COMMUNITY KNOWLEDGE, COHESION AND ENVIRONMENTAL SUSTAINABILITY: AN EDUCATIONAL CASE STUDY IN CLARKSON

THESIS

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ABSTRACT

An ethnographic case study was done in the rural community of Clarkson which lies at the foot of the Tsitsikamma Mountains in the Eastern Cape, South Africa. Rural communities gathered and developed local wisdom on the natural resources around them. The study shows that in the past, life in Clarkson was characterised by such shared wisdom, an abundance of natural resources, as well as strong community cohesion. With the advent of modern lifestyles community cohesion and practices were disrupted and today, people living in Clarkson are less dependent on each other and on local resources. This study suggests that some of the past wisdom, community knowledge, practices and skills that existed for ages in Clarkson, can still be useful today in the context of environmental sustainability. The incorporation of this knowledge into the new outcomes-based education curriculum in South Africa and the local school curriculum, is explored.

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I

INTRODUCTION

LOCATING THE STUDY

My research was carried out in the small, rural community of Clarkson. I see this community as rural because of the agricultural and non-urban activities that characterise it. Pask and Williams (1993) classify villages and smaller towns as rural because their populations mainly comprised residents engaged in agricultural practices and 'living-off-the-land'. However, as this study will show, the residents of Clarkson are increasingly less involved in sustaining themselves with natural resources.

Clarkson, a Mission Station that was established in 1838 (Uithaler, 1994), lies at the foot of the Tsitsikamma Mountains, about 42 kilometres west of Humansdorp in the Eastern Cape Province of South Africa. The past existence of this small rural community depended mostly on self-sufficient community practices and skills that were associated with a strong community cohesion. The community of Clarkson is predominantly Afrikaans speaking. After the 1994 elections the Mfengu-people (Fingo's), that inhabited this area before 1838 (Krüger, 1967) were relocated to Clarkson. Growth in Clarkson has been slow. The population increased since 1839 from more or less 140 (about one hundred Mfengu, forty Coloureds (of mixed descent) and a few farmers of European descent [Kruger, 1967]) to about 2 000 - 3 000 currently (Pers. Comm., Rev Mcubusi, 2000). Like many small towns, Clarkson has a high proportion of elderly people, and young people of school-going

age. For reasons such as modernisation and the lack of employment opportunities a number of young adults moved to bigger towns and cities.

Comparing my field observations with information from documents suggests, that in recent times the community has become relatively impoverished, although the bio-physical environment and the resources it provides have not changed dramatically. I associate this 'impoverishment' with the abandonment by the community of self-sufficient ways of living for assimilation into the dominant society. Examples of what I see as impoverishment include gardens and fields previously used for cultivation, that now lie fallow; the decrease in the use of animals as slaughter stock, and houses in the process of being built by local residents left to stand incomplete. All in all it seems, as if people in Clarkson now have a greater reliance on the cash economy.

Having being born in Clarkson and as an environmental educator concerned about processes of sustainable development, it is important for me to understand why and how this impoverishment came about in a community described (by Uithaler, 1994) as once strong and cohesive. This understanding will provide me with the insight to make recommendations to educational practitioners about including past knowledge, skills and practices into their curricula. I believe that establishing links between school and community learning environments can help to address issues of impoverishment and development in Clarkson, and other communities in need of 'development'. Other authors (Smith and Williams, 1999; Matowanyika, 1999; McNeely, 1995) also support the idea of stronger links between the school and the broader community.

AIMS OF THE RESEARCH

This research adopts a historical and ethnographic approach to the data collection and to the analysis and interpretation of data. It attempts to:

- establish what knowledge and practices people used in the past in Clarkson, to secure a living from the land;
- establish who still holds this knowledge and whether it is being passed on generationally through teaching and learning at home or in the broader community;
- explore how and why the observed impoverishment in Clarkson took place; and
- critically explore the possibility of incorporating (past) community knowledge and practices into Curriculum 2005 and the local school curriculum.

RATIONALE

In South Africa the Department of Environmental Affairs and Tourism is developing a national strategy to protect traditional knowledge and legislation has been passed to find "innovative solutions to the commercialisation of indigenous knowledge" (O'Donoghue et al. 1999). The National Research Foundation (NRF) highlighted the importance of indigenous knowledge for South Africa and the African continent by providing funding for research into different areas focusing on indigenous knowledge systems (see Appendix I). By researching and documenting indigenous knowledge systems, they become accessible to contribute to the development of communities and society at large. During past decades, ignorance of local and community knowledge often resulted in the failure of development

projects. "Documenting the existing knowledge systems and working with local communities in order to improve upon their lives, became very important" (Warren et al. 1995).

Among those who study indigenous knowledge it has been noted that development models in place in many developing countries are exclusive of indigenous people's ideas. "The development models in place are, in effect, displacement models: they seek to displace 'Indigenous Systems' with 'Western' ones…" (Matowanyika, 1999). In effect indigenous knowledge is lost and replaced by the western knowledge paradigm (Nader, 1996).

Agriculture was the dominant occupation in the Clarkson area, though some people commuted to factory jobs in several nearby towns – Kareedouw, Humansdorp and Coldstream. Locally, cultivating the land provided opportunities for work; some people also practised as builders, carpenters, plumbers and thatchers (of roofs). Self-development in communities such as Clarkson, where people used their own knowledge, skills and practices, may be an important way of improving their economic, social and cultural conditions. Communities should attempt to meet their own needs as far as possible, but recognise the need to co-operate with others for the global good. Development models should therefore empower communities to organise themselves and manage local environments for their own benefit.

The study I undertook is in the field of environmental education. The adoption of an outcomes-based education (OBE) framework and the development of a new curriculum, C2005, by the democratic government, marked a decisive break with the apartheid education system and its associated philosophical underpinnings of Christian National Education and Fundamental Pedagogics (CEM, 2000). Government sees OBE as the most appropriate curriculum approach to produce critical,

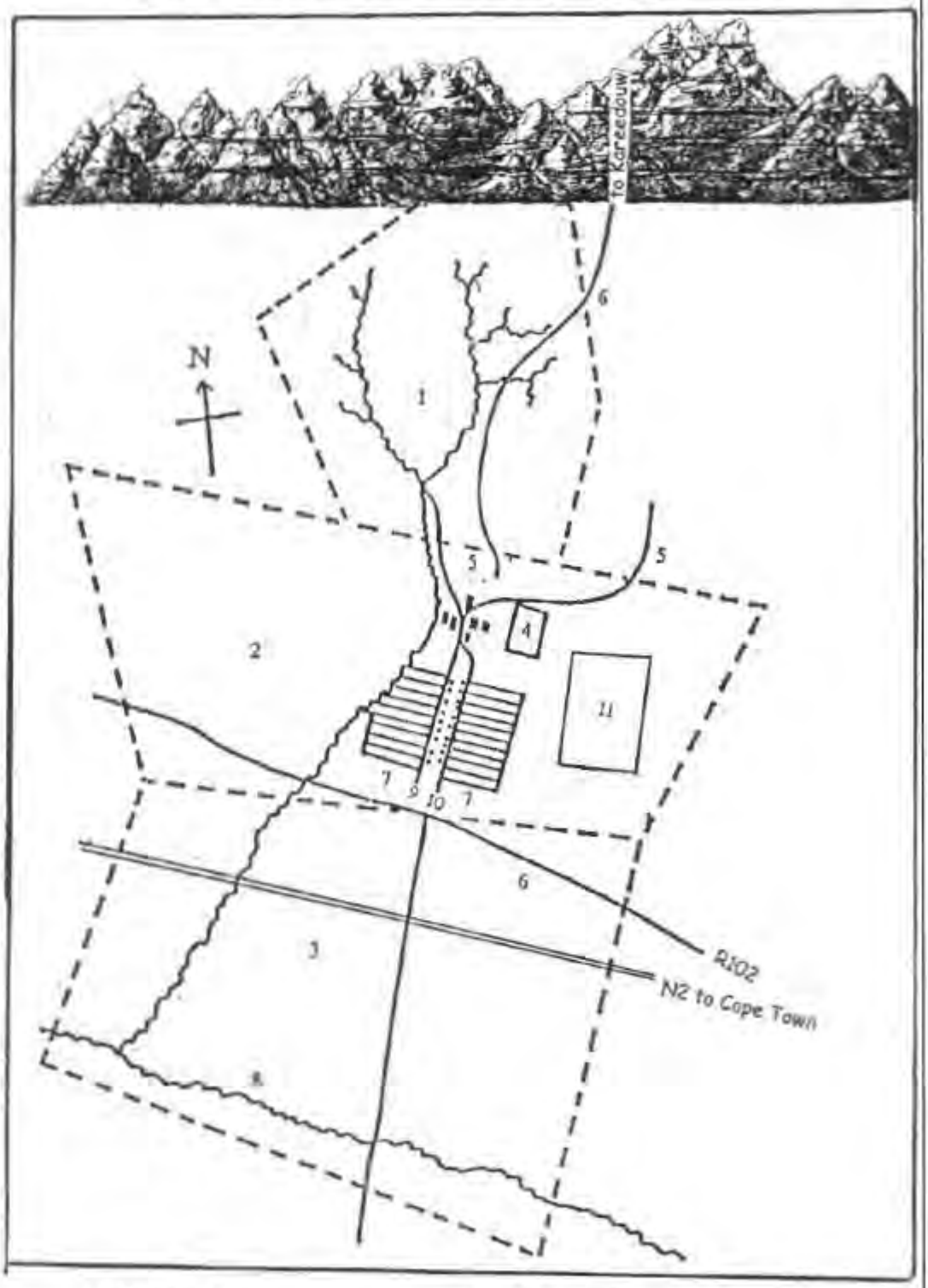
reflective and democratic citizens through processes of open and critical enquiry in schools. The education ministry also sees environmental education as an important aspect of the new curriculum, as was evident when the CEM directed the team of curriculum experts to review C2005, to pay particular attention to the place of history and environmental education in the curriculum (CEM, 2000).

Until fairly recently formal curricula in the South African education system largely ignored environmental principles and the philosophy of sustainable living. In many communities people never understood the links between individual lifestyles, the alleviation of poverty, the use of resources, environmental degradation and, ultimately, the survival of humanity (Yeld, 1997). It is therefore especially important that community knowledge be incorporated into the new curriculum that is currently being phased into the South African school system. Within this new system teachers are to create learning opportunities that are "to focus on needs of relevance to society; to learners' present and future needs; to encourage values education; emphasize the importance of life-long learning and encourage locally-relevant education" (Department of Education, 1997).

Local people are often an overlooked source of information and learning materials do not often reflect knowledge that has direct local relevance. The school curriculum can be enriched with local stories, history and community experiences of change and insights into how people used the local environment in earlier times. Programmes that enable learners to interact with local people and to find out about early history and change can be central to successful environmental education processes. The focus areas (Appendix I) identified for research by the NRF into indigenous knowledge systems can provide valuable knowledge which can inform the school curriculum on locally relevant issues, skills and practices.

I wish through this study to inform environmental education processes, which, through school-and-community-based education, could contribute towards the revival of practices and skills that have the potential to restore and improve the quality of life in this community and other communities in the same position as Clarkson.

Map 1: Clarkson in 1850 (Updated from Krüger 1967)



1. Koksbosch
2. Clarkson
3. "Fingo reserve"
4. Graveyard
5. Water furrows
6. Wagon path to Kareedouw & Langkloof
7. Settlement
8. Tsitsikamma River
9. Bazia Street
10. Church Street
11. Fingo Settlement after 1994

Tsitsikamma Moutain Range

II

HISTORICAL REVIEW OF CLARKSON AND CLARIFICATION OF TERMS

INTRODUCTION

Clarkson was chosen as research area for its location and size of the community. In terms of its location, Clarkson was relatively near to me (in Port Elizabeth) and costs incurred were therefore minimal. The community is small which made it adequate for an in-depth case study. The fact that I was born and bred in this community and my attachment to it, also prompted me to research the problem identified in this study.

This Chapter locates Clarkson in terms of:

- its historical origin, as reflected in documents I reviewed; and
- issues related to community knowledge, cohesion, sustainability and environmental education, as identified in the literature.

HISTORICAL INTRODUCTION TO CLARKSON

Clarkson is a Moravian mission station. It is currently in a process of transformation as far as local governance is concerned, through incorporation into the Kareedouw Municipal Area. It is a relatively small and isolated settlement with a population of between 2 000 – 3 000 inhabitants most of whom live in two parallel streets, Bazia and Church Streets (Map 1). The name Clarkson can be traced back to a gift of 200 (±R400 in 1839) given by a friend of the then Cape Governor, Napier (1838-1840), to Reverend Hallbeck, at the time a missionary to Clarkson.

The condition linked to the gift was that the place be named after Thomas Clarkson, a friend of Wilberforce, who played a great role in the liberation of slaves (Krüger, 1967).

It is important in this study to know where the Moravian people had their origin and how they came to be established in South Africa. The Moravian Mission is a Christian Movement, which was established by the followers of Johannes Huss, after his death in 1415, in Moravia (central part of Slovenia). The arrival of George Schmidt and other refugees in the Cape in 1737, led to the establishment of the Moravian Missions in South Africa. It later became the Moravian Church and is currently known as the Moravian Church of South Africa (Jacobs & Pauw, 1994).

