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ABREVIATIONS

CBO	Community-Based Organisation
CEDAW	Convention on Elimination of all forms of Discrimination Against Women
CIDA	Canadian International Development Agency
CMDA	Cator Manor Development Association
CDROM	Compact Disk Read On Memory
FAO	Food and Agriculture Organisation
GAD	Gender and Development
GISD	Global Information Society and Development
ICTs	Information Communication Technologies
ITU	International Telecommunication Union
IFU	International Women's University
MCTs	Multipurpose Community Telecentres
MPCCs	Multipurpose Community Centres
NGOs	Non Governmental Organisations
OBE	Outcomes Based Education
PLA	Participatory Learning and Action
PRA	Participatory Rural Appraisal
SMS	Short Messages System
UNIFEM	United Nations Development Fund for Women
USAID	United States Agency of International Development
VLSI	Very Large Scale Integration
WB	World Bank
WID	Women in Development

ABSTRACT

This topic was initiated because of love of community development and information communication application by the researcher. It was further strengthened by taking part during the International Wowen University (*Ifu)* practice in 2000. The main theme of the study was Information Age. Ifu is well known as the virtual university, which is based in Germany at the University of Hamburg. The researcher, together with eight other women from different countries, designed and developed a model for community development by using ICTs. The model can be used as a basic guide for similar projects. The work, therefore in this thesis is based on personal experiences shared experiences, and research as well as by reading others experiences.

This study provides ideas for potential community development by using Information Communication Technologies (ICTs) in rural areas with special reference to Ward Three of Durban Metro. The results of the study confirmed the saying "If you can't beat them join them". This study reported on research conducted in two different rural areas known as Bamshela and Ward Three. The results from the first area Bamshela, illustrated the way forward for Ward Three. Since the ICTs center exists in Bamshela the author received more information about the centre's utilisation than its establishment.

The focus on the second area emphasises the necessity, awareness and participation in community development. The three specifics focuses on whether there is a need for the ICTs centre for community development. Further more the study focused on areas where ICTs played prominent roles, such as in policy making, education, globalisation, ICTs, community development and participation of community members in community development projects.

DECLARATION

I declare that this dissertation is my own work. It has not been submitted before for any degree or examination in any other institution or university.

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……. Day of ……., 2003

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This challenging study has been successful, but would have been difficult to finalise without the assistance from different enthusiastic individuals at the two institutions, namely: Mangosuthu Technikon and Durban Institute of Technology. I thank ML Sultan Technikon, now known as DIT for registering me as a student and providing all the help and support I needed. Not forgotten are my colleagues at Mangosuthu Technikon for their support too.

The most important participants in the study were community members both from Bamshela and Ward Three who agreed to participate and assist in the research process who were direct respondents in the study. To the authorities who allowed me to sample their communities and for all the help given through the process, I say thank you.

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CHAPTER 1

A STUDY TO EXAMINE RURAL COMMUNITY DEVELOPMENT THROUGH INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS) IN WARD THREE OF DURBAN METRO

1.1 RESEARCH QUESTIONS

1.1.1 How can the community gain access to ICTs?

1.1.2 What can be done to familiarise people in Ward Three with Information Communication Technologies (ICTs)?

1.1.3 How can the community use technology to both spread and get information to improve their standard of living e.g. education, health awareness, human rights etc?

1.2 BACKGROUND AND MOTIVATION OF THE STUDY

The author noticed the increasing need for information and communication resources as a means to educate fight poverty and combat unemployment in the area. Techno-phobia and cyber-phobia amongst the community are of concern to her as they are problems for most people who are new to technology i.e. computers. Ward Three is a rural area which falls under Durban Metro. Formerly it was known as the Qadi Tribe under the authority of iNkosi Ngcobo. It is approximately 75 Km away from Durban City. It is a rural and underdeveloped area. A community profile is provided as an appendix two.

As a community member and a community development committee member of this area, the author decided to conduct a study as a means to reach out and encourage the community especially women, to use and familiarise themselves with information communication technologies. The establishment of a tele-communication centre could

be one way of encouraging people to spend their social time seeking and transmitting information, broadening their information knowledge and technology usages and also to familiarize themselves with different means of interaction.

