makes schools look beautiful and lively
14. If you were still active in the field would you embrace greening? Of course I would embrace greening for its beauty.

APPENDIX 5: INTERVIEW WITH SANBI MANAGER-O.R. TAMBO CULTURAL VILLAGE

What office do you hold in this organisation?-----Programme Manager

How old are you?-----52 years-

What training did you receive?-----Basic Land scraping and Horticulture

What is your understanding of 'Greening'?-----Greening is a concept that is related to environmental

broader promotion of biodiversity in South Africa. awareness and education and is also concerned with

Where does greening come from?-----Greening is a global concept that is prevalent within concerned Organisations, Institutions concerned with climate change, over-utilisation of resources, unprotected wild life.

What other qualifications do you have?------ Honours in Developmental Studies

For how long have you been serving in this Office?----- Since September 2005

Of what benefit is greening to the community?-----Creating employment, training opportunities sent people to different institutions to acquire skills (Masters in Environmental Education – Rhodes, Horticulture and Landscaping in Durban University of Technology)

Of what benefit is greening to the schools?----- Promotes environmental education integration with other Learning Areas.

How sustainable is greening in schools?-----If it gets the support of the traditional Authority, the support of the Local Municipality and the support of the school community greening can be sustained.

What kind of workforce do you have? ----- 6 Interns Garden based programmes, Environmental Education

What challenges is greening faced with? ----- Schools show interest in vegetable than indigenous gardens

How are the schools responding to greening?----- Well there is plus minus 40% response from schools though there seems to be a lack of commitment.

In which ways is the local Municipality involved? --- The Municipality involved during the launch, at inception, Municipality is a major stake holder, Municipality includes the project in its IDP.

In your view who benefitted most from this programme?----- Communities benefitted the most from the programme.

Is the programme making any impact?----- Of course For instance at Mfundisweni people are coming to see the gardens and as such there is a B&B that has been built.

After greening what next?-----This was only a pilot project there is Greening for 2010 coming soon

APPENDIX 6: LESSON OBSERVATION GRADE 8

T: What type of sexually transmitted diseases do you know of?

L: Gonorrhoea, syphilis

T: What mechanisms can be used to prevent sexually transmitted infections (STI)?

L: Use condoms, abstain

T: What disease is caused by lack of proteins in our bodies?

L: Kwashiorkor

T: How can we prevent it?

L: We can prevent it by eating healthy food

T: How can we tell if the food we eat is healthy?

L: Our food must have fruit and vegetables

T: What disease affects people who do not eat healthy food?

L: Scurvy

T: How do we protect ourselves from having scurvy?

L: By eating food that has vitamin C

T: Any other disease that you know?

T: It's cholera. What is cholera?

L: *Utyatyazo*

T: It's continuous diarrhoea. What causes cholera?

L: *Ngamanzi amdaka* (unclean water)

T: What should an infected person do?

L: She can pour teaspoon of jik in 20L water or boil water before using it.

T: What else can we do to remain healthy?

L: By eating healthy foods.

T: Tell me about six food stuffs that you have learnt about

L: Minerals

T: Where do you get the minerals?

L: From pumpkins

T: What type of food is a pumpkin?

L: It's a vegetables

T: And what other types of food give us minerals?

L: We get minerals from fruits

T: How much % of minerals do our bodies need?

L: We need 70% of minerals

T: What can we do to ensure that we have access to most food stuffs?

L: We need to plant vegetables and fruits

T: Where exactly?

L: In hospitals, schools, homes

T: To ensure that what we plant survives what can we do?

L: Use *umgquba* (manure) to save expenses on fertilizers

T: What can we do with excess vegetables and fruits?

L: We can sell them.

T: Okay what we are now going to do is to go out to the garden so that we can see the vegetables and fruit trees.

T: Give me the names of vegetables that are in front of you

L: Cabbage

L: Spinach

L: onion

L: Peach trees

L: Apple trees

T: How should we care for these plants?

L: By weeding, watering and pruning.

At the end of the lesson I asked the teacher why she displayed so much focus on boys both in her classroom and in the garden. Her response was that as far as communication is concerned, boys are welcoming, receptive and open. She further said that in the garden she assigned boys hard work because according to her culture males are regarded as being stronger than females and females are inherently weak.