Krüger (1967) reports that long before the establishment of Clarkson, the Mfengu already inhabited the place to the south of where Clarkson is today (Map 1). Two thousand Mfengu lived in about one hundred kraals under five captains dispersed on the plain. Their huts were of the beehive type. They made a living from their cattle and also from agriculture. Wherever the ground was suitable, they had crops of corn, pumpkins and oats near the kraals. Johan Halter and Christian Teutsh, two missionaries, arrived at Clarkson (previously named Koksbosch) in 1837 looking for a suitable place to establish a Mission Station. Here they met two young Mfengu captains, Manqoba and Bladje, who expressed the wish to have missionaries in that area.

An application to settle Coloured people from Enon, another Eastern Cape mission station, and surrounding areas, in Koksbosch was endorsed by governor Napier in 1839. The already mentioned missionary Rev. Hallbeck was instrumental in this. From the documents I reviewed (Krüger 1967 and Uithaler 1994) it seems as if these missionaries travelled on a regular basis between Enon and Clarkson.

Eventually in 1839 Halter and another missionary, Adolf Küster, left Enon to settle in Clarkson. After their arrival, they built a residence on the spot where the memorial is today (*Photo 1*). As time passed, the community of Clarkson grew bigger, with former slaves and a few Hottentots (Khoi) also applying for admission. Admission to the community was granted to those who showed an earnest desire to hear the Gospel.

Photo 1: Memorial where first buildings stood

Rev Nauhaus who arrived with his wife, child and a bride for Küster, replaced Halter and Küster. After being ill, Nauhaus's child died and was buried at the site which is today still the graveyard of the settlement (*Photo 2*).

Photo 2: The graveyard

As time went by developments took place in Clarkson: streets were laid out and plots allotted, on the western side to the Mfengu and on the eastern side to the Coloureds; water-furrows, fencing of plots and agricultural practices were some of the things that kept people busy. A number of people were baptised by missionaries and became members of the congregation – they included Mfengu, local Coloureds and people from areas surrounding Clarkson. Some cultural customs such as lobola (a symbolical exchange of gifts from the groom's family); selling of daughters to traditional doctors for cattle, and other traditional practices, were strongly prohibited by the Church. This was a great offence to the Mfengu and caused them to become very critical and hostile towards missionaries. The extent of these problems caused Manqoba, his counsellors and some followers to move to

Peddie. His complaint being that he was losing his authority as a captain at the station as many Mfengu (especially children) became rebellious.

The Mfengu that remained in Clarkson were not easily integrated into the Christian community, and it was the Coloured people who formed the backbone of the settlement. The settlement developed under Nauhaus to a sizeable village. Those who built houses in Clarkson, received a subsidy from the Mission. After completion of the church (*Photo 3*), a residence for two families (*Photo 4*) and a mill were erected. Members of the community also constructed a wagon-path across the mountain range in order to give farmers of the Langkloof and Kareedouw access to the mill.

Photo 3: The Church

Photo 4: Residence of Missionaries

Hallbeck was succeeded by 33 other missionaries (1939-1967) and 8 other Ministers (1968-currently) in Clarkson. While an account of the contributions of all the missionaries after him is not a relevant focus of the study, the role of the Church in Clarkson is illustrated by a consideration of the way in which his contributions and ideas until the early 1940's, shaped the further development in Clarkson. Krüger remarks: "The entrenchment of the peculiar order of the settlements, the promotion not only of the spiritual life of the inhabitants, but also of their temporal progress with the support of indigenous co-workers, the development of the economy of the Mission, in which the shops played an ever increasing role, and the introduction of English as second language were the fruits of his work." Other historical events are beyond the scope of this study but

reference to relevant practices, knowledge and skills which shaped the character of Clarkson, are discussed in Chapter IV.

COMMUNITY SYSTEMS AND STRUCTURES: PAST AND PRESENT

To assist with the orderly management of Clarkson and its community the Church established a few organisations. The following organisations (diagram 1) played (and still do to a lesser extent) an important role in creating community cohesion.

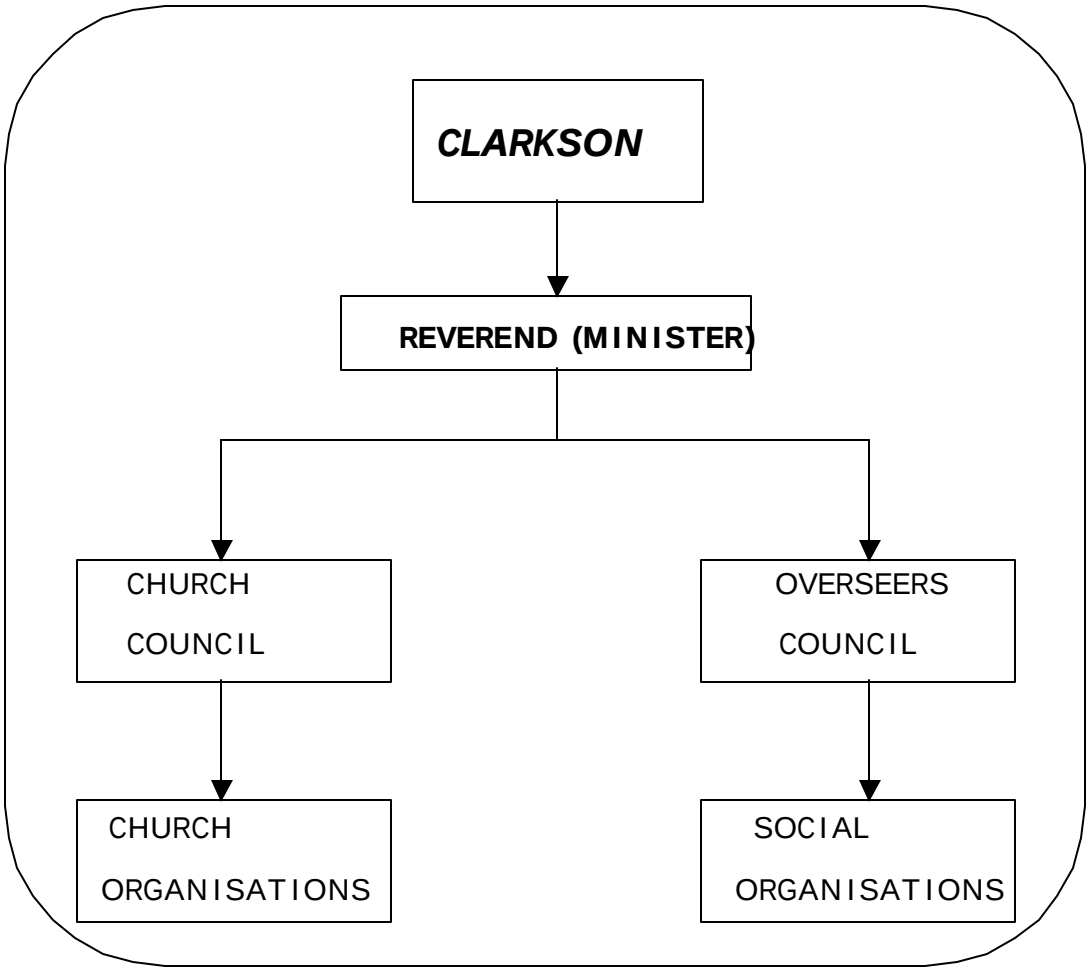


Diagram 1 – Community Structures in Clarkson

THE REVEREND/MINISTER

He is the leader of the community as well as the representative of the Moravian Church of South Africa. The financial management of the communal affairs of Clarkson is his responsibility. He is assisted in this by the Finance Committee. They have to report on financial matters to the community on an annual basis. The most important function that he fulfils is the spiritual care of members of the community.

THE CHURCH COUNCIL

The first Council was established in 1839. It assists the Minister in spiritual guidance and also helps in any church matters of interest, whether it is material or non-material. They play an important role in providing advice to the community in matters concerning their individual and collective well-being.

The Church Council usually consists of 20 members, 10 male and 10 female, which are divided into 10 wards. Wards are community units served by a council member. Membership on the Church Council is limited to residents in Clarkson only and they must be over the age of 18. They serve on this Council for a three-year period.

Members must avail themselves for giving advice on almost any problems encountered in their wards. They were highly respected in the past and had to lead by example. Presently, because of the disintegration of the community, this group is not so well respected anymore. This attitude among especially the younger members of the community can be ascribed to the way the Church and its Order are currently perceived. In the past people were highly religious and attended Church and prayer sessions on a regular basis (Uithaler, 1994). Today one will find few young adults attending such gatherings (see Looking at the Present, Chapter IV).

THE OVERSEERS' COUNCIL

The first Overseers' Council was elected in 1879. This council consists of 12 elected members, who are permanent residents of Clarkson. They also serve the community and Church for three years.

The following are some of their most important functions:

- Maintenance of infrastructure such as roads, waterpipes, firebelts, fencing surrounding agricultural and grazing lands, as well as law enforcement with assistance from the South African Police Service (the nearest Police Station in Kareedouw is ±18km away);

- The initiation of new projects which address the needs of the community;

- Decision making on funds collected from the community and payment of services rendered to the community.

Through the following community structures the Church tries to create a community bonding or sense of belonging: the Christian Alcoholic Bond (CAB), Brothers and Sisters Bond, Church Choir, Brass Band, Youth League, Sunday School, Boys and Girls Brigade and Sport Clubs.

Community structures affiliated to the different Councils are still in place, but their effectiveness in creating a strong community cohesion or bond is not as it was in the past, as the findings of this study will confirm (see Chapter IV).

CLARIFICATION OF CONCEPTS

To put this study into the context of environmental education as an academic field, it is important for me to clarify the following concepts:

COMMUNITY KNOWLEDGE/KNOWING

Most definitions of Indigenous Knowledge (IK) refer to the accumulation of experience and passing down of information from one generation to the next within a community or society in general (Wang 1982 in Warren et al. 1995). According to O'Donoghue (1999) the term 'indigenous knowledge' is an abstract appropriation. O'Donogue explored the relationship between knowledge and knowing and came to the conclusion (M.Ed[EE] class notes, 1999) that knowing is the process of being able to answer the questions WHAT and HOW, becoming knowledge when the question WHY is being answered.

He further suggested (O'Donoghue, 1995) that defining indigenous knowledge may constitute a "transformative colonisation of indigenous knowledge". In attempting to define it we are imposing a certain set of values that treats knowledge as information and lose sight of indigenous knowledge as "social processes of coming to know and responsive 'common sense' knowing" that are constantly being revised through experience (Le Roux, 1999).

Masuku (1997) also concurs with O'Donoghue that indigenous knowledge or as she puts it, 'indigenous processes', is habituated common sense knowing. Often people did not investigate why they did things the way they did – it was simply done that way because that is what was done.

The importance of community knowledge/knowing in many rural communities can be seen from practices whereby people provided for themselves, their neighbours and their families with vegetables, medicinal plants, firewood, poultry, food, etc. (Smith and Williams, 1999). The passing down of such knowledge/knowing forms an important part of any community's existence. Modernisation (which does not always imply becoming "better-off") caused many community and local practices to disappear (Matowanyika, 1999). These practices were subject to what McNeely (1995) describes as "cultural extinction".

As noted in the introductory Chapter global interest in the recognition of indigenous knowledge is on the increase with the realisation of how such knowledge can benefit the world. The World Conservation Union (IUCN)(1991) and the United Nations Educational, Scientific and Cultural Organisation-United Nations Environment Programme (UNESCO-UNEP) (1992) share a global concern about the loss of human cultures and of traditional, local and community wisdom about the environment. The International Forum of Non-Governmental Organisations held during the Earth Summit in Rio de Janeiro (International Council for Adult Education, 1992) stated as one of its principles that "Environmental Education must recover, recognise, respect, reflect and utilise indigenous history and local cultures, as well as promote cultural, linguistic and ecological diversity".

In South Africa, the concern for the revival of indigenous knowledge can be seen from research funding by the National Research Foundation for research on Indigenous Knowledge Systems (Appendix I). Some related work done recently in environmental education in southern Africa includes studies by: Mtshali's (1994) investigation of environmental knowledge of the elderly in Kwazulu Natal; Ngwane (1999), who documented indigenous food plants in her study of factors that contributed to the decline of indigenous species in the Eastern Cape and Shava

(2000), who focused on the use of indigenous plants as food by an Eastern Cape rural community.

COMMUNITY COHESION

Caring for the Earth (IUCN/WWF/UNESCO, 1991) refers to a community as "the people of a local administrative unit, such as a municipality; of a cultural or ethnic group, such as a band or a tribe; or of a local urban or rural area, such as the people of a particular neighbourhood or valley" (1991:57).

Chapter 7 of this document (IUCN/WWF/UNESCO, 1991) suggests that communities vary in their ability to care for their environments. Lack of consensus, organisation, knowledge, skills, suitable technologies and practices, funds or other resources are all cited as factors that undermine a community's prolonged capacity to care for themselves. This often leads to a weakening of the community's cohesion.

The dictionary meaning of cohesion is: "the process or condition of cohering; becoming or remaining united, especially in a tangible or explicit way" (Readers Digest Great Illustrated Dictionary, 1984).