The study is aimed at helping to find a means to combat techno-phobia, cyber-phobia, and reduce the digital-divide-gap between people, especially women from both rural and urban areas.

1.3 OBJECTIVES

The objectives of this project are to:

1.3.1 Assess the level of peoples' skills in information technologies.

1.3.2 Determine the level of peoples' awareness about ICTs centre.

1.3.3 Determine a need for ICTs centre in rural areas.

1.3.4 Establish a viable and sustainable multi-purpose ICT centre in Ward Three.

1.3.5 Establish strategies to promote the use of ICT's.

1.3.6 Examine community involvement in a Community Development project.

1.3.7 Establish possible strategies to combat techno-phobia, cyber-phobia and the digital divide.

1.4 SUMMARY OF CHAPTERS: RESEARCH OUTLINE

1.4.1 CHAPTER I

This chapter covers the introduction to the study, and includes the following areas: the need for the study, areas of concern, the problem and its settings. Definitions and special terms are defined in this chapter. Chapter 1 also outlines the benefits as well as limitations of this research. A summary of chapters will also be discussed in this chapter.

1.4.2 CHAPTER 2

Chapter 2 focuses on the work that has been done by other researchers that is related to the topic of this study. This chapter identified the gaps in the work that has been done in the area of information communication technologies so as to improve on, and/or suggest, alternative ways of reducing or closing the gap.

1.4.3 CHAPTER 3

Chapter 3 elaborates in the research methodology and study design used. The population, sample and data collection technique are described in this chapter.

1.4.4 CHAPTER 4

Data collected is presented on this chapter. Data capturing, analysis and tabulation are also presented here. The data is presented in a form of tables, charts and bar graphs to facilitate comprehension and ease of understanding.

1.4.5 CHAPTER 5

Chapter 5 contains analytical statistics that indicate the how the data was interpreted and testing of hypotheses. These reflect the results of this study.

1.4.6 CHAPTER 6

Conclusion and recommendations are outlined in chapter 6.

1.5 WORKING DEFINITIONS

There are many and often conflicting definitions of central terms, with different individuals and within the literature. The researcher drew-up the definitions below with the help of group discussions. The group was made of 11 women from 8 different countries, including the researcher. The 11 women gathered at the University of Hamburg in Germany from July to October 2000. The women gathered with the aim of reflecting their research and experiences in the Project Area called Information as a Social Resource. After reviewing literature they (the 11 women) came up with the following definitions. The report was called the *ifu* report: 2000.

Community

A community refers to a number of people who live together, and who may share some traditions, norms, values or interests. A community is, however, not homogeneous, being made up of different groups (communities) of people positioned in various power relations that might be enabling or constraining, or conflicting and bound in a geographic area e.g. Ward Three and Bamshela (De Beer & Swanepoel, 2000).

Community Projects

A community project in this context can be defined as activities that are either initiated by the community or the government through the community, or are provided with the aim of developing the individuals or community economically, socially and in different self-help skills to become self-sufficient and self-reliant (Hudson, 1984).

Cyber-phobia

Cyber-phobia is the fear of computers in one-way or the other. This term was coined in 1985 it refers to an aversion to or anxiety caused by technology (Harris: 1996). A Dell Computer study shows 55% of people have some fear of technology and 36% of office computer users feel their skill levels are inadequate
(Http://www1.timesofindia.indiatimes.com/articleshow/340423944.cms).

Development

Development is an ongoing process of betterment and improvement of quality and equality of life, as defined by the person or people concerned. This involves problem solving, life-long learning, and includes social, cultural, political and economic factors (Nyerere, 1973:60 & Pottier, 1993).

Digital divide

This is the term used to identify the knowledge and skills gap between the people that have access to and utilise the new technologies as against those that do not (Wilson, 2001).

E-Learning?

E-Learning, also referred to as web-based training, online learning or distance learning, is an anytime, self-paced instruction that is delivered through the Internet. There are many definitions, but local experts define e-learning as using technology to integrate learning into the workday, increase its relevance, reduce its costs, and make it more efficient. E-learning is made up of several methods of learning that are enhanced or facilitated by technology (Etter, 1999).