APPENDIX 7: LESSON OBSERVATION GRADE 7

TEACHER: Are you okay?
TEACHER: We are going to deal with Healthy Environment
TEACHER: What makes you sure that you are healthy?
LEARNER: Energy
TEACHER: What else make you healthy?
LEARNER: HIV/AIDS
LEARNER: If you are eating.
TEACHER: What else makes you healthy?
LEARNER: Water
LEARNER: Shelter
LEARNER: To do exercise
TEACHER: Alright. Is there anything?
TEACHER: What is unhealthy for us?
TEACHER: What makes us to be unhealthy?
LEARNER: Junk food

Here the teacher wrote junk food on the chalkboard.

TEACHER: What else makes you healthy?
LEARNER: Smoking
LEARNER: Alcohol
LEARNER: Drugs
TEACHER: Anything else
LEARNER: Drinking, Sir
TEACHER: Drinking what?
LEARNER: Drinking beer
TEACHER: Alright let's have a look at our class.
TEACHER: Is it only dust in your class?
LEARNER: Dirty
TEACHER: The class is eh....dirty. What makes it dirty?
LEARNER: Broken desk
TEACHER: What do you see when your class is dirty?
LEARNER: Papers
TEACHER: *Andithi nanga siyawakhaba*. Here teacher was actually kicking some papers on the floor to show learners.
TEACHER: Our class is not healthy. Who must make it healthy?
LEACHER: Principal
TEACHER: How is the principal to make the class healthy?
LEARNER: Pay the money
LEARNER: Find desks
LEARNER: Buy windows
TEACHER: What else?
LEARNER: And connect the electricity
TEACHER: Anything else, What about the dust, and the dirtiness of the class?
LEARNER: We have to clean the dust
TEACHER: Alright we'll see what to do to keep the class healthy. We have to clean dust and dirtiness. Remember cleanliness is next to Godliness.
TEACHER: What will be caused by dirtiness and dust?
LEARNER: We sick
TEACHER: You get sick. What sickness?
LEARNER: TB
LEARNER: Flue
LEARNER: Pneumonia
TEACHER: How do you get pneumonia?
LEARNER: Windows are broken
TEACHER: You get pneumonia through cold
TEACHER: Let's have a look at these pictures. I want you to tell me what is happening in a picture

which is the first

LEARNER: House

T: Anything else? What else?

L: Fire

T: Is there anything you can relate to things we have talked about?

L: Yes there is smoke.

T: What causes smoke?

L: TB

T: What causes the smoke in the picture?

L: Fire

T: What else?

L: Car

T: What else?

L: Aeroplane

T: Let's have a look at that small car. Do you see the building?

T: What do you think is happening in the building? What can we call that place? Yintoni leya? [What's that]?

Learners were stuck here and the teacher had to tell them.

T: It's a factory

T: We have a smoke from what? From a car, aeroplane, fire, factory

T: Okay, alright now. What is wrong with that smoke from the car, aeroplane and factory?

T: What's wrong with it?

L: It causes heart disease

T: You make fire at home does it cause heart disease?

L: TB

T: What make smoke to cause heart disease in that area?

T: If we have smoke from fires, factories, cars, aeroplanes, what happens to the air?

L: It causes a brain damage

T: The air that we breathe is polluted. Air isclass!

T: Have you seen the smoking in a burning veld? If you may go through that smoke for a long time what happens?

L: *Uzokhohlela* (you'll cough)

T: Smoke will affect *iintoni*...lungs *zakho* because of that smoke.

T: And then *yintoni enye futhi*? If your lungs are affected what kind of disease will you suffer from?

L: TB

T: If your father have been working *kule migaqo eya ko Mpsi*, Monti[in these dirt roads that go to] Mpsi and Monti what happens? He gets affected. There are others caused by smoke. We said its TB and Asthma. What is asthma?

L: *Sisifuba*

T: *Kukho nantoni phaya?*

T: Bronchitis, *kAbantu bakhohlela kahulu*. [People are coughing a lot].

T: *Ngela xesha la moto ikhupha esa smoke kuthiwa yi carbon*. [the smoke that comes out of the exhaust of a car is called carbon]...

L: Carbon dioxide

T: No, *yi carbon monoxide*.

T: It's Carbon and sulphur monoxide. Those gases are dangerous for us.

T: What's happening in the left picture?

L: Water

T: Is that water healthy or dirty?

L: It is healthy

T: What makes you sure that it is healthy? *Andithi nawe uqhele ukuthwala isipakupaku*. [Are you not used in carrying plastic bucket]? where do you get that water?

L: From the river

T: Is that water healthy?

L: No

T: Why is it not healthy? What causes it to be dirty? *Kutheni sisithi amanzi ase mlanjeni amdaka?*

L: Cows

T: Yah there are the cows drinking water over there, can you see them? They also urinate in the water while other people drink that water.