According to Krüger (1967) and Uithaler (1994) the past existence of the community of Clarkson depended mostly on self-sufficient community practices and skills that were associated with a strong community cohesion. Strong community bonds were also created by the numerous community organisations that were established by the Church. Agriculture, building, sports, church and other activities played a significant role in the development of a sense of community through stimulating participation, a sense of ownership and responsibility to oneself and the broader community (Uithaler, 1994 and Jacobs & Pauw, 1994). It helped

(Uithaler, 1994) especially in combating neighbourly disintegration (breaking up of neighbourliness) and environmental degradation. It was a matter of (as one of the elderly interviewees put it): "to care not only for oneself but for others as well".

Processes of self-help and mutual help can be seen as intimately related to self-respect and self-determination (Jeppe, 1985). The community and the individual thereby cultivate the attitude of 'do-it-yourself' and do not constantly look for external assistance and 'handouts'. Attitudes of own initiative and self-reliance in personal and community life promote the belief in the dignity, worth and importance of the individual, the community, its institutions and actions.

Unfortunately this is not the case in Clarkson anymore. In Chapter IV I will explore the reasons why Clarkson is not characterised by a strong sense of community anymore.

SUSTAINABILITY AND SELF-SUFFICIENCY

Sustainability is a very complex concept and I drew on *Caring for the Earth: A Strategy for Sustainable Living* (1991) to clarify it.

The word "sustainable" is used in several combinations such as "sustainable development", "sustainable economy", "sustainable society" and "sustainable use".

The World Commission on Environment and Development (WCED, 1987) defined "sustainable development" as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Much confusion was created with the use of "sustainable development", "sustainable growth" and "sustainable use" as if they were interchangeable. "Sustainable growth" is a contradiction in terms: nothing physical can grow indefinitely.

"Sustainable use" is applicable only to renewable resources: it means using them within their capacity for renewal. Furthermore, when we define an activity as sustainable, it is on the basis of what we know at the time. There can be no long-term guarantee of sustainability because many factors remain unknown or unpredictable.

"Sustainable development" is used to mean: improving the quality of human life while living within the carrying capacity of supporting ecosystems. For practical purposes, "sustainability" in this research will imply: the utilisation of resources in a way that will ensure its availability for future use.

In the first Chapter I introduced the notion of self-sufficiency in a development context, as a focus in this study of Clarkson. In the past home gardens found in 'door-yards' and agricultural fields provided nearly all families in this village with nutritious fruits, vegetables, medicinal plants and poultry feed, etc., while the forest provided them with firewood, building material and a whole lot of other non-wood forest products. This helped them to lead self-sufficient lives (Uithaler, 1994).

Community practices, skills and especially community knowledge/knowing, have been irreversibly altered by the profound transformation of society in the wake of the industrial and post-industrial revolutions (Smith and Williams, 1999; Warren et al. 1995; Matowanyika, 1999). Clarkson too, has been affected by this change. In Chapter IV I will explore these changes in the community of Clarkson.

ENVIRONMENTAL EDUCATION AND SUSTAINABILITY

It is widely agreed that education is the most effective means that society has for confronting the challenges of the future. In "Educating for a Sustainable Future",

UNESCO (1997) reiterates education's role: "Education is humanity's best hope and most effective means in the quest to achieve sustainable development".

The World Conference on Education for All (UNESCO, 1997) identified "basic education" as important to achieve sustainability. Basic education here refers to "all forms of education and training that meet the basic learning needs of individuals, including literacy and numeracy, as well as the general knowledge, skills, values and attitudes that they require to survive, develop their capacities, live and work in dignity, improve the quality of their lives, make informed decisions and continue learning" (1997:19).

Basic education is therefore aimed at all the essential goals of education: learning to know, to do, to be – and therefore aimed at empowerment. Basic education should therefore empower learners to become environmentally literate, to act on environmental issues and to promote environmental ethics.

In the last 20 – 25 years of its history, environmental education has steadily striven towards goals and outcomes similar to those inherent in the concept of sustainability. Although the practice of environmental education in South Africa has a history of at least 14 years, past policies for its inclusion in formal curricula were limited by a lack of broad participation and top down fragmented curriculum development approaches followed by the previous education departments prior to the 1994 elections (Environmental Education Curriculum Initiative [EECI], 1997).

That environmental education in South African schools is increasingly becoming a possibility can be seen from the following review of developments related to formal environmental education (EECI, 1997). In 1992 an Environmental Education Policy Initiative (EEPI) was started to encourage a broad, participatory process of

curriculum development for environmental education. In 1996 the success of the EEPI and progress with national education policy development necessitated the establishment of an Environmental Education Curriculum Initiative (EECI). The EECI was to take the work of the EEPI from policy to curriculum development, with the ultimate aim of improving the quality of education in South African schools, together with the quality of life of the South African people through effective environmental education.

Through its work the EECI Task Team drafted a document entitled "Enabling Environmental Education in the Outcomes Based Curriculum Framework" (EECI, 1997) which was aimed at supporting the interpretation of the Essential and Specific Outcomes stipulated in C2005, against the background of the environmental context of reconstructive development and social justice in South Africa. Following on this was the EECI document "Enabling Environmental Education as a Cross Curricular Concern in Outcomes-Based learning Programmes" in 1997.

The rationale behind developing an environmental education orientation to education and training in South Africa can be viewed in the light of national as well as international developments. Our Constitution enshrines the right of every citizen to a healthy environment (Bill of Rights, 1996, p.10). The South African Government supports Agenda 21, adopted at the United Nations Conference on Environment and Development, stating that education is critical for sustainable development (UNCED 1992, Chapter 36, p.2). This concern was also reflected in the Reconstruction and Development Programme (RDP) which advocates "programmes to rekindle our people's love of the land, to increase environmental consciousness amongst our youth, to co-ordinate environmental education policy at all levels, and to empower communities to act on environmental issues and to promote an environmental ethic" (RDP, 1994:40).

Finally, the White Paper on Education and Training (1995) states that "environmental education, involving an interdisciplinary, integrated and active approach to learning, must be a vital element of all levels and programmes of the education and training system, in order to create environmentally literate and active citizens and ensure that all South Africans, present and future, enjoy a decent quality of life through the sustainable use of resources".

In this study, I will try to make a link between the issue of past community knowledge and cohesion as a part of sustainable living practices, and the emerging outcomes-based curriculum informed by this sentiment in the *White Paper.*

III

RESEARCH METHODOLOGY

INTRODUCTION

In this Chapter I will discuss the Ethnographic and Historical research methods which I applied in this study. It begins with a definition of Ethnography. Thereafter, methods and techniques that I used for data gathering during my fieldwork, are presented. An account of the Historical approach to the research precedes the discussion on the data analysis and the chapter concludes with a brief look at some ethical considerations.

BACKGROUND TO ETHNOGRAPHIC AND HISTORICAL RESEARCH

Since the study focused on one specific community, which was to be investigated in its cultural or native environment (Le Compte and Preissle, 1993) an ethnographic case study was undertaken. This study took the form of a "beginning ethnography" (see section on participant observation). The value of using an ethnographic approach in this study lies in its ability to make explicit what most members in the community take for granted. This study is more than just the use of qualitative techniques of data gathering; it aims to go deeper into what Wolcott (1973) and Geertz (1973) call "cultural description" and "thick description" respectively. In this study it would mean to recreate for the reader the shared knowledge, practices and skills that created a sense of community amongst people in Clarkson.

In this study an attempt is also made to understand how things came to be as they are and how things might be changed for the better of the community. It therefore also has an historical dimension. It involves historical research or historiography (Berg, 1998), an examination of elements from history; where history is used synonymously with the word past (Hamilton, 1993). Through the study of historical documents and oral histories, I will focus on how people lived in the past.

Ethnographic and historical research is often located within what Cantrell (1993) calls the interpretive paradigm. The purpose of interpretivist research is to understand and interpret daily occurrences and social structures as well as the meanings people give to everyday phenomena. These research approaches involve mainly qualitative data. It should not be inferred that ethnographic and historical research is limited to qualitative data only (Wiersma, 1986). However, when quantitative data is involved it plays at most a sub-ordinate role (Atkinson and Hammersly in Denzin and Lincoln, 1994).

ETHNOGRAPHY

LOCATING A DEFINITION FOR ETHNOGRAPHY

Although ethnography has been around since the 1920's (Spindler, 1982), many interpretations as to its meaning and application exist amongst different disciplines. Since they are reconstructions of a single culture (Spradley, 1979), ethnographies are by definition, case studies. The following are definitions offered by some prominent ethnographers.

- Van Maanen (1982) suggests that ethnography has become the method *"that involves extensive fieldwork of various types including participant observation, formal and informal interviewing, document collecting, filming, recording, and so on."*
- Hornberger's definition (1994) cited in Krause (1997) states that: *"An ethnography … of a community, a classroom, an event, a program … seeks to describe the set of understandings and specific knowledge shared among participants that guide their behaviour in that specific context, that is to describe the culture of that community, classroom, event or program".*

This study has elements of both definitions presented. I would also describe my study as an ethnographic case study with a historical dimension. My aims were to establish what knowledge and practices people used in the past; who still holds this knowledge and whether it is passed on generationally and to explore how and why observed impoverishment took place. In this case study therefore I had to provide "a description and explanatory account of what people do in a setting … the outcomes of their interaction, and the way they understand what they are doing …" (Watson-Gegeo, 1988).

ETHNOGRAPHIC FIELDWORK METHODS

- **Accessing the Field**

Shaffir et al. (1980) cited in Berg (1998) suggest that one central problem shared by all field investigations is the problem of "getting in". My entry into the community of Clarkson was characterised by a less problematic process – it was one of immediate acceptance. My research in Clarkson was announced by the Minister during the Sunday Church Service exactly two weeks before my entry on the 10th of December 1999. To my advantage was the fact that most people knew me and therefore participation during my research was spontaneous. Sometimes it might

be that people are less open because of the known identity of the researcher (Berg, 1998). In this instance they do not provide information that is personal in nature, although important for the research. In this study it was however not the case.

On the other hand Becker (1963) cited in Berg (1998) notes that entering a field site as a known researcher has several benefits. For example, a known researcher might recover information that is confidential, which an unknown researcher would not have recovered. People might share secrets, which they won't share with strangers (unknown researchers).

Berg et al. (1983) suggest that it is sometimes easier for a known researcher to locate guides and informants. It is through my known identity that people responded by directing me to a member of the community who is well-informed about what was going on in the community, as well as giving information about whom would be the best people to interview on past knowledge, practices and skills.

The person that was described as the most well-informed member of the community became a valuable key-informant (Le Compte and Preissle, 1993) in my research. He was born and bred in Clarkson. He lived there for almost 60 years. He is well-known because of the roles he fulfilled in different community structures i.e. member of the Church Council, Chairman of the Finance Committee, member of the Church Choir, Chairman of the Brothers Bond, architect and builder. During my first week of observation in the field – before interviews started – this key-informant referred me to useful documentation on Clarkson and the community. Studying these documents provided me with some information on past environmental knowledge, skills and practices.

- **Taking in the physical setting**

  During the first week of observations, I wandered around the study area to get acquainted with the inhabitants and *vice versa,* as well as the physical environment. This allowed me to make accurate observations on current community practices and to observe the day-to-day life within the community.

  I found that a smile or greeting during this initial phase paid back tenfold later, during the research. Greeting is still highly valued as a sign of respect, especially towards elderly people. Showing this kind of respect opened up many avenues for me to find sources other than those referred to by the key-informant.

  Often by merely walking around and watching and listening, important first impressions are made (Guy et al. 1987). Some of my first impressions were not entirely accurate, but later became clearer as I became more knowledgeable about the setting. An example of this is the building of the new dam, which some people felt was some irresponsible development venture, which created a loss of certain animal species in the area surrounding the dam. Others did not feel the same. These contrasting views were later clarified, as I became more familiar with the situation.

- **Field Notes**

  The central component of ethnographic research is the "ethnographic account" (Berg, 1998). Providing such a narrative account of what goes on in the lives of members of the community derives from having maintained complete, accurate, and detailed field notes. Field notes can be seen as "the mainstay of qualitative research … a written account of what the researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data in a qualitative study" (Bogdan and Biklen, 1982).

Using the approach discussed above, I completed field notes every night following an excursion into the field. Most of these notes were transcribed from tape recordings of conversations. Various ways to keep field notes are suggested. I made use of a tape recorder to record interviews. I also entered some written notes from observations of activities, events and in some cases unexpected conversations with people whom I met during excursions. Keeping field notes is important especially to record exact *verbatim* quotes and *in vivo codes* – literal terms used by individuals themselves. Once out of the field, I used these complete notes to write-up the full account.

EQUIPMENT USED

Notepads, tape recorders, cameras, etc. are all ethnographic "tools". These tools can be seen merely as extensions of the human instrument and as an aid to memory and vision. These useful devices can facilitate the ethnographic mission by capturing the rich detail and flavour of the ethnographic experience and then helping to organize and analyse these data. I used the following "tools" during my research.

- **Tape Recorder**

  It allowed me to engage in lengthy unstructured informal interviews without distractions. Tape recorders effectively capture long *verbatim* quotations and *in vivo codes*, essential for good fieldwork, while the ethnographer maintains a natural conversation flow (Fetterman, 1989). The tape recorder was used with consent by participants and therefore did not inhibit or restrain individuals from speaking freely during interviews. Assurance of confidentiality of data was also given.

Transcribing (Fetterman, 1989) of recordings took place during the evenings. This process was very time-consuming and tedious as I needed to listen to tapes over and over again to complete detailed notes.