Empowerment

Empowerment is about people, both men and women, taking control over their lives, setting their own agendas, gaining skills, increasing self-confidence, solving problems and developing self-reliance. Empowerment is both a process and an outcome (Meyer & Baber, 1998).

Gender

Gender is being female or male, and encompasses socially- given attributes and roles (reproductive, productive and decision-making), responsibilities etc. Gender relations are the relations between men and women, and include a consideration of how power is distributed between the sexes. Gender relations vary from time and place, between different groups of people and other social relations e.g. class, race, and ethnicity (Chambers, 1999).

Information

Information is a group of words, pictures, images, concepts or ideas that can be interpreted to an action, Fuchs: 1997. Facts and/or data alone are not information; the meaning of these facts is essential if they are to be considered information; and information can be used to increase or enhance knowledge (Rodgers, 1987).

ICTs

Information and communication technologies are digital technologies facilitating the acquisition, processing, presentation, management and communication of information. They include, for example, the micro-electronic, photonics, computer and telecommunications industries (National Research and Technology Foresight, 1999. Online. Source. http://www1.timesofindia.indiatimes.com/articleshow/340423944.cms).

A broad definition of ICTs in recognition of the fact that computer and the Internet are but one of many tools with which people can communicate. As such, included in general understanding of ICTs are: indigenous folklore, proverbs, radio, print media, books, newspapers, telephone, telegram, fax, television, recorded audio visual material, and computerized forms i.e. Internet, automatic teller machine, compact disk read only memory (CD-ROM) man many more. There is no privilege given to any of these tools. Depending on the community context, different tools will be appropriate at different times (Etter, 1999).

Knowledge

Knowledge refers to any set of ideas and practices accepted by a social group or people as being real and meaningful for them. Knowledge is socially produced and distributed. Further, it is an historical product of the social group and individuals thereof (Lankshear *et al*: 1997).

Knowledge divide

Knowledge divide is referred to as a lack of knowledge of certain information. One can be an expert in one area and lack knowledge in the another one; the gap between the known and the unknown prevents one being knowledgeable about a particular subject (Warren, *et al*, 1998).

Participation

Participation is the process whereby people share and exchange knowledge, experience, ideas, opinions, skills and information with others on an equal level in order to make decisions and to take clear and useful action towards their goal for development. Participation involves the community or group taking and sharing equal responsibility for the start, the process and the outcome of any initiative or activity. Participation means that people have the right to say yes or no to the activities (Dahms & Faust-Ramos, *in* Floyd *et al*, 2002: 279-283).

All definitions covered are drawn-up using views of more than one author. Definitions were drawn-up to cover all aspects regarding the community development through information technologies.

Chapter two demonstrates the actual areas of the study and relevant literature covered.

CHAPTER 2

LITERATURE REVIEW

"IF YOU CAN'T BEAT THEM JOIN THEM"

2.1 INTRODUCTION

This chapter presents a discussion on the work done by other researchers and relevant to this study. The chapter will discuss the overview of the study, policy makers and ICTs, global development and ICTs, community needs assessment, community participation in community development projects, education and ICTs culture and ICTs and ICTs available for community development. This chapter also includes a discussion on the parallel practices on the subject.

2.2 OVERVIEW OF THE STUDY

This section of the study clarifies the impediments that strengthened the need for the investigation. It therefore provides the basic subtopics necessary to complete the study. Subtopics included in the study are listed in the introduction section of this chapter.

Digital divide is a common term used to describe the gap between communities that have electronic infrastructure (urban areas) and those that don't have, usually, rural areas. Haywood (1995: 1) called his book "Information rich and Information poor", the concept "information rich and information poor" does not describe the actual gap exactly. The people in rural and under-developed areas could have extensive information, but cannot afford the cost of modern means of communication (ICTs). It was concluded at the conference "Voices of the poor" held in Geneo in June 2001, that "information is not a scarce resource – it is infinitely expansible and proliferates with its use", which shifts us from knowledge divide to income divide, (Rheingold, H. 2001). Will the rural communities be able to fight for the removal of barriers to information sharing and enjoy the benefits of information communication technologies?