T: Other than cows and cattle what else impurifies water?
L: Frogs, dogs
L: Pigs
L: Horses, people
T: People themselves they are the most dangerous, they know that you fetch that water for domestic use. What will happen if you drink that water?
L: You get pneumonia.
L: You get cholera
T: *Ukuphathwa sisisu kwenziwa yintoni?*[What causes diarrhoea]?
L: Diarrhoea
T: *Yha ufumana ntoni?*
L: *I cholera ne diarrhoea*
T: Ubone umntu sele engasenazi breaks[A person with diarrhoea has a running stomach which is out of control]. *Ukuze sifumane*[To get pure water what can we do]?
L: Boil water
T: It's simple you just boil water. You jik water. Do you know how much jik to add to a 20L container?
L: Yes 2 table spoons
T: What else?
L: Allum
T: Allen. *Uwasefe amanzi, siwathini? Yintoni esingayenza ukuze siqinisekise ukuba sifumana amanzi aright? Apha esikolweni zikhona iitaps?*
L: Yes sinazo
T: *Azikabi healthy ezi ndawo sihlala kuzo [We are living in unhealthy environments]. Amanzi aclean ngaphuma e tephini*[only tap water is clean water].
T: When going towards Nomlacu there is a place for water purification. Who stays next to Nomlacu here?
T: Let us now look at our school. What is unhealthy about it?
L: Toilets
T: What else?
L: Papers
T: What else?
L: Dusty
T: Okay if you say our school toilets are not healthy, our school is having papers and dust, lets take the toilets first, what can we do to ensure that they are healthy?
L: Clean the toilets
T: Who must clean the toilets?
L: Learners must clean the toilets
T: How can we make sure that our toilets are clean?
L: Learners must not toilet anywhere and must not urinate on the floors
T: Who must preach about that?
L: Teachers
T: There must be rules
L: We must clean our own mess
T: Hey you at the back you are not listening and I will give you a good hiding
T: the classes must take turns in cleaning the toilets
T: What other advice can you give?
T: What equipment should be provided?
L: Brooms, toilet spray, paint, seats mouth covers, gum boots.
T: *Yha* we must paint toilets so that they look nicely. What about the dirty papers and the dust?
L: Collect papers and burn them
T: What happens if you don't burn them?
L: They spread all over the place
T: Where do we actually have to burn the papers?
L: We must burn the papers in the pit
T: Are we doing that?
L: Sometimes we do, sometimes we don't
T: If we go outside shall we see papers?
T: Let's take the dust. What can we do to prevent the dust?
L: We make concrete slabs on the school premises.
T: The money you pay for school fund is far less than the needs

L: Plant grass

T: Which is easier, planting grass or making concrete slabs?

L: Planting grass and plants.

T: Is it helpful to have plants in our premises?

L: Yes Sir

T: How is it helpful?

L: Plants give out oxygen

T: And what do you give out as a human being?

L: I give out carbon dioxide

T: Plants need that carbon dioxide. What do plants do with carbon dioxide?

L: Plants breathe in carbon dioxide

T: Plants use carbon dioxide for making their food. The food we eat from plants is made out of carbon dioxide. Let's make sure that we keep those plants even at home.

APPENDIX 8: GRADE 8 LESSON PLAN

LEARNING AREA: Life Orientation

INTEGRATION

CONTEXT IN CONTENT: Health Promotion (Nutrition, STD's; Abuse)

LEARNING OUTCOME 1

- ◆ The learner will be able to make informed decisions regarding personal, community and environmental health.

ASSESSMENT STANDARDS

- ◆ Critically analyses the causes of common diseases in relation to socio-economic and environmental factors.
- ◆ Demonstrate informed, responsible decision-making about health and safety.
- ◆ Examines a health and safety issues related to violence and proposes alternatives to violence as well as counter-strategies.

METHOD

As we have talked about HIV/AIDS, we have got other diseases i.e. STI (Sexually transmitted infections) Obesity, Cholera, Kwashiorkor and scurvy.

STI: Caused by unprotected sex and may result to HIV/AIDS if not treated early.

OBESITY: Are disease like heart attack, Diabetes and they usually attack fat people

CHOLERA: Usually caused by unclean water and can cause continuous diarrhea. We have to take care of our environment and clean water by boiling or by using some jik.

KWASHIORKOR: Is caused by the lack of proteins in your body.

ACTIVITY 1

(Page 55 Activity 5.1) Understanding S.A. Bill of Rights

ACTIVITY 2

GROUP WORK

Write the Bill of Rights and the responsibilities. Which are the human rights you learnt about and their responsibilities?