- **A Camera**

Cameras are most useful in documenting field observations. Cameras document people, places, events and settings over time. As a tool it enables the researcher to create a photographic record of the physical environment. I used the camera to show changes that took place over time in Clarkson – it included changes in the natural environment around the village, changes in types of buildings, and how people live today by capturing agricultural activities. These photographs can be seen as records of material reality. Photographs can be found in the section on the Historical review of Clarkson in Chapter II and in the Research Findings in Chapter IV.

An important advantage of using a camera is that it often captures detail on film which words and imagination cannot always explain. Although the camera is an extension of the subjective eye, it can be a more objective observer, less dependent on the fieldworker's biases and expectations (Fetterman, 1989). An example of this is the photographs used in Chapter IV that provide detail of the environmental situation in Clarkson.

DATA COLLECTION TECHNIQUES

No particular data collection techniques are associated exclusively with ethnography. Furthermore, and most importantly, there is no guarantee that one will produce an ethnography by using certain data collection techniques because the ethnographic product or account is ultimately the most important (Fetterman, 1989). The strength of ethnographic research lies in its "triangulation", obtaining

information in many ways rather than relying solely on one (Berg, 1998). In my research the following techniques were used to gather data:

Interviewing

An interview is done with the conscious intent of obtaining particular information directly from participants (Cantrell, 1993). The interview is the ethnographer's most important data gathering technique. Interviews explain and put into a larger context what the ethnographer sees and experiences.

A list of themes, which I used to guide interview questions to address the aims of this research, can be found in Appendix II. I used both unstructured individual interviews (Le Compte and Preissle, 1993) and semi-structured focus group interviews (Denzin and Lincoln, 1994).

- **Unstructured Interviews**

Unstructured interviews are not completely unstructured because the interviewer already has in mind a general topic/theme and may want to ask specific questions (Schurink, 1998). However, there is no predetermined sequence of questions or specific wording. Open-ended questions were used in order to avoid restricting the participants' answers and to give respondents control over what they wished to say and how they wished to say it (Irwin, 1999).

Unstructured interviews seemed to be the easiest to conduct. They do not involve specific types or order of questions, and can progress much as an informal conversation does. Done well, unstructured interviewing feels like natural dialogue but answers the field workers unasked questions (Fetterman, 1989). Questions typically emerge from the conversation because of its open-endedness that allows broader interpretation.

I interviewed nine elderly community members in Clarkson (age range 55-79 years), five of whom were female and four male. All of these people were referred to me by my key-informant. He is a respected and trusted person in the community. What is also important to mention is that some of these interviewees referred me to one another – what Cohen & Manion (1989) called 'snow-ball' sampling.

Everything did not however go as smoothly as sketched here. One of the eldest people (age 85) refused to talk to me. Most of the people interviewed requested that their names not be mentioned. They felt that they only wanted to provide information and expressed fear that I might misrepresent their views and that they would be held accountable for that. This was their feeling despite the fact that I assured them that information and views given would not be distorted. More interviews with elderly people were scheduled but I had to stop as a point of "data saturation or redundancy" (Bogdan and Biklen, 1982) had been reached. No new information was forthcoming, and already mentioned information was repeated.

I also conducted individual interviews with younger members of the community (age range 19 – 37). They consisted of four female and four male participants. These interviews focused on their views of change in the community, whether they inherited knowledge, practices and skills from the previous generation and if so, whether they are using them to the same effect.

I planned to stay for six weeks in the field which at first seemed awfully long. Once in the field, and as the Clarkson situation "emerged", I found myself short of time with the number of interviews I had to arrange with elderly people and members of the younger generation. The key-informant helped me in locating potential participants. Although interview sessions were long it later appeared as if

the information gathered was on a very superficial level – lacking the "deep probing" which ethnographers engage in, in order to provide for "thick description".

I conducted my interviews in Afrikaans, the home language of most community members. This became a problem during translations (to English) as it was sometimes difficult to accurately relate the intended meaning of what participants said. Also, a week before my entry into Clarkson the oldest person – 95 years of age – died. People believed he would have been a very important source of general history and developments in Clarkson.

When I reached the state of "data saturation", it seemed as if there was nothing else that I could ask or nothing more that participants could say. So, I was not sure how to continue and had to phone my supervisor who suggested that I continue with focus group interviews.

- **Focus group interviews**

  I used focus group interviews with groups or members of the younger generation to assess their views on past knowledge, practices, skills and changes within the community. Interviews took on the form of discussions where participants made comments, asked questions or responded to comments by others.

  Group discussions took place on a very informal basis. I met with the Church Youth Group during their weekly Monday evening meetings at the Church. I provided refreshments as an incentive to enhance the turn-up to discussions.

  Berg (1998) refers to focus groups as small groups consisting of not more than eight participants. I had groups of 19 and 25 at two different evenings, respectively. The rationale behind this was, that the more participants there are,

the more views can be expressed which creates a better understanding of the situation as perceived by the youth. Discussions at times became chaotic as everyone wanted to comment on issues raised. This sometimes left me without control. I would concur with Berg (1998) that smaller groups allow for more control and order.

Participant observation

I stayed in the community for a period of 6 weeks (December 1999 – January 2000), observing and recording what people do and how they live on a daily basis (Fetterman, 1989). This enables the researcher to obtain first hand data on the participants' lives (Schurink, 1998).

I chose for myself the role of 'participant-as-observer'. Le Compte and Preissle (1993) classify participation in field research into four kinds: the complete participant, the participant-as-observer, the observer-as-participant, and the complete observer. As the 'participant-as-observer' the researcher's role is known to the group and he/she interacts with the group under investigation.

My role as 'participant-as-observer' allowed me to have close contact with the people participating in the study as well as the broader community of Clarkson. As people knew me and my role as researcher, I was allowed to wander all around Clarkson, taking in all aspects of the physical and cultural environment.

Some researchers and ethnographic writers suggest a researcher has to stay with (in) a community for a full cycle – meaning at least one year – for his/her work to be seen as ethnography (Wolcott, 1973). Often budget or time schedules do not allow long periods of study. In these situations, the researcher can apply ethnographic techniques (e.g. focus group interviews, participant observation, thick description,

etc.) to the study. This does not necessarily mean that a full ethnography has been conducted. Similarly, observation without participation in other people's lives may involve ethnographic methods, but is not ethnography (Fetterman, 1989:47). For this reason I prefer to label my research as a "beginning ethnography" (Pers. Comm., Smith, 2000) rather than a complete ethnography because of the shorter duration in the field.

I was born and grew up in Clarkson. The setting of Clarkson was therefore very familiar to me. However, sometimes a familiar setting is too familiar, and the researcher takes events for granted, leaving important data unnoticed and unrecorded (Fetterman, 1989). In retrospect, if I were more open to events that took place after 1994 (such as the resettlement of the Mfengu people in Clarkson), I could have provided a more in-depth account of the current situation. Observing the Mfengu people's way of life might have created new insights for the rest of the community. Rather, I was blinded by the situation that was familiar to me and isolated myself from the contributions that the Mfengu people might have made to the understanding of past ways of life.

HISTORY

THE HISTORICAL METHOD

Historical research or historiography attempts to fashion a descriptive account of the past. It involves far more than linking together old pieces of information found in diaries, letters, or other documents, important as such an activity might be. Historical research is at once descriptive, factual and fluid (Hamilton, 1993). It increases appreciation and understanding of contemporary issues such as education, environmental change, politics, health and a virtually infinite array of social realms.

It can also be seen as the study of the relationship among issues that have influenced the past, continue to influence the present, and will certainly affect the future (Glass, 1989).

The importance, in this study, of doing historiography is to understand how things had come to be as they are and how things might be changed for the better of the community. It might be, as in many communities, that people are oblivious to their past, "living in the isolation of a single time period – their present" (Berg, 1998).

It also is important to assess historical documents for their usefulness and in terms of their external and internal adequacy: validity, reliability and authenticity (Berg, 1998). External criticism aims to discover whether a document is both genuine (not forged) and authentic (is what it purports to be and truthfully reports on its subjects). Internal criticism is concerned with the validity, credibility or worth of the source content. Besides textual criticism it also includes a criticism of the author (character and competence) as a trustworthy source.

Three historical sources were studied. All these sources document the broad history and development of Clarkson since its establishment in 1839. The work of Uithaler (1994), who is a trustworthy person well respected in Clarkson, was done in close collaboration with the National Organisational Structure of the Moravian Church and some Church Ministers that resided in Clarkson since 1968. His work was published in the Department of Anthropology at the University of Port Elizabeth (UPE). The community study (1994) of Jacobs and Pauw (two academics at UPE) relied to a certain extent on the work of Uithaler. Krüger was accredited a Ph.D by Rhodes University in 1966 for his research on the history of the Moravian mission stations in South Africa. His research was later published by the Moravian Book Depot in Genadendal.

The historical resources consulted leans heavily on one another in reporting on the history of Clarkson. It therefore seems that a limited perspective on the history and development of Clarkson exist. However, it should be mentioned that although focusing on a short period of history Krüger obtained his information from National government resources and documents; documents and diaries from the Moravian Mission Movement in South Africa, as well as documents from Europe, where missionaries came from. Uithaler, who saw that a limited account on the history of Clarkson existed, went further by studying documents and diaries of missionaries that resided in Clarkson. Although the sources might be limited, the current history of Clarkson, can be seen as updated.

It is remarkable how much history has been written from the vantage point of those who have had the charge of running – or attempting to run – other people's lives, and how little from the real life experience of the people being written about. In Clarkson this is quite true as mainly missionaries serving this community wrote the history. As a result researchers often obtain only one perspective on the past (for example, the missionaries in Clarkson), which is represented in official or residual documents of leaders or institutions (such as daily diaries of missionaries and church documents). Documents in my study deviate from this as some information in Uithaler (1994) and Jacobs & Pauw (1994) were obtained from oral histories.

ORAL HISTORIES

Interviews with elderly people were conducted to corroborate and extend the information received from the document analysis. Interviews with elderly people allowed me to have first-hand accounts of knowledge, practices and skills that people had in the past (and still have). It also allowed for people to express their

views on how they lived in the past and how they perceive changes that have taken place over time. Some of them enjoyed to share their stories as they do not often get the chance of conversing to someone about their past.

These older people sometimes hold a gamut of facts and memories, and this information may be unavailable anywhere else. There may have been no reason for anyone to have recorded these treasures of knowledge or explanations. Were it not for those memories of people, these nuggets of information might vanish. Furthermore, as extremely important as written documents are, they cannot answer questions directly put to them. Nor can they be asked what they mean or offer greater details than appear on the recorded page. Oral evidence, on the other hand, is ongoing. The information that is available from oral histories is limited solely by the number of survivors and the resourcefulness of the researcher (Berg, 1998). I found that these first-person accounts or oral histories of people helped me to access information otherwise unavailable.

Historical Document Analysis

Document is a general term for "an impression left by a human being on a physical object" (Travers 1964 in Smith 1998). Documents can be described as either primary or secondary sources.

Primary sources are original or eyewitness accounts that came into existence in the period under research. These sources involve a deliberate attempt to preserve evidence for the future, possibly for researchers, for self-vindication or for reputation enhancement. These include autobiographies, memoirs, diaries or letters for later publication and documents of self-justification (Smith, 1998).

Secondary sources are interpretations of events or a period based on primary sources. They are accounts of an event provided by a person who did not directly observe the event, object or condition. They can also be seen as oral or written testimonies of people not immediately present at the time of the given event (Hammersley and Atkinson, 1995).

Documents (secondary sources) giving the history of Clarkson, the context in which this community developed since its establishment and changes that took place over time, were studied. These documents included:

- a broad history of the Moravian Mission Stations in South Africa – (Krüger, 1967);
- the history of Clarkson from 1839 – 1989 which was based on diaries and other documents of missionaries in service of the community during that period – (Uithaler, 1994); and
- a community study on Clarkson conducted by the University of Port Elizabeth – (Jacobs and Pauw, 1994).

DATA ANALYSIS

The human inquirer/researcher serves not only as the instrument of data collection but also as the tool for data analysis. The two remain intertwined because (in interpretative research) analysis begins during data collection (Cantrell, 1993). Data analysis occurred during and after data collection took place and eventually led to the ethnographic narrative account.

This ethnographic narrative account may be termed 'thick description" (Geertz, 1973). Thick description is directed towards drawing out a complete picture of the observed events, the actors involved, and the social contexts in which these

elements arise (Berg, 1998). It started out as long redundant entities in note form during my fieldwork. I then carefully selected categories and themes from the data collected. These categories and themes consisted of different knowledge forms, practices and skills that people in Clarkson had. I lastly engaged in a process of "sorting, comparing and contrasting" (Patton, 1990) to produce the final product, which is discussed in Chapter IV.

As mentioned, I also studied historical documents. Here, I made use of an inductive content analysis. An inductive approach begins with the researcher "immersing" him/herself in documents or various types of information in order to identify themes or topics that seems meaningful to the study. According to Berg (1998) most historical researchers make use or rely upon the inductive approach. It started from my first day in the field until the final product.

During the writing-up phase I engaged in "triangulation" (Berg, 1998), obtaining information both from documents studied as well as field notes from interviews and observations.

ETHICAL CONSIDERATIONS

It is important that whenever research is done which makes use of human participants that researchers take special precautions to safeguard the rights of those participants (TESOL Research Committee, 1980). During the announcement of my research the Church Minister conveyed the following:

- my identity as a member of the Clarkson community and my association with Rhodes University;
- a simple description of my research and the procedures in which the participants will be asked to participate.