Barriers, as indicated by Dahms & Faust-Ramos *in* Floyd *et al* (2002: 277) lie in the model which is based on technological determinism; the model overlooks complex social factors influencing underdevelopment and poverty. Other factors are power imbalances and inequalities at global, national and local levels. The missing link is either a lack of electricity and or telecommunication facilities or both in many of the poorest rural communities in countries of the South.

People, in their everyday normal lives, do not know where and how to access information for their own survival and development – information on health, education, employment, human rights, government services and plans; information that will enable them to participate in social, political and economic processes (including agenda setting), i.e. citizen action information.

This problem is particularly important for the marginalised people - in this case rural areas. This study focuses on the marginalised also termed rural areas because the author accepts that the community is not homogenous but is structured with various hierarchies that limit the extent to which the voices of the marginalised are heard. Some hierarchies include:

- Power relations
- Gender relations
- Urban-Rural Divide
- Social classes
- Educational levels
- Political differences
- Cultural differences (religion, language, ethnicity)
- Racial differences
- Disabilities (physical, psychological)
- Economic differences
- Displacement due to political upheaval, natural disasters, social reasons (Legaobe, *et al* 2000).

The term rural area can be described according to each country's settings. For example the area can be rural through political consequences, social classes and/or racial differences, which result in Urba/Rural divide. In SA the rural areas were

mainly the results of the apartheid regime, which led to the infrastructure being based in certain areas such as Johannesburg now known as Gauteng Province, Durban etc. The remote areas are mainly where black people live. "There is no legal existing definition and no formally-accepted definition in use. Rural areas are areas that have the lowest level of services and the greatest average distance to the nearest service points with large scale farming activities. Certain areas used to be called Bantustan areas" (http://www.polity.org.policydocs.html, 030/3/2002).

The Information Communication Technologies (ICTs) have had a significant impact on the way that people lead their lives. The lack of infrastructure, prohibitive costs of access to infrastructure where it is available, poor quality of infrastructure, shortage of relevant skills, low levels of literacy and inadequate investment in technological development are hindering progress toward exploiting the new generation of ICTs in developing areas.

With this background in mind the next section elaborates on policy makers.

2.3 POLICY MAKERS IN SOUTH AFRICA AND ICTS

Communities' survival is based on the economy of the country. The country governs the communities and therefore the state has to care for the basic community needs.

It has been clear that one of the government's objectives is to improve telecommunication systems in rural areas and "Information Communication Technologies (ICTs) are part of South Africa's economic plan to meet the envisaged requirements of the Global Information Society and Development (GISD)" (Mbeki, 2001:1). This is one of Mbeki's statements that show that Information Technologies are drastically changing the traditional way of communication. Computer skills are the most required skills in the job market worldwide, e.g. "Cisco Systems needs 2 000 people per month to fuel up growth potential in the industry" (Bugie, 2001: 37). Gibson (2001: 3) states that we should not ignore the fact that a computer is a tool that allows companies to be more efficient and innovative in a business world (http://www.cisco.com, 20/09/2001).

Maepa (1997: 9) agreed that economic development of any part of a country is nearly impossible without the ability of two-way communication between the sources of the material required at a footprint, or footprints as the case may be covering both areas provide the link to conduct the communication.

The author is aware of the government's plan to provide access to a public telephone within a walking distance of about 10km. This is an ambitious goal but it is difficult to make it commercially viable, especially in rural areas because of a lack of suitable infrastructure. Necessary infrastructure includes:

- Service provision to all sectors of the community in all geographic areas.
- Digital telephone exchanges and transmission networks.
- Broad and narrow-band transmission capabilities.
- International connection by means of satellites and optical fibre cables

(http:www.polity.org.za/govdocs/white_papers/sicitech.html, 03/03/02).