ACTIVITY 3

INDIVIDUAL ASSESSMENT

Question 1

If you can be a President what are five things you will change in South Africa? Question 2

Write 15 human rights you know and write the responsibility of each right.

APPENDIX 9: GRADE 7 LESSON PLAN

LEARNING AREA: Life Orientation

GRADE: 7

CONTENT IN CONTEXT: Health Promotion

LEARNING PROGRAMME: Life Skills

LEARNING OUTCOME: LO1 The learner will be able to make informed decisions regarding personal, Community and Environmental health.

ASSESSMENT STANDARDS: Life Orientation 1-5

Plans an action in which laws and / policies for protecting environmental health are applied to address an environmental health issue.

INTEGRATION ACROSS

Tech LO3 AS2 Impact of technology

NS LO3 AS Understanding the impact of Science and Technology on the environment and on peoples' lives.

SS (Geo) LO3 AS 1 Identifies challenges to Societies and settlements associated with the use and abuse of people and natural resources.

ACTIVITY 1

- ◆ Identify environmental health problems we experience at school or at our communities.
- ◆ Suggest a health problem which could result once one of the problems is experienced.
- ◆ How can we deal with the health problems mentioned above?

ACTIVITY 2: AIR POLLUTION

Find out the environmental health problem: Read the case study about “Air Pollution”.

APPENDIX 10: GRADE 9 LESSON PLAN

THE IMPORTANCE OF VEGETABLES

Vegetables are extremely important for the people of our country.

This is because they are protective food.

They provide fibre which helps the food to pass the food digestion system.

Vegetables contain proteins, which are body building foods

Beans and peas are very rich in proteins

Vegetables contain vitamin A which helps us to grow

They also have vitamin C, which helps to heal wounds

Vegetables also contain energy-rich food such as sugar and starch- Carbohydrates /sweet potatoes

Vegetables are rich in minerals such as calcium and phosphorus which are needed to build strong bones and teeth

Vegetables can be classified under the following headings:

- ◆ Legumes – Beans and peas
- ◆ Leaf crops- Lettuce and spinach
- ◆ Root crops- Carrots and beetroot
- ◆ Fruit bearing crops- Tomatoes and pumpkins
- ◆ Tuberous crops- Potatoes
- ◆ Cabbage crops- Cauliflower and cabbage

GROUP WORK

ACTIVITY 1

How to establish a vegetable garden

ACTIVITY 2

INDIVIDUAL WORK

Draw up a table that includes the following information:

(A) Names of 3 food groups

(b) One function per group in a human body

- ◆ One example in each food groups

Tabulate your answer like this:

FOOD	EXAMPLE	FUNCTION

Mungwile James Grade 8
20 Controlled Test

31
90

Question 1

H - Human ✓ (3)
I - immune ✓
V - Virus ✓

A - Acquired ✓
I - immune ✓
D - deficiency ✗
S - Syndrome ✗

It can be transmitted by born baby
It can be transmitted by having unprotected sex ✓

It can be transmitted sharing same toilet ✗
It can be transmitted ✗ (2)

It can not be transmitted by
by hugging ✓
by sharing same bathroom ✓
by having sex with condom ✓ (8)
by kissing ✓

Stage of HIV/AIDS

No symptoms - Stage 1
Swollen lymph gland neck - Stage 2
shrinker - Stage 3 (6)
cardinal Dura TR - Stage 4

Ludada Snowya Grade 7B

18 July 2007

h.o Assignment

24/96

1. Because water from stream are death, another things animals are wee-wee to the water and toilet. And all those things can make diseases.
2. The diseases may have is cholera.
- 3.
4. As T.B like those people who are smoke are affected us like when you near to him/her something is going to happen you going ~~rough~~ cough or sneeze so you get the T.B diseases when
5. We can maintain by cleaning it, and kill insects that can make our toilet clean.
6. It important to have a gardens to the schools if we have gardens to the school that will make our lives more comfortable.
7. Because make our school look more beautiful and nicely.
8. The broke bottle will hurt them by (Acaba hlabq ama batle.)
9. The people from this area must call municipality so that they can clean this place.