He also conveyed the following ethical considerations to the community of Clarkson:

- anonymity of participants and confidentiality of the information gathered;
- the possibility that the data from the research may be used for different purposes in future;
- that the results and a copy of the research will be available to the community when finalised;
- and lastly that no monetary gain will be extracted from the use of their knowledge.

The aim of this was to be trustworthy – not only to my own subjectivity - but also to the research participants and the broader community. As a matter of principle I tried to carry out this research as fairly as possible and tried to the best of my ability to represent as closely as possible the experiences of people who participated in this research.

In Conclusion: Ethnographic methodology relies on detailed contextualised observation over a long period, and draws on a variety of data gathering in order to present a holistic account of the setting under study. It is hoped that efforts made to gather data from a variety of sources and perspectives will capture, and accurately reflect the situation of Clarkson and therefore address the aims of this research. The next chapter provides the “ethnographic account”.

IV

RESEARCH FINDINGS

Although a rich cultural knowledge base exists in Clarkson, I had to limit myself to the aims of the study. The aims of this research were to establish what knowledge, practices and skills people had in the past; who still holds this knowledge and whether it is passed on generationally; and how observed impoverishment mentioned in Chapter I, took place. This chapter tells the "story" of the research, i.e. gives the "ethnographic account". It documents the extensive body of unrecorded community knowledge, practices and skills that through the years existed in Clarkson.

I have divided the story into four sections, focusing on:

- Life in the past
- Looking at the present
- Changes in living patterns
- Community knowledge transfer

LIFE IN THE PAST

This section focuses on how the environment and natural resources were used to secure self-sufficient ways of living in the past. It also includes biodiversity conservation and environmental community practices.

NATURAL RESOURCES

- **Food**

It has been documented (Krüger, 1967) that even before 1838 the people in Clarkson and surrounding areas obtained their food from crop growing. These crops fulfilled their local food needs. The most important foods being vegetables (three and four monthly crops) such as potatoes, cabbage, carrots, beetroot, tomatoes, onions, pumpkin as well as (six monthly crops) mealies and sweet potatoes.

> "Yes, we've been living off-the-land for ages. Our daily lives consisted of planting … working the lands. That was our job – the men and boys. In addition to use at home, we planted vegetables to boast at our yearly Church bazaars (fete). The bazaars created a healthy spirit for us to show our skill and dedication in generating money for the Church" [INTERVIEWEE].

Produce were auctioned and moneys were contributed to the Church – so the better and bigger the produce, the more money one could contribute to the Church. The more money the Church had, the better it was equipped in addressing the needs of the community. Vegetables not sold would usually be shared amongst family, friends and neighbours. According to Uithaler (1994) bazaars were a long-standing practice dating back to the 1950's and a means to encourage crop growing.

While we were drinking tea one of my interviewees explained where their tea came from in the past:

> "We, all of us in Clarkson, collected our tea, 'Bossie Tee' at Kamsterrivier (a place about six kilometres south of Clarkson). I can remember as a young boy in the 1930's … walking down with my mother and others collecting this bush. It was dried in the sun and chopped into smaller parts for use. The tea tasted like today's Rooibos Tea, maybe even better" [INTERVIEWEE].

The bush (Bush Tea; Cyclopia spp.), according to one of the elderly men, might not exist anymore as the area from where it was obtained belongs to private farmers today. They use this land for commercial agriculture.

While men worked mostly outside, and had more knowledge of agriculture, most women held knowledge of what was going on in the house. The discussion that follows concerns information provided mainly by women.

Bread formed the main staple food of the community. One of the elderly ladies explained to me how each home functioned as a bakery; how skilful and passionate people were with regards to baking bread. According to her, every home had a mealie-pounder or "stampblok" where they pounded or stamped mealies to samp or mealie-meal. These were staple foods in the community. She explains: "We baked our bread in a three-legged pot, on coals from an open fire. The inside of the pot was laid out with mealie-leaves and the dough placed on the leaves. Dough was made from mealie-meal. We closed the pot and people know without timing when the bread would be ready". This bread was called "potbrood". Another type of bread, "koepa" was also made from mealie-meal. The dough was put onto woven reeds which were put onto fire-ash.

In the absence of yeast a piece of dough was kept in a bottle of water for fermentation purposes. When dough was kneaded, this water was added to the flour so that the dough could expand.

Each household had a few fruit trees. From these, people made their own dried fruit especially from peaches, guavas, apples and pears. This fruit got bottled or canned. "My grandmother kept bottled or canned fruit as a luxury. When doing some small job for her, she would spoil us with this kind of sweet things" [INTERVIEWEE].

Meat was also easily available as most people (if not all) had animals such as cows, sheep, pigs, goats and chickens that were kept as 'fat' stock ("vetvee" or "slagvee" Uithaler, 1994). With the absence of refrigerators before the 1960's meat and fish were cut in small pieces and dried in the sun. People had to use this food as soon as possible as no means (refrigeration) existed to keep the meat and fish fresh. Some of the meat was dried for "biltong".

Cows were not only used for meat but also provided people with milk and homemade butter. The following procedure was followed: "cream was firstly separated from the milk; it was thrown into a bottle and shook until it formed a thick paste; this paste was then thoroughly washed in cold water and mixed with salt; the end product was used as butter". One elderly woman remarked: "This method was taught to us when still very young; a few years ago (around 1985) when I still had cows I still used it. I taught it to my children but what can they do with this knowledge if there's no more cows?" According to the interviewee some people also made cheese. I tried to locate somebody who still knows the procedure for making cheese but failed to do so as this practice was used by only a few families. The

elderly ancestors of these families died long ago and the younger generation have no knowledge of this practice.

Communities have different ways of socialising and therefore different pleasures. In Clarkson home-brewed liquor was a well-practised pleasure. As early as 1946 people knew how to produce "kaffirbier" (local name) which were made from grain sweepings, scorched mealie-meal, sugar and yeast which were mixed in an old paraffin tin and left for a week to ferment (Uithaler, 1994). The name suggests that this practice was learnt from the Mfengu people. Another home-brewed liquor called "heuningkarrie" was made from honey. "Since reliance on 'stronger and better' alcoholic drinks, traditional drinks became out-fashioned in the early 1980's" [INTERVIEWEE].

- **Building Material**

A shift or transition not only in the type of housing but also the material and technology used, took place from the 1840's to current times. Documents (Krüger, 1967 and Uithaler 1994) showed that the first houses in Clarkson were built with grass sod and were called "sod houses". The sod was stacked to roof height with wooden poles laid horizontally on it. Thatching grass, fastened with a rope, was then put on to the poles. All the material was collected from the local environment. This type of housing dominated before the 1900's.

After the 1900's building materials changed to stone and mud, while thatching remained as the main roofing material. The art/skill of brick-making in Clarkson led many people to build their houses from locally produced bricks. A few skilled artisans produced the bricks in the brick field, which was to the north of Bazia Street. Some of the first brick houses, that date back as far as the 1918's (Photo 5) can still be seen in Clarkson.

Photo 5: House dating back to 1918's

More changes in building patterns became apparent in 1932 with some houses having corrugated iron roofs instead of thatching. However, "thatching kept our houses cool in summer and warm in winter" [INTERVIEWEE]. With the advantages it provided in summer and winter and the fact that thatching grass is still in abundance in the area, it remains unclear to me why people changed this practice. According to Uithaler (1994) it was around the late 1930's that residents started to buy bricks, cement, window frames and other material from shops outside of Clarkson. "The reliance on locally produced material was reduced with the advent of a more modernised lifestyle, which was perceived as better" [INTERVIEWEE].

To prevent cold from spreading from the ground, floors of houses (before the 1930's) in the absence of mats and carpets, were covered with cow-dung. "Fresh dung was collected by girls once or twice a week and spread evenly on the floor" [INTERVIEWEE]. Walls were painted (for beautification) with white and yellow clay that was dug from areas rich in silicates, aluminium and magnesium. "As a means of sharing, holes from where clay was extracted, was left open for others to easily find remaining clay. People however had a responsibility to the environment and therefore, after extraction of clay, holes were filled with sand and grass so as to reduce or prevent further erosion or to prevent injuries of people passing through the area at a later stage" [INTERVIEWEE]. This was some kind of soil conservation action practised by them.

Amongst the local men were artisans – brick makers, builders, painters, carpenters and plumbers who helped each other to complete a house without expecting any financial reward (Uithaler, 1994). Knowledge transfer amongst the community took place especially at building sites which were the "training fields of many young men; where skills and knowledge were shared from teaching and sometimes just observing" [KEY-INFORMANT]. Building sites were instrumental in creating a sense of community, a bond, a family. "We did not only build our houses, we built our community as well. Every brick was a building block to strengthen this community. Every willing and free hand helped in building these houses that you see here" [INTERVIEWEE].

- **Firewood**

A variety of 'exotic or alien species' of wood were used as fuel. This includes "Keurhout", Bloukeurhout (*Psoralea spp.)*, Blue gum *(Eucalyptus globulus)*, Port Jackson and Acacia collected from the forest. Collection of wood was solely the responsibility of the boys. "They had to find dry wood, carry it home, saw it, and

chop it into pieces. That kept them busy when there was no work to do on the lands or around the houses" [INTERVIEWEE]. The different wood species were easily obtained and in abundance for use. The use of these woods can be seen as an unintentional means of eradication of aliens and therefore conservation of indigenous species. Pine cones were also used as firewood as it also appeared to have been in abundance especially in the pine-forest that was established north of Clarkson.

Indigenous wood species such as; Yellowwood *(Podocacarus spp.)*, Stinkwood *(Cape laurel*) and Blackwood *(Maytenus peduncularis)* were protected in the Nature Reserve which was managed by the Church. These species were sometimes sold to furniture factories and sawmills in Coldstream, Kareedouw and Port Elizabeth. These transactions brought income to the Church and community (Uithaler, 1994).

- **Use of indigenous plants**

Plants have been used to cure diseases since time immemorial. Even ancient Chinese and Egyptian sources show that these cultures had a sophisticated and wide knowledge of the medicinal properties of plants, that was passed down through the centuries, culminating in the great herbals and pharmacopoeias of the Middle Ages (Abercrombie, 1999).

As a result of the great strides in science and technology during more recent times, the use of herbal remedies has been overshadowed by the advent of the synthetic drug industry (De Jongh Frangs, 1999). However, indigenous medicine is once again becoming popular in the West due mainly to a general dissatisfaction with strong chemicals and the side effects of many modern drugs.

In Clarkson too, medicinal plants were used extensively in the past. During conversations with people in my first week of observation I met a lady aged 52 who claimed to know about the medicinal use of plants. She took me through the forest and identified 25 plants (Photo plates 6a-c). She explained to me the local names, uses and preparation of the plants for medicinal use (table 1). She explained: "The knowledge I have of these plants was inherited or passed on by my mother, who inherited it from her mother. I usually walked with her through the bush and she explained to me all about these plants and its uses". I asked her whether her children or other people had an interest in the knowledge that she has, but she said: "My youngest son (9 years old) does have an interest, but most people rather go and sit for hours on a Tuesday and Thursday at the clinic waiting for a doctor instead of using medicinal plants to help them. There are a few other people that know a little about plants used for medicine, but they do not want to walk so far into the bush to get these things". Shava's thesis (2000), confirms that long walking distances has become a factor in the practice of using plants from the natural environment. People do not have the time, patience and fitness for these long walks anymore.

She felt proud about how many people she helped with different mixtures of medicine to cure kidney problems, high blood pressure, diabetes, influenza and many other ailments. When I recently (July 2000) experienced kidney infections, she sent me a mixture of "Kaggeltee", Buchu and "Witvlap". I had to drink this over a period of a week and this medicine made me feel much better than the "modern medicine" I previously obtained from a doctor.

This lady remarked about her knowledge of medicinal plants: "I could not go and study to become a doctor, I don't even have matric, therefore my curiosity led me to learn from my mother, and in doing so I try and help people who are not able

to afford a doctor". Due to the current reliance on modern medicine most of the plants that were used in the past were not over-harvested and remain in abundance.

TABLE 1: MEDICINAL PLANTS INDENTIFIED IN CLARKSON

Local Name / English Name	**Scientific Name**	**Ailment**	**Preparation / Method**
1. Boegoe/"Buchu"	*Agathosma longifolia*	Sprained ankle	mixed with vinegar and kept in closed bottle.
		muscle	Apply dampened cloth to affected area
		urinary antiseptic, stomach ache, nausea and vomiting, coughs & colds	drunk as a tea
2. Kamella	*Anthemis arvensis*	stomach ache and pain	leaves boiled and fluid drunk
3. Kamfie Tee	*Symphytum officinale*	high blood pressure, diabetes	leaves dried in sun and thrown in water; drunk as a tea
4. Tama/Wilde als Wild wormwood	*Artemisia afra*	severe fever	leaves flattened, put in cloth and wrapped around stomach

5. Vinkel/ Fennel	*Foeniculum vulgare*	Flatus/severe winds with babies	boiled in water; left to cool; babies bathed in it NB no cold water added
6. Oondbossie/ Oven-bush	*Conyza ivaefolia*	high fever	mixed with wilde als and drunk as tea
7. Rooiblom-metjie	*Salvia spp.*	colds and influenza	boiled and drunk as tea
8. Roosmaryn/ Rosemary	*Eriocepholus umbellulatus*	Diarrhoea, loss of blood; bleeding	boiled and drunk as a tea
9. Gousblom/ Marigold	*Calendula officinalis*	inflammation of bladder	boiled and drunk as tea
10.Perdepis	*Clausena anisata*	colds and influenza	boiled and mixed with lemon and ginger; drunk as a tea
11.Wilde Wingerd	*Cliffortia odorata*	influenza; womb/ uterus problems	boiled and drunk as a tea
12.Appelblaar	*Pyrus malus*	uterus problems	boiled and drunk as a tea
13.Bloukeur	*Psoralea spp.*	weak legs, leg pain (older people); sores or ulcers on head	boiled and liquid used for bathing of legs and washing of head; left to dry
14.Geita	*Helichrysum petiolare*	colds, influenza, uterus problems	boiled and drunk as tea

15.Kaggeltee	*Clifortia spp.*	kidney infection and inflammation of the bladder	mixed with "Witvlap", Christmas Carol and buchu, boiled and drunk as tea
16.Kakbossie	*Pentanisia prunelloides*	Gastro enteritus, fever, diarrhoea, vomiting	leaves put in cloth made wet with vinegar and wrapped around stomach
17.Katdoring	*Asparagus spp.*	pulmonary problems such as asthma, bronchitis, chronic coughs, liver complaints	leaves and roots chopped and boiled, fluid drunk as a tea
18.Seldery/ Celery	*Puecadanum spp.*	stomach aches, menstruation cramps	boiled with Bels; drunk as a tea *(see below)*
19.Bels	*Podalyria spp.*	stomach aches, menstruation cramps	boiled with Celery; drunk as a tea
20.Opklim	*Cuscuta spp.*	sores on head, pimples, boils	boiled with Bloukeur, affected areas washed in liquid and allowed to dry.
21.Bitterbos-sie/Bitter-bush	*Chrysocoma tenuifolia*	stomach ache	leaves chewed for sap to relieve pain
22.Nasgal	*Solanum nigrum*	inflammation	boiled and drunk as tea
23.Olieblaar	*Datura stramonium*	headaches & other pain	heat up in oven and apply to affected area

Photo plate 6a

1. Boegoe/Buchu

2. Kamella

3. Kamfie Tee

4. Tama/Wilde Als

5. Vinkel/Fennel

6. Oondbossie/Oven-bush

7. Rooiblommetjie

Photo plate 6b

8. Roosmaryn/Rosemary

9. Gousblom/Marigold

10. Perdepis

11. Wilde Wingerd

12. Appelblaar

13. Bloukeur

14. Geita

Photo plate 6c

15. Kaggeltee

16. Kakbossie

17. Katdoring

18. Seldery/Celery

19. Bels

20. Opklim

21. Bitterbossie/Bitterbush

24.Aloe/Aalwyn	*Aloe ferox*	burns and minor wounds	apply gel from fleshy leaves
		to clean blood, calm digestive complaints	dried leaves put in water for minimum of 3 days, drunk as a juice
25.Rooiwortel	*Bulbine latifolia*	kidneys	chopped in pieces; mix with water and gin, drunk as a tea
		back pain	chopped in pieces; mix with water, drunk as a tea.

The Selmar Schonland Herbarium in Grahamstown helped me to identify the plants I obtained from the forest in Clarkson. It is important for people in Clarkson to know the local names, but in generating knowledge one also has to take cognisance of the broader scientific fraternity. For this reason scientific names were included. These would also be important when widening the knowledge base of students through the new curriculum (discussed in Chapter V).

BIODIVERSITY CONSERVATION

Conservation is the careful planning and management of the natural and human environment and its resources to avoid loss, waste and damage. As an aim it calls for the sensible use of resources to satisfy people's basic needs whilst at the same time ensuring continuity of supply for future generations, and also protecting other resources from exploitation (Pask and Williams, 1993).

Conservation in Clarkson was a very sound practice. Through communication with the Church Minister it was found that the natural forest (now nature reserve) was a no-go area for the people of Clarkson. People could only enter the forest with a permit from the Church Minister. A permit was only issued once the exact purpose for entering the forest was known. A few cases (as early as 1970) are documented of people entering the forest illegally, poaching proteas, ferns and other plants for visiting family and friends. People found guilty of such a transgression had to "pay a high penalty" (Uithaler, 1994). The penalty was usually an amount of money – not disclosed in the documents. Oral resources could also not provide the amount of the fine.

In 1985 the Church took total charge over the natural forest – to conserve and preserve the different plant and animal species – by appointing two people from the community to guard against those who hunt in and plunder the forest. This was a form of social regulation for the community by the community.

The selling of proteas (National Flower of S.A.) and ferns to florists and nurseries in the Tsitsikamma and Humansdorp dates back to 1972. This practice generated some income for the Church. Local people were eligible to receive some protected plants with the permission from the Church Minister, but only after he consulted with the Overseers' Council. From the documents studied and communication with elderly people it was found that the forest was closed during winter to allow for plant growth. This also prevented extinction of certain plants, animals and the over-use of water. Yellowwood, Stinkwood and Blackwood were especially protected because of the high value attributed to it.

These conservation practices were strongly adhered to after World War Two and formed part of the general conservation laws and policies of the country at that time (Uithaler, 1994).

ENVIRONMENTAL COMMUNITY PRACTICES

- **Natural / Organic farming**

It was important for people to keep their agricultural fields productive and fertile. Natural or 'organic farming' methods of fertilization was already practised by the Mfengu and Coloureds in 1839 (Krüger, 1967). Some of the elderly men informed me that compost heaps were part of broader farming practices. Usually in the backyards, these compost heaps consisted of animal dung, fire-ash, vegetables peels, grass and other biodegradable material. "Compost, together with unused remains, were worked into the soil to secure fertility for the next season" [INTERVIEWEE]. Crop rotation also played an important role in preventing soil erosion and land degradation. This practice was encouraged by the Agricultural Association which existed since the 1970's but only became a formal organisation in the mid 1980's (Uithaler, 1994). It consisted of community members who were quite knowledgeable about agricultural practices. Their aims were to:

- share knowledge and skills in the community;
- make sure animal husbandry and agricultural practices remained healthy for sustainability and self-sufficiency; and
- enforce better land-use practices such as crop-rotation and shift cultivation.

Irrigation practices were not needed as Clarkson is situated in the Temperate Coastal Climatic Region, which receives rain throughout the year.

Today it may seem an unhealthy practice, but with the absence of modern toilet facilities, urine buckets were kept in homes and emptied in dooryards and back

gardens or areas where cultivation took place. “Outside or bucket toilets were also used and we emptied it on a weekly basis in areas we keep for the next year’s planting” [INTERVIEWEE]. These practices, however crude it may seem, enhanced the fertility of the soil. One lady said, “This was the natural way of getting rid of natural things”. On the potential risk that this might have posed, one elderly man remarked: “No one got sick or died of food that grew where my urine and toilet buckets were emptied. I used this practice for a long time, I’m still alive and well, my children too”.

- **Valuing domestic animals**

  In a South African version of *Caring for the Earth* (1999), John Yeld argues that the first principle for sustainable living deals with respect and care for the community of life. It states: “Even species which do not appear to benefit human societies directly must be treated with respect and accorded the right to exist”. Davies (1999) agrees with this when he says: “Like us, animals have certain basic moral rights, including in particular the fundamental right to be treated with respect … Animals must never be treated as mere receptacles of intrinsic value e.g. pleasure, or preference satisfaction, and any harm that is done to them must be consistent with the recognition of their equal inherent value and their equal *prima facie* right not to be harmed” (1999:09).

In Clarkson, not only knowledge, skills and practices were inherited, but also property and livestock (Uithaler, 1994). Animals were used especially as slaughter stock. But one of the elderly people explained: “animals were not only there as meat, they had a special place in our hearts. If one lost something dear, it left some kind of void”. Usually new-borns, especially cows, were given to children in order from old to young.

When these animals were slaughtered or died of other causes it left people with a loss and pain. One of the younger ladies, during the focus group discussions, illustrated this when she said: "I cried for days when Daisy (her cow) was slaughtered. I fed her since when she was a calf – for four years. I looked after and cared for her – really, I missed her". The value people attributed to animals in the past could be seen in the energy invested in providing them with food i.e. "in the past the lands were full of oats-crops for cattle to graze" (Uithaler, 1994). Even dogs and horses were not ill treated as their value as protector, friend and means of transport respectively, were highly rated.

- **Hygiene and health practices**

With excitement one of the elderly interviewees explained: "I still remember the soap depression/scarcity during the years 1939-1946. I was a young man and we used leaves from the Acacia (gum tree) to wash ourselves and our clothes". They rubbed the leaves in water, which made the water soapy, and therefore a good cleansing substance. In winter he explained they used grease obtained from the wagons as skin lubrication because it was very cold and their skin became cracked and dry. This "lotion" also kept legs warm.

Some other cleansing practices were also used: "In the absence of toothpaste, fire-ash was used to clean our teeth. Ash not only strengthened our teeth, but kept it white and healthy as well. Therefore we never had to go to a dentist" [INTERVIEWEE].

A very old dry-cleaning practice also existed in Clarkson. One elderly woman explained how people removed stains from their husband's dirty clothes, ink from children's trousers and shirts and stains from anything. "We used leaves from the Fig tree (*Genus Ficus)* which were cooked in water. With a brush or piece of cloth

that we dampened in this fluid we removed any type of stain from clothing" [INTERVIEWEE].

One of the elderly women still remembers her friend who passed away in 1997 and who practised as a midwife since the 1950's. In fact, according to her, Clarkson had two other midwives before. Most babies in Clarkson had the privilege of being delivered by the people within the community. "These people had no medical training but somehow learnt from one another how and what to do"[INTERVIEWEE]. It is said that these midwives stayed besides expectant mothers' beds when labour started and remained there until the baby got washed and dressed. "They even took up the responsibility of regular visits to see if the mother and baby were still doing fine and to give advice and assistance if needed" [INTERVIEWEE]. The last midwife practised her trade until her death in 1997. By the mid 1980's, however, most people went to hospitals in Humansdorp and Kareedouw to give birth (Uithaler, 1994).

- **Craftware**

The craftsmanship and inventiveness of people in Clarkson became much pronounced after World War Two. "I don't know if the soldiers brought some of the ideas from the War in Europe, or from where it came" [INTERVIEWEE]. Some inventions that "made life much easier" [INTERVIEWEE] were the following:

As clothing was expensive and jobs and money scarce, people used everything as a resource, i.e. SASKO flour bags were used to make panties and vests. Bed sheets and pillowcases were also made by stitching bags together. "This practice was used by my mother after World War One and I also used it. Our men were at war and our children had to have clothes" [INTERVIEWEE].

Another such practice illustrates what we today would call a form of alternative technology: in the absence of electricity an Illovo-syrup tin was used to make lamps. A hole was made in the middle of the lid and the tin was filled with paraffin. A metal tube or a spent bullet casing with a piece of cloth (wick) was put in the middle of the hole and the cloth was lit which then provided light.

Until 1960, coffins were made by a local carpenter (my grandfather). He used pine wood because according to an interviewee "pine wood is much easier to bend than any other wood".

"We also made our own brooms" [INTERVIEWEE]. The broom bush (*Rhus dregeana, Arthosolen spp.)* was used while the broom handle was usually made from Pine or Eucalyptus wood" [INTERVIEWEE].

"People also made their own mattresses, since the early days (1900), from remaining straw or mealie-leaves. Grain bags were stitched together and these straw or mealie-leaves were stuffed into it to create a mattress" [INTERVIEWEE].

Weaving of floor mats and wall-mats is a traditional skill (Krüger, 1967) but "mats were later made from hides and skin of cows and sheep" [INTERVIEWEE].

- **Funeral rites**

Modern funerals are a very expensive and lengthy process. In the past all these "fancy rituals and funeral services never existed" [INTERVIEWEE]. According to her, when somebody died, the corpse was kept for up to 24 hours in the house. It was covered with grass sod and put on a bed. A bath filled with cold, strong saltwater or dip was kept underneath the bed to keep the corpse from smelling. The corpse was then covered in a linen cloth and put in the locally produced coffin. Usually

after two days, to give enough family and friends the opportunity to travel, the burial took place.

- **Miracle and myth**

  There is much in nature that people experience as beyond human understanding and explanation. These unexplained things we identify as miracles or we create other myths about and around them. In Clarkson several myths have been developed around omens about birth and death. One elderly interviewee explained as follows:

  ”Red ants in a heap together in a corner are an indication of death in the family. When the mountain, becomes totally obscured with mist and the mist moves down to the foot of the mountain, it is said that a female in the community will die; the opposite, when the mist moves to the top of the mountain, a male will die”. It is further generally believed that death will occur in the vicinity of an owl hooting.

  Heavy thunder and clouds that seemed almost ‘unnatural’ characterized the skies above Clarkson during my visit, the week after Christmas. A lady in her fifties died of a heart attack the night that the thunder occurred. One of my interviewees at a later stage told me that this thunder and “unnatural clouds” were indicative of a death to occur.

  On being questioned as to how they know these things she remarked: “God has ways to tell this community about misfortunes that they will suffer. Our parents observed this through many years and told us about it, and that is why we believe (in) it”.

LOOKING AT THE PRESENT

Clarkson has undergone (like any other place) much change since its establishment in 1839. If one contrasts the life today with earlier times it is easy to notice changes in lifestyle, loss of moral fabric in the community, breakdown of order and adult authority as well as changes within the environment.