Zindela Nodumo grade 9^B 23 July 2007
 1.0 classwork

food groups	Function	example
① Protein ✓	It's build us our body ✓	eggs ✓
② Carbon hydrates ✓	It's give us energy ✓	Pasta
③ Calcium ✓	it makes our bones Strong ✓	Milk ✓

APPENDIX 14: ANALYTICAL MEMO 1

ANALYTICAL MEMO 1: FEATURES OF THE OFFICAL PEDAGOGIC DISCOURSE OF THE LIFE ORIENTATION LEARNING AREA STATEMENT WITH REFERENCE TO HEALTH PROMOTION

Official pedagogic discourse	Expectations of teachers	Possibilities for using the school gardens for health promotion
<p><u>STANDARDS- BASED DISCOURSE</u> Evidence of standards-based discourse is found in the fact that the LO Statement has particular standards for each Grade. Expectations are different for Grade 7, 8 and 9 learners. Progression is built into the standards. For example: The principle emphasizes the importance of enabling progressively more complex, deeper and broader expectations of learners.</p> <p>Evidence in the Purpose Statement which says 'The Life Orientation Learning Area will enable learners to make informed, morally responsible decisions about their health and the environment'.</p>	<p>Expectation is that teachers will pay attention to the national standards that have been set, as articulated in the NCS, and that they will assess learning accordingly. Adequate attention will be given to conceptual progression within particular Learning Areas. Teachers are expected to use Learning Outcomes and Assesment that are appropriate to the learning Areas and the grades he /she is working with.</p>	<p>The curriculum has set some standards relevant to health promotion in Grade 7 and 8. These are:</p> <ul style="list-style-type: none"> ◆ Evaluates actions to address an environmental health problem. ◆ Plans an action in which laws and / policies for protecting environmental health are applied to address an environmental health issue. ◆ Describes what a healthy lifestyle is in own personal situation, as a way to prevent disease. ◆ Demonstrates informed, responsible decision-making about health and safety. ◆ Examines a health and safety issue related to violence, and proposes alternatives to violence as counter -strategies. <p>In using the schools gardens, it is possible that teachers can inculcate a culture of decision-making.</p>
<p><u>RIGHTS-BASED DISCOURSE</u> Curriculum principles state that human rights should be integrated into the Learning Area. In the LO statement there is evidence of this in LO1 which focuses specifically on making informed decisions about personal health, community health and environmental health, that is, a healthy environment that supports human health.</p> <p>Evidence in AS1 for LO2: Discusses the application of human rights as stated in the Constitution (Gr 7). Discusses violations of human rights and plans counter- strategies (Gr 8). Debates issues with regard to citizens' rights and personal choices (Gr 9).</p> <p>Evidence in the Purpose Statement which says that "Learners will develop skills to relate positively and make a contribution to family, community and society, while practising the values embedded in the Constitution. Learners will exercise their constitutional rights and responsibilities, to respect the rights of the others and to show tolerance for cultural and religious diversity in order to build a democratic society."</p>	<p>Expects teachers to bring in human rights issues into their lessons plans, and to cultivate a human rights culture in their classrooms. Expects teachers to plan in such a manner that stronger learners and learners with barriers to learning are able to work in mixed -ability groups. Expects teachers to provide extra support for those learners who are struggling to learn.</p> <p>Expect teachers to accept that all learners have the potential to learn and as such the teacher has to adopt a supportive approach.</p>	<p>School gardens can address gender stereotypes, which mean that boys and girls should share the different tasks equally.</p> <p>Even learners with learning difficulties can learn best when mixed with others, and gardens can assist in building self-esteem within those learners.</p>

<p><u>SOCIAL JUSTICE DISCOURSE</u> Curriculum principle emphasizes the importance of foregrounding social goals in the curriculum. In particular, it aims to be sensitive to issues of poverty, inequality, race, gender, age, disability and such challenges as HIV/AIDS LO 2 which states that the learner will be able to demonstrate an understanding of and commitment to constitutional rights and responsibilities, and to show an understanding of diverse cultures and religions.</p> <p>➤ AS 1: Discusses the application of human rights as stated in the South African Constitution (Gr7)</p> <ul style="list-style-type: none"> • Discusses violations of human rights and plans counter-strategies (Gr 8). • Debates issues with regard to citizens' rights and personal choices (Gr 9). <p>Evidence is found in the Purpose Statement which says "Learners will learn to exercise their constitutional rights and responsibilities, to respect the rights of others and to show tolerance for cultural and religious diversity in order to build a democratic society.</p>	<p>Expects teachers to consider both the principles and practices of social justice, respect for the environment, human rights and inclusivity. Expects teachers to consider the relationship between an unhealthy environment and human rights / social justice.</p>	<p><i>School gardens can assist with care of those in need of food (e.g. HIV/AIDS).</i></p>
<p><u>ENVIRONMENTAL FOCUS DISCOURSE</u> Evidence is found in the fact that NCS (R-9) provides opportunities for environmental learning in each of the Learning Areas. Learning Outcome 1 Assessment Standard 2:</p> <ul style="list-style-type: none"> • Evaluates actions to address an environmental health problem (Gr 7). ◆ Critically analyses the causes of common diseases in relation to socio-economic and environmental factors (Gr8). ◆ Develops and implements an environmental health programme (Gr 9) <p>Evidence is found in the Purpose Statement which says "The Life Orientation Learning Area will enable learners to make informed morally responsible and accountable decisions about their health and the environment".</p>	<p>Expectations are that teachers will consider environmental health risks such as health risks and polluted water, health risks and poor waste management practices.</p>	<p>Gardens can be used as an extended classroom and teaching resource. Learners can use gardens for implementing environmental health programme like growing of nutritious food.</p>

<p><u>LEARNER - CENTRED DISCOURSE</u> Evidence is found in the fact that the Learning Outcomes and Assessment Standards emphasise learner-centred and activity-based education. Learning Outcome 1 Assessment Standard 4 and 5 of Grade 9:</p> <ul style="list-style-type: none"> ➤ Critically evaluates resources on health information, health services and a range of treatment options, including HIV/AIDS. ➤ Discusses ways to apply insights gained from participating in an activity related to national health or a safety 	<p>Expectations are that teachers will design learning processes that are participatory, learner-centred and activity based in nature.</p>	<p>When learners work in the garden they have an opportunity to develop interpersonal skills, team work and responsibility.</p>
<p><u>PROBLEM -BASED DISCOURSE</u> Evidence is found in the Learning Outcome 3 Assessment Standard 6 (Gr 8):</p> <ul style="list-style-type: none"> • Draws up an action plan to apply problem-solving skills in a personal context. Assessment standard 6 (Gr 9): • Critically evaluates own application of problem solving skills in a challenging situation. <p>Evidence in the Purpose Statement which says that " Learners will be encouraged to acquire and practise life skills that will assist them to respond to the challenges and to play an active and responsible role in economy and in society".</p>	<p>It expects teachers to involve learners in problem-solving activities so as to develop problem-solving skills, and expose learners to challenging situations.</p>	<p>Gardens can serve as sites for learning and problem solving activities, or solution to problems. Learners can use gardens to plant and sell vegetables to provide good health, fight hunger and poverty.</p>
<p><u>SOCIAL AND INDIVIDUAL WELL - BEING</u> Evidence is found in the Learning Outcome 1 Assessment Standard 2 (Gr 8) and Assessment Standard 4 (Gr 9) which say :</p> <ul style="list-style-type: none"> ◆ Critically analyses the causes of common diseases in relation to socio-economic and environmental factors. ◆ Critically evaluates resources on health information, health services and a range of treatment options, including HIV/AIDS. <p>Many social and personal problems are associated with lifestyle choices and high-risks behaviours. Sound health practices, and an understanding of the relationship between health and environment, can improve the quality of life and well-being of learners.</p>	<p>Teachers are expected to find learning opportunities for life challenges like poverty, hunger, unemployment and HIV/AIDS.</p>	<p>School gardens can offer sites for learning and addressing life challenges such as poverty, hunger and HIV/AIDS. Use of gardens can also strengthen school-community relationships and promote social development</p>

<p>CULTURAL DISCOURSE Evidence is found in the fact that Learning Outcome 2 Assessment Standard 4 and 5 state that:</p> <ul style="list-style-type: none"> • Explains how recognition of diverse cultures can enrich South African society. • Explains the role of oral traditions and scriptures in a range of the world's religions • Critically evaluates changes in cultural norms and values in relation to personal and community issue. • Critically investigates issues of diversity in South Africa and ways in which to promote understanding of diverse cultures. <p>Evidence in the Purpose Statement which says that "Learners will learn to show tolerance for cultural and religious diversity in order to build a democratic society".</p>	<p>Expectations are that teachers will accommodate and use community links and relationships in planning their lessons. For example Traditional healers can be asked by teachers to teach learners about cultural and medicinal use of plants and how to protect them for future use. Teachers are also expected to make use of indigenous knowledge vested in elderly members of the community especially in explaining different plants and their uses.</p>	<p>Gardens can be used to learn more about indigenous plant knowledge and indigenous ways of knowing.</p>
<p>VALUE- BASED DISCOURSE Evidence is based on the fact that Learning Outcomes and Assessment Standards and the content guidelines in the NCS (R-9) provide the standards for establishing a high level of knowledge and skills. Learning Outcome 1 Assessment Standard 4: Discusses the personal feelings, community norms, values and social pressures associated with sexuality.</p> <p>Evidence in the Purpose Statement which says that "Learners will respect the rights of others and show tolerance for cultural and religious diversity in order to build a democratic society".</p>	<p>Expectations are that teachers will need to give attention to the quality of information being shared with learners, and ensure that the activities allow learners to develop high levels of skills. Teachers will need to give attention to how learners access and use knowledge, and how they develop skills, to ensure that some learners are not disadvantaged as a result of language use or type of activities used.</p>	<p>School gardens can be used to develop skills such as identifying, responsibility, caring, teamwork and classifying. Gardens can also provide sites for learning about environmental decisions and values such as caring for biodiversity.</p>