The Clarkson community is in transition towards modern life-styles, as almost every home is electrified. The media is evidenced by the presence of radio and television in almost every home. By becoming more reliant on modern advances, such as the cash economy, the capacity of the community of Clarkson to be self-sufficient and satisfied with local resources is being eroded. With the exception of a few dedicated individuals, mostly Mfengu who were resettled in Clarkson after 1994, no one is engaged in agricultural activities anymore. The existing activity is also minimal.

While community functions, Church services, etc. were well attended in the past (Uithaler, 1994), a trend of poor attendance seems to exist today. People I spoke to confirmed this. An example that I observed was the poor attendance of the Christmas play (Sunday, 19 December 1999). "This used to be the highlight of our holidays where the whole of Clarkson, young and old … I'm telling you everyone, attended" [INTERVIEWEE]. I observed a great number of children (average age 6-14 years) but only a few young people and adults attended, unlike in the past.

Another elderly person remarked:

> "Music and sport played an important role in mobilising and entertaining the community. Concerts, church functions, music

> festivals, rugby and netball tournaments formed a way of socialisation. Community support in these activities was massive. Clarkson literally came to a standstill when we had social activities. People were so trustworthy that when everyone else is at a function, the doors of our houses stood unlocked" [INTERVIEWEE].

Today we see another Clarkson: the day-to-day activities of people were nearly the same for the whole duration of my six-week observation. The youth were vagabonding (merely doing nothing) around in streets; some were seen in taverns; a few played cricket in the street and at the sports grounds; older people sat around in backyards and on front stoeps. I noticed high levels of liquor consumption across different age groups and sexes. Two totally opposing views for this type of life-style exist amongst my informants: elderly people felt that, like themselves when they were young, the youth could have kept themselves busy with some constructive activities such as gardening or cleaning of yards. Young people, however, felt that things have changed since those days and they needed "this type of rest and relaxation".

Changes in the physical environment were also observed. Some yards looked neglected and was particularly noticeable because of the time of the year. "In the past during the Christmas season people took special care in beautifying their homes and yards … they created beautiful gardens" [INTERVIEWEE]. It seemed as if many people had lost this pride in beautifying the environment. I did come across a number of small vegetable gardens and a few well looked after flower gardens (Photo 7 & Photo 8). Disturbing however were the acres of agricultural land that sustained the community since the past century, that now lay deserted (Photo 9). According to interviewees these lands have not been worked for the last ten to

fifteen years. Some claimed that this was due to lack of money to buy seeds; others blamed the absence and attitude of the youth.

Photo 7: Vegetable Gardens

Photo 8. Flower Garden

Photo 9: Land laying fallow/deserted

Some domestic animals were observed which means that animal husbandry is still being practised (*Photo 10, Photo 11 & Photo 12)*.

Photo 10: A pigsty

Photo 11: Cows grazing

Photo 12: Free-range chickens

The poor state of the surrounding bush left me astonished. A new dam, at the foot of the mountain north-east of Bazia Street, was built in 1998 (*Photo 13*). Water from permanent rivers was channelled into this dam, and these rivers consequently ran dry *(Photo 14).* The rivers have been the source of water for animals like baboons, buck, rabbits, porcupines and birds. Confirmation of this was given by hunters who said that since the building of the dam they had to move much higher up in the mountains to catch any of these animals. "Even the bird life decreased in that area" [INTERVIEWEE]. During my walk through this area, only a few birds were spotted, but no sign of other animals was observed.

Photo 13: New dam built in 1998

Photo 14: One of the dry rivers

The area where the exotic pine plantations once stood and where brick making took place (*Photo 16*) was totally invaded by other exotic trees. Even areas where natural fynbos existed were invaded. Pine plantations were closed, because no new seedlings have been planted since the late 1980's. Also disturbing were the number of dumping sites in the bush (*Photo 15*). In the past people took responsibility for their own garbage and rubbish. Deep pits were dug where rubbish would be burnt on a weekly basis and topped with soil until the pit was filled.

Photo 15: Dumping site

Photo 16: Area where exotic pine plantations were to be found

CHANGES IN LIVING PATTERNS

Modernisation and urbanisation had a great role to play in shifts in lifestyles all over the world. Clarkson is no exception. The influence sphere of the city extended and reached right at the heart of rural communities – the youth. One of the younger interviewees remarked that change is inevitable, and sometimes we have to allow things that change to follow their course. There are however different and opposing views held by elderly people who see change as a process that needs to take cognisance of the past. The views below are a summary of changes observed by residents and the related perceptions of the elderly people interviewed and others I had conversations with.

Modernisation in Clarkson, exemplified by – electricity and water taps in houses, as well as the introduction of television sets, the convenience of buying food rather than producing it and migration to bigger towns and the city, are seen as the main factors contributing to change. Blame was also laid on a lack of or 'loosening up' of parental roles and authority.

> "Today's parents are not as strict as parents in the past … they allow young people to disrespect everyone else; they allow them to challenge their (parent's) views and overthrow them. I blame the TV with all the violence and crime for the attitude of the youngsters … also the music that they listen to. In the past when there was no TV, we sat in front of the fire-place at night – having informal family talks, where stories were told, where children were taught about respect, and where children had the chance to openly discuss problems with parents. All this is absent today … I don't know where we are going …" [INTERVIEWEE].

One elderly man remarked "… in the past youngsters were seen and not heard, they were afraid of elderly people – not for the sake of being frightened, but because of a deeply seated respect". The responses from these two people sum up one of the ways in which the past strong community cohesion or bond has been broken.

The role of the church was also blamed for the attitude change of the youth and others in the community.

> "When young people in the past reached standard six (grade 8) or finished school, they had to be trained for one week in what was called 'Opnaam'. This practice refers to the youth being 'taken up' in the adult community. The Church Minister and the Overseers' Council trained young people to be good citizens; to respect everyone in Clarkson; to care for others and the environment; to be responsible and helpful; to love and respect the order of the Church and to use resources responsibly and caringly" [INTERVIEWEE].

This ritual ('rite of passage') has however been discarded. No elderly person asked could provide a reason for this. Its absence could account for the current trends towards disrespect for the order of the Church and the reported weakening of community cohesion (Uithaler, 1994).

In the past agricultural practices were like a chain reaction – if one person started to plant, the neighbours would follow suit and so the reaction continued. "Today, the lands lie fallow" [INTERVIEWEE].

"I hope the spirit that came with the resettlement of the Mfengu people here in Clarkson (after 1994) will revitalise our bond to the land" was the sentiment

expressed by one of the elderly interviewees. "These people (referring to the Mfengu) do not have a job but they have life-stock and they work their land – if they can survive from this, so can we – as in the past" [INTERVIEWEE].

COMMUNITY KNOWLEDGE TRANSFER

"With each passing generation, local wisdom, knowledge and stories, and oral histories are disappearing. If we do not catalogue elders' stories, knowledge of crafts and skills; if we do not pass on this way of life to future generations, then all is lost" (Smith and Williams, 1999). In general when checking sources of information, researchers ask people how they know certain information. According to Warren et al. (1995) the most common answers are "my father/mother showed me" or "I saw it". Sometimes we do not know the reason for following – it is simply just the way things are done. Communication channels identified in Clarkson that most frequently pass on environmental and community knowledge are the school, some church organisations, parents and other elderly people. Much is also learnt through observation.

- **The role of the School and Church**

  To assess the role that the local school played in teaching local environmental knowledge, I interviewed a retired foundation phase teacher. According to her Environment Studies ("Omgewingsleer") was taught in grades I – III, until 1997. The syllabus content focused on:

  - the history of the local environment [Clarkson]
  - aesthetics – to keep the environment clean
  - importance of water, fauna and flora
  - health education and caring for the environment
  - gardening

In her view a lot has changed in terms of environment and community knowledge in Clarkson. She ascribes the neglect of the environment and the attitude of the youth towards their environment to the fact that most teachers at the local school are not from Clarkson. She felt that these teachers do not know about the existence of/or are not familiar with the community knowledge, skills and practices "hidden" in Clarkson. "They therefore do not have the passion to revive these valuable assets" [INTERVIEWEE]. The community, citizenship and pastoral role of teachers that can help in addressing community-education issues are discussed in Chapter V.

In focus group discussions, some of the youth members of the community confirmed that they had learnt about gardening, beautification and anti-litter attitudes during their schooling years. On questioning why they allow the environment to deteriorate to its current state, their responses were: "We launched anti-litter campaigns and had plans to beautify each and every yard in both streets with a minimal payment. The money we would've shared between the ten of us that were willing to do the job. After cleaning around the Church and the first few houses, some of us were not up to the challenge anymore. We heard that people won't be able to pay us the R10,00 per house. Anyhow, it was only for the money we wanted to do this" [FOCUS GROUP PARTICIPANTS]. A few felt that they were not slaves and that this hard labour is part of the past – therefore they were not willing to do it.

In the month of August the Moravian Church has what is called "Kinderfees" (Celebration of Children) where the Church is decorated with different types of flowers like the Cape-saffron ("geelblommetjie), Water Lilies, Ferns and Proteas. The school-church alliance comes out strongly as it is the duty of school-going children to collect these flowers from the forest under supervision of teachers.

Some people (young and elderly interviewees) felt that this was another way in which they came to appreciate the environment. This outing provided them with the opportunity to observe the beauty of the forest, experience its calm and learn about different plants, trees and its uses.

The Sunday school and Brigades for boys and girls were also instrumental in instilling a love for the environment as many youth camps and field schools were held. One of the elderly interviewees, an ex-officer in the boys' brigade, remarked: "… when we were out in the mountains, veld or at the beach, it always became clear how good the environment was … the children laughed, played and just enjoyed themselves … they loved to be part of and in nature". Some of the things that were taught in the field schools were: survival, co-operation, hunting and how to treat the environment with respect.

- **The role of parents and the broader community**

  Inter-generational knowledge transfer usually occurred orally. During interviews many participants indicated that their parents played the most important role in providing knowledge about the environment. "We walked and worked side by side with our parents who shared stories and lessons they had learnt from their parents over generations" [INTERVIEWEE]. Collection of wood, flowers, broom-bush, grass sod and wild plants for medicinal use, hunting and freshwater fishing created opportunities to recreate and learn in nature. Knowledge of agricultural practices and animal husbandry was taught by everyone who had knowledge about it; skills were shared when people helped each other. As each household had domesticated animals, door yard gardens and agricultural land, it was easy to learn-by-doing, or by just observing.

Although parents went out of their way to teach or pass on knowledge and skills about environmental use and how certain practices work, children did not always share their interest. During conversations some parents felt that the new generation did not know half of what they themselves knew at the same age.

The observation that elderly rural people have a lot of knowledge about their immediate environment, which is not transmitted to the younger generation, was also made by Mtshali (1994) who maintained that the poor knowledge of the younger generation about their immediate environment arouses concern. Ngwane (1999) in her study in Tsolo (Transkei) also deplored that the younger generation seem to be deprived of knowledge about their immediate environment due to modern development. The younger generation "will not live the hardship that we went through, which forced us to learn because it was 'learning to survive'" [INTERVIEWEE].

Urbanisation and the city with its modern lifestyle, also contributed to the change in attitudes of youth about rural life. "It is the lack of money and employment that forced my children to move to the city where they become strangers" [INTERVIEWEE]. In contrast to many older parents, a few younger parents interviewed indicated that they did not feel sorry that things have changed "because one cannot stagnate in the old ways of doing things".

A few younger builders and carpenters still exist in Clarkson, mainly because of their employment with local sub-contractors, Rensilfier and Woodline (Cabinet and Wood Factories in Kareedouw) respectively. Most other skills and practices traditionally found in Clarkson are now said to be extinct amongst the younger generation.

In conclusion: This account paints the picture of a community in transition, where the changes occurring do not always seem to be for the better. Despite improvements associated with modernisation, the community seems less able to sustain its members from locally available resources, though local skills, knowledge and cooperation are still valued in Clarkson. Applying some of the past practices, know-how and values to the future development of Clarkson may be more than wishful thinking. Development initiatives currently being planned include a bakery, craft and arts, food gardens and piggery. All of these can benefit from and contribute towards the revitalisation of old practices. With concerted efforts in the school and broader community of Clarkson to blend old and new practices and understandings in ways that would fit contemporary conditions, much could be done towards betterment of this community.

V

LINKING THE PAST AND THE FUTURE: CONCLUDING DISCUSSION AND RECOMMENDATIONS

The research demonstrates that an extensive body of unrecorded community knowledge, practices and skills exists in Clarkson. We have seen how people in the past worked together, and shared stories and lessons they had learned from farming, gardening, building and engaging in other practices over generations, to satisfy their basic needs. We noted the broad range of activities such as bread baking, composting, fruit canning, drying of fruit and many other skills and practices that existed in the past. It is evident that the generational transfer of knowledge, practices and skills in Clarkson, has not taken place as with earlier generations. This confirms a trend also noted by Mtshali (1994), who studied rural communities in Kwazulu-Natal, where she also found that elderly rural people have a lot of knowledge about their immediate environment, which is not transmitted to the younger generation. The loss of traditional knowledge, skills and practices in especially rural communities and traditional cultures is a concern, which many writers feel education should address.