NOTES:

This is linked to the SA Constitution which also emphasizes the right to a healthy environment ... Rights-based environmental discourse in the National Curriculum statement recognizes the close relationship between human rights issues, social justice questions and a need for a healthy environment in South Africa.

Rights-based environmental discourse is based in a social response to a history of exclusionary policies introduced by colonial and apartheid regimes which defined the majority of South Africa's population access to its natural resources and hence its wealth.

APPENDIX 15: ANALYTIC MEMO 2

ANALYTICAL MEMO 2 Selective appropriations and ideological transformations in Lesson 1

Lesson 1: How the garden was used (a summary of what the teacher planned and did)

Official pedagogic discourse and expectations of teachers	Evidence of what was done	Evidence of selective appropriations	Evidence of ideological transformations
The educator took the learners to the garden where they identified the different types of plants.	Pictures of learners identifying the plants were taken.	The teacher focused on skills attained by the learners as they identified plants	
Standards-based discourse and assessment according to standards	<i>Teacher 1 planned his lesson using AS1-5. That is what was recorded in the lesson plan. In fact there are only 4 assessment standards for Grade 7. He actually applied assessment standards for Grade 8 in Grade 7. The NCS (R-9) forms the foundation for ongoing curriculum development, delivery and assessment in South African schools. It states that the performance of learners should be measured against the Assessment Standards of the Learning Outcomes in a grade. The teacher asked the learners to answer questions based on the picture or handout. The teacher assessed this, but did not know how to develop a rubric. A consequence was that the standards were not met. The teacher explained that he had not had enough training in assessment standards. From the observations it was evident that the workshops were not effective.</i>	Teacher selectively worked only with one aspect of the AS 1 in a grade higher than the one he was teaching. This seemed to be the case because of a poor background in how to work with the Assessments standards. In fact it is evident that the teacher is still using traditional methods of assessment and is in a way disregarding the dictates of NCS. If that is not the case, the teacher is lacking in so far as training in the NCS is concerned.	
Standards -based discourse and assessment according to standards <hr/> Rights-based discourse and the need to create a human-rights culture in teaching and learning <hr/> Learner -Centred discourse and assessment according to standards.	<i>Teacher 2 planned her lesson using AS 2, 4 and 5. The teacher did not state upfront what the objectives of her lesson were. It was difficult to establish if the objectives were achieved as they were not stated in advance.</i> <hr/> <i>Teacher got the learners to work in groups. She made all the boys dig, and the girls stood and watched boys working hard (observations). In discussions with the girls they said they don't like working in the gardens because it's meant for men.</i> <hr/> <i>The teacher acted as a knowledge resource. She did not allow learners to stretch their minds. The teacher was very quick to answer the same questions she asked and gave learners limited time to respond.</i>	The teacher selectively worked with a healthy environment. Her focus was on AS 2 at the expense of other Assessment Standards. Even though other Assessment Standards were mentioned it did not look like the teacher intended to use them at all. <hr/> There was very little coherence between the lesson plan and what was actually taught. For example in her lesson plan the teacher had prepared three activities which she did nothing about in her lesson. <hr/> Her chosen teaching style using content and questions	The teacher took the learners to the garden to have a close observation of some vegetables and dig out the old ones. <hr/> Teacher neglected to ensure equity in the lesson due to stereotypes. The teacher maintained that boys are inherently strong and as such fit for hard work whilst girls are weak and can only do light work.

Outcomes-based education and assessment according to standards	Outcomes- based approach allows all learners to develop and achieve to their maximum ability and allows for participation in learning. The fact that girls were merely observing boys working in the garden has had a negative contribution in learning in terms of gender sensitivity. It is evident that this outcome was not achieved in all learners.		
Environmental discourse	Only used the vegetable gardens to identify vegetables. Did not use the indigenous garden due to lack of knowledge	Chose only to focus on known vegetables (western vegetables)	
Cultural discourse	Did not attend to this	See comment above	
Well-being discourse	Focused on diseases	Chose to focus on diseases, and not on the full scope of the LO	

APPENDIX 16: LETTER SEEKING PERMISSION TO DO THE RESEARCH

Letter to the Deputy Principal and SGB (I am the Principal of the school in which I conducted this study).

The Deputy Principal
Bizana Village J.S.S.
P O Box 149
BIZANA

Sir

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am registered as a part-time student at Rhodes University (student number G06J3430). I am studying for Master's degree in Environmental Education. I would be most grateful if you would allow me to use your school as one of my research sites for the research report which I am required to write.

The aim of the research is to review the lesson planning and implementation to identify the delocation and relocation processes involved in curriculum recontextualising. Should you agree to allow me to use your school as a research site, teachers who are willing to participate in this project will be asked to complete a questionnaire giving background information on their qualifications and experience in this Learning Area. Further data for analysis will be collected from interviews with these teachers. They will be asked for permission to audio-tape record these interviews. I will also request permission to look at examples of their records of classroom observations, tests and learners' portfolios, examples of performance task assessments.

The school and teachers are assured of anonymity in the final research report and will be invited to proof read drafts of the reports to ensure that details are accurately recorded and reported.

Should you have any concerns or questions about this request, you can contact me at (0392510372) during business hours or (0393173698) after hours.

Yours faithfully
Wiseman Jenkins

APPENDIX 17: LETTER SEEKING PERMISSION FROM GRADES 7, 8, 9 EDUCATORS

I am registered for a Master's degree in Environmental Education with Rhodes University. To qualify for my Master's degree I am required to write a research report on how teachers use school gardens for teaching Life Orientation in the Senior Phase with health promotion in mind. More specifically the aim of this research is to review lesson planning and implementation to identify the delocation and relocation processes involved in curriculum recontextualising.

Please complete the attached consent forms if you are willing to assist me with this research:

- a) by participating in an interview with me at a time that is convenient to you and
- b) by allowing the interview to be tape-recorded for later transcription and use in the research report.

Yours faithfully
Wiseman Jenkins

CONSENT FORM 1

CONSENT FORM 1

I hereby agree to participate in an interview with Wiseman Jenkins. I understand that he will be reviewing lesson planning and implementation, identify the delocation and relocation processes involved in curriculum recontextualising. I am also aware that he will be looking at my work and assessment activities.

Signed.....Date.....

APPENDIX 18: LETTER SEEKING PERMISSION FROM PARENTS

Dear Parent

I am doing Masters in Environmental Education with Rhodes University. In order to fulfill the requirements for my studies, I am expected to conduct interviews with learners. Because learners are still minors, I have to seek permission from their parents in order for them to participate in the research. The interview will be probing into their interest and attitude towards use of school food garden in Life Orientation. Will you then be kind enough to grant me that permission? Interviews will take place during school hours, but will not interfere with their normal classes.

Yours faithfully

M.W. Jenkins

APPENDIX 19: COPY OF THE LEARNING OUTCOME AND ASSESSMENT STANDARDS ON HEALTH PROMOTION (DOE, 2002b)

Learning Outcome 1

ALTH PROMOTION

learner will be able to make informed decisions regarding personal, community and environmental health.



Assessment Standards

We know this when the learner:

- Proposes ways to improve the nutritional value of own personal diet.
- Evaluates actions to address an environmental health problem.
- Describes strategies for living with diseases, including HIV/AIDS.
- Discusses the personal feelings, community norms, values and social pressures associated with sexuality.

Senior Phase



Assessment Standards

We know this when the learner:

- Plans an action in which laws and/or policies for protecting environmental health are applied to address an environmental health issue.
- Critically analyses the causes of common diseases in relation to socio-economic and environmental factors.
- Describes what a healthy lifestyle is in own personal situation, as a way to prevent disease.
- Demonstrates informed, responsible decision-making about health and safety.
- Examines a health and safety issue related to violence, and proposes alternatives to violence as well as counter-strategies.

Senior Phase



Assessment Standards

We know this when the learner:

- Illustrates and evaluates the influence of ecological, social, economic, cultural and political factors on own personal choice of diet.
- Develops and implements an environmental health programme.
- Investigates personal and social factors that contribute to substance abuse and suggests appropriate responses and rehabilitation options.
- Critically evaluates resources on health information, health services and a range of treatment options, including HIV/AIDS.
- Discusses ways to apply insights gained from participating in an activity related to national health or a safety promotion programme.