According to Nader (1996) cited in Shava (2000) the loss of indigenous (traditional and community) knowledge is due to the dominance of the western knowledge paradigm which is perpetuated in southern Africa by our westernised education system. Very little reference if any is made, for example, of indigenous practices or traditional skills in various South African curricula. The geography syllabus, for example, on the topic 'ecology' gives (in a very structured, scientific way) an account of the classification of soil, its formation, the different soil horizons and

determining the age of soil. No mention is made of the importance of soil, for example, in rural agricultural communities, and how they maintained soil fertility through different practices of composting. This trend is evident across most subject disciplines. In their discussion of the three curricula that all schools teach, Jickling and Weston (1997), quoting Eisner (1985), define what schools do not teach (as illustrated in the previous example) as the 'null curriculum'. They see this as "... the options that the students are not afforded, the perspectives they may never know, much less able to use, the concepts and skills that are not part of their intellectual repertoire" (Eisner, 1985:07). What the westernised 'null curriculum' does in rural community settings, is to leave students poorly fitted to the local context. Their knowledge is inadequate and students are not practically equipped to face the everyday challenges the community members may encounter (Henderson, 1991 in Shava, 2000).

Environmental education has a crucial role to play in keeping past knowledge, skills and practices alive, where relevant. This can be done through Curriculum 2005, the new and 'transformative' (Spady, 1996) approach to education and training, which South Africa embarked on after 1994. In an outcomes-based curriculum such as C2005 'environment' can provide the organising frame for the development of learning activities which emerge out of 'real' environmental contexts (Lotz, 1998).

The question now remains: How can the local school in conjunction with the broader community, in the interest of environmental learning, revive knowledge, skills and practices of the past? Recommendations made below in this regard, are based on the Norms and Standards for Educators (1999) produced by the Department of Education to guide teacher education and conduct, and the curriculum discussion produced by the Environmental Education Curriculum Initiative (EECI, 1997).

The EECI proposed that environmental concerns be integrated into the eight learning areas. Drawing on the EECI's discussion document, I selected five learning areas with certain specific outcomes (SO) as examples to show how community knowledge, practices and skills from Clarkson can be incorporated into the new curriculum. The focus areas suggested would be appropriate across phases, from primary to secondary school.

- **HUMAN AND SOCIAL SCIENCES**

SO1: Demonstrate a critical understanding of how South African (Clarkson) society has changed and developed.

Possible interpretations of the SO:

- Understanding of how societal changes over time impact on the environment. This should include understandings of how settlement patterns have influenced resource utilisation and the condition of environments over time. Also how particular physical environments have shaped particular land-use and associated practices.
- Understandings of living patterns in past societies, and development in a range of different contexts in present society. Critically exploring whether past practices were ecologically sustainable or not. Critically exploring both the advantages and the negative side effects of socio-economic development.

Suggested focus in local curriculum:

- the history of Clarkson since its establishment, including the role of the Church; how did the fact that Clarkson was a mission station, affect its development, compared to other rural settlements
- who were the first inhabitants e.g. the Mfengu? What did different societies learn from each other?

- how did they live? – looking at, for example, agricultural practices and animal husbandry, home-making, building and carpentry, selling natural resources.
- present conditions in Clarkson compared to past ways of life – advantages and disadvantages.
- how developments such as the new dam influence changes in the physical environment.

SO3: Participate actively in promoting a just, democratic and equitable society.

Possible interpretations:

- Recognition and evaluation of indigenous knowledge and technologies.
- Participation in community-based projects, which promote social justice and sustainable living patterns.

Suggested focus in local curriculum:

- where and how people obtained food to sustain themselves – agriculture, hunting
- how these foods were prepared – bread baking, drying of fruit, drying of meat
- the role that the annual bazaar (fete) played in community cohesion
- communal agricultural and building projects – how it contributed to community development
- forestry, wild plants, brick fields – its role in job creation
- involving learners in some of the local development projects where they can focus on the value of past practices in terms of self-sufficiency, self-esteem and tourism potential; develop entrepreneurship, tourism-related, problem-solving, budgeting skills; and learn crafts, home-making, animal husbandry, gardening and other skills.
- Involving learners in an activity in which they design a form of governance for Clarkson that would combine the benefits of the cohesive role that the church

played, with the benefits of democratic local governance and integration in a broader society.

- **LIFE ORIENTATION**

SO2: Use skills and display attitudes and values that improve relationships in family, groups and community.

Possible interpretation:

- Tolerance and respect for others and different points of view.
- The ability to work and live with others as members of teams and communities.
- Valuing the contributions of various groups and individuals in society.

Suggested focus in local curriculum:

- the role that the church played in teaching good neighbourly relations
- how respect for elders and other community members were maintained
- the role of community structures such as the Sunday School, Boys and Girls Brigade, Church Youth Group and Sports Clubs in promoting good values, norms and standards
- the roles that various individuals played in the village in the past – mid-wives, carpenters, thatchers, committee members, etc, as well as children – learners can put together a play which demonstrate how all contributed to the greater good, and follow-up with a consideration of the formal and informal roles one can play as a modern-day citizen
- how respect for the environment and non-humans were inculcated – learners can bring pets to school, can visit local residents who still keep domestic stock, can listen to local or international naturalists and animal rights activists, as well as those who believe that other species need to make way for economic development.

SO4: Demonstrate value and respect for Human Rights

Possible interpretations:

- Understand the relationship between a healthy environment and the well being of people, as well as the constitutional right to a healthy environment
- Understand the relationship between environmental issues and social justice and quality of life.

Suggested focus in local curriculum:

- door-yard gardens (vegetable and flower) – aesthetic or beautification purposes and the role of crop production and contribution to the church income
- how pollution (air, land and water) was reduced to create healthy living conditions
- how environmental problems in Clarkson were resolved amongst community members or groups

➢ **ECONOMIC AND MANAGEMENT SCIENCES**

SO3: Demonstrate the principles of supply and demand and the practices of production

Possible interpretation:

- Investigate economic activities for their impact on the environment
- Understand how patterns of trade have changed over time; and how patterns of trade have led to large-scale resource depletion.

Suggested focus in local curriculum:

- which economic activities took place – selling of indigenous wood (Yellowwood, Stinkwood, Blackwood); selling of indigenous plants – Proteas and Ferns
- conservation practices to secure sustainable use of these products
- the role that money played in the Church and greater community; the role of natural resources in obtaining an income
- how the patterns of trade changed through time – from self-sufficient practices to the present cash economy
- whether the change in economy has reduced resources and if so, how

- **TECHNOLOGY**

SO2: Apply a range of technological knowledge and skills ethically and responsibly

Possible interpretation:

- Demonstrate an understanding of the development of appropriate technologies which are being developed to respond to the environmental crisis, and to solve environmental problems in societies over time.

Suggested focus in local curriculum:

- the use of medicinal plants to cure disease – what kind of plants and how they are applied; technologies used elsewhere to conserve wild medicinal plants (e.g. in indigenous nurseries); the growing economic value associated with the technology to exploit medicinal plants such as aloe, buchu and the threat this poses for species in the wild
- organic farming methods for fertilisation, the environmental and health risks associated with industrial agriculture based on high-input technologies, the current trend towards 'alternative' technologies and more organic practices

- cleansing practices – plants that were used and how they were used
- tools used in agriculture – ploughs made of wood; how and by whom the tools were made and how they were used
- carpentry and building skills – who the people were that had these skills; where and how they 'learnt' them.

➢ **ARTS AND CULTURE**

SO1: Using the arts as methods for teaching to show skills of past communities

Suggested focus in local curriculum:

- how clothing, mats, lamps and mattresses were made in the past
- by whom they were made and what material were used.

The aforementioned recommendations are illustrative; they are far from complete and can be developed further, with adaptation to other local contexts.

It has been agreed among researchers in southern Africa (Mtshali, 1994; Ngwane, 1999; Masuku, 1999; Shava, 2000) that the curriculum must create opportunities to integrate issues and concerns in the community and the wider world, with the learning that happens in schools. Smith and Williams (1999) also call for a reconnection of local schools with the traditional, local and community knowledge as well as the natural heritage of the locale. Active community involvement in the school curriculum can result in an almost continuous flow of information back and forth between the school and the wider community. What is happening, known, of value and of concern in the community, becomes available as basis for further learning in the school. As a result the school is sensitive and responsive to the local people. However, we must be careful not to emphasise learning about the local at

the expensive of developing a broader understanding of the world – including our own place. Here a historical perspective, when approached wisely by the teacher, can help to develop a better understanding of local issues, by placing them in a broader social, cultural, economic, political and ecological context.

In Clarkson the role of the school in community issues and *vice versa* has mainly been hampered by teachers not actually living in the community. As a result – according to a retired teacher I interviewed - they were not responsive to community issues. The Norms and Standards for Educators (1999) ascribed seven roles and their associated competences to teachers. The fifth role refers to the community, citizenship and pastoral role of teachers. This role consists of the following competences (Department of Education, 1999:10-11).

- **Practical competences**
  - Showing an appreciation of, and respect for, people of different values, beliefs, practices and cultures.
  - Being able to respond to current social and educational problems with particular emphasis on … poverty … environmental degradation.

- **Foundational competence**
  - Understanding key community problems with particular emphasis on issues of poverty, health, environment …
  - Understanding the possibilities for life-skill and work-skill education and training in local communities …
  - Knowing about the kinds of impact school extra-mural activities can have on learning and the development of children and how these may best be developed in co-operation with local communities.

- **Reflexive competences**
  - Reflecting on ways of developing and maintaining environmentally responsible approaches to the community and local development.

If teachers live up to these competences they will become sensitive and responsive to the community of Clarkson. Their role as scholar, researcher and lifelong learner (Department of Education, 1999:5) should afford them the opportunity to learn what is going on in the community and also to learn about the past from people in Clarkson. If well versed in community knowledge, practices and skills, teachers might be more open in creating opportunities for students to learn about their local issues. This implies that provincial education departments should consider recognising environmental education programmes and courses for teachers, which would increase their knowledge of the local environment and its history, as valid professional development activities.

In Clarkson there are many elderly people who are knowledgeable about past community practices and skills. Inter-generational transfer of knowledge will take place if elders can be allowed to share their stories about local history and environmental and cultural changes over time. This study, like others, indicated that many elders have experiences to share that can easily fit across any curriculum. The values that elderly people can bring to schools are, however, hampered by their perception of schools. They view schools as a place of professionals and where children are to busy preparing for the future. Children are therefore not given an opportunity to consider the past. If the school invites and gives elderly people a meaningful opportunity to participate in the life of the school and community, young and old can become connected once more. Respect for the elderly and their knowledge might at the same time be revived.

The Department of Health and Welfare in the Eastern Cape Province identified certain development projects to be established in Clarkson. This came as a response to the lack of employment opportunities in that region. Community-based projects such as piggery, community gardens, a bakery and craft and arts projects were proposed. These initiatives will be aimed at creating opportunities for unemployed, less-literate and illiterate people to take control of their lives by engaging them in life-long learning. Similar projects that have successfully been implemented in South Africa includes:

- The Integrated Nutritional Programme in primary schools in the Eastern Cape and Free State provinces;
- The Tholakele-Community Project in Kwa-Zulu Natal which is an example of how a community can be empowered to sustain nutrition based development;
- The Ndlovu Nutritional Project in Mpumalanga focusing on community based nutrition (Integrated Nutrition Programme, Unicef(SA), 1999).

Development projects such as these can undoubtedly benefit from existing community knowledge, complemented with the current and broader perspectives of development workers and others educated outside this environment.

"Food growing can address issues associated with unemployment such as poverty, nutritional needs, self-esteem and idleness" (Davies, 1999). It is believed that the unemployed and underemployed are in most cases excluded, not only from work and a livelihood but also from many kinds of leisure. Their time is not "commodified value" (Davies, 1999). In society in general and in Clarkson, exclusion from economic processes can contribute to a vicious circle of depression, low self-esteem and consequent unemployability. Food growing can thus reclaim control over time and self worth as was suggested by elderly people in the previous paragraph. The end

product has value not only in the formal economy but also in an absolute sense: it 'feeds' people in more ways than one (Garnett, 1996 in Davies, 1999).

It is my hope that the school will take a leading role in creating a school-community partnership especially in the proposed community development initiatives. Through involvement in these projects teachers can for example learn how to use gardens to create grade-by-grade curricula that can address real community issues. By teaching students about gardening the school might create opportunities for them to live like their great-grandparents – self-sufficiently from the land. While young people today may associate food gardening with 'slavery' and a redundant, less advanced lifestyle, the emerging political economy in South Africa requires young people to develop problem-solving, 'entrepreneurship' and other skills associated with self-employment and greater self-reliance. The examples of learning outcomes suggested earlier in this section illustrate that teaching in and about the local context does not necessarily confine learning to that context. If approached with insight, it can serve as a basis for teaching and learning about the broader historical, cultural, political and economic developments affecting the learners' community, as well as the often-neglected ecological aspects of local environments.

My last aim in this study was to critically explore the possibility of incorporating (past) community knowledge practices and skills into Curriculum 2005 and the local school curriculum. If this is to be achieved, then our Western paradigm of knowledge and education should begin to be informed by local and indigenous knowledge. In qualifying this I want to conclude by quoting Smith and Williams (1999:119) when they say:

"Indigenous knowledge is not static, an unchanging artifact of a former lifeway. It has been adapting to the contemporary world since contact with 'others' began, and it will continue to change. Western science in the North is also beginning to change in response to contact with indigenous knowledge."

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