The government has adopted a four-pillar model, which sets out the different areas in which crime prevention should be developed:

- The criminal justice process which aims to make the criminal justice system more efficient and effective with clearer deterrent for criminals and reduce the risks of re-offending.
- Reducing crime through environment design by focusing on system designs to reduce the crime opportunities, ease of crime detection and identification in crime prevention.
- Public values and education, which aims at changing community reactions to crime and violence by using public education and information to facilitate citizen participation in crime prevention.
- Trans-national crime programmes that aim at improving controls over criminal cross-border traffic and reducing the attractiveness of the region to international criminal syndicates.

Despite all the difficulties involved, priority areas for advanced ICT use in Pro-Poor Government Services is important. This can serve as the basic model for information needs support (Mactar, 2000: 25).

Figure 1: Basic model for information needs support

GOVERNMENT SECTOR	HIGH PRIORITY	LOWER PRIORITY
Education	Tertiary and technical ICT training, teacher support, education-sector administration, distance education, selected use in secondary education	Direct and widespread use across school curriculum
Health	Epidemiological data collection and processing, administration, electronic health care data	Real-time online consultations
Tax, Fines and Fees	Records, instructions, databases	Online payments systems
Finance	Debt management systems, regulatory data	
Environment	Data Collection, processing and monitoring	Support for telecommuting
Governance	Records dissemination, consultation	Online voting
Welcome	Records, databases, information	Electronic payment systems

Source Mactar (2000:25)

The South African government's intentions are clearly stated through the government's publications and documents regarding ICTs development and policies. The next section tells us more about ICTs global development.

2.4 GLOBAL DEVELOPMENT AND ICTS

The World Summit Information Society programme is to provide different countries with, "common vision and understanding of the information society and the adoption of a declaration and plan of action for implementation by a government, international institutions and all sectors of civil society". While there are many issues associated with the dawn of the information society, the themes proposed for the Summit can be

clustered into Three main concerns: vision, access and applications (http://www.johannesburgsummit.org/, 07/07/2002).

Does South African policy coincide with international developments? Social scientists and current theory maintain that you choose "to be in the net or not to be" in the network. "Be in the network, share and increase your chances to improve overtime. Be out of the network, be switched off and your chances vanish", (http://hjem.get2net.dk/gronlund/Castells.html, 24/07/01). Information exchange has been going on for years but with new technologies it has drastically changed. Information technologies have removed time and place boundaries.

Castells, (2001) compares ICTs and electricity in industry: people need to educate themselves and adapt to technological changes. Information Technologies have leapfrogged stages of economic growth in countries in the Asian Pacific particularly Hong Kong, Taiwan, Singapore, Malaysia and South Korea where they have been able to modernise their production systems and increase their competitiveness faster than in the past, regardless of financial crises. When countries that have not been able to adapt to the new information technological system, their economic retardation has accumulated (http://www.unrisd.org/inforen/castelp1.htm, 07/03/2002).

Likewise the statistics showed that most of the Non Governmental Organisations use IT to some extent. The following statistics were taken from a recent study done by the Princeton Survey Research Associates, (http://www.psra.com, 15/08/2003). The Princeton survey confirms the growing necessity for getting connected through the use of information communication technologies.

"Nonprofit IT use at a glance

- 86% use some form of information technology
- 79% have e-mail
- 77% provide Internet access to staff
- 52% have an office network
- 49% have a web site", (Princeton Survey Research Associates).

The statistics shows that it is important for community development officials to be able to communicate with different stakeholders regarding their development project. The community development official should develop a common vision and understanding of the information society. Together with community promote the most and urgently needed access of all the world's inhabitants to information, knowledge and communication technologies for development. Working as a team to harness the potential of knowledge and technology for promoting the goals of the United Nations Millennium Declaration. Organised preparatory committees are working on realizing the declaration and resolutions e.g. resolution A/RES/56/183 (Mbeki, 2001: 6).

International Organisations such as World Bank (WB), World Trade Organisation (WTO) and the International Telecommunication Union (ITU) support developments on information technologies around the world financially and with other resources because they aim to:

2.3.1 Promote business growth and development through innovative competition.
2.3.2 Enable new job creation.
2.3.3 Expand international trade and new markets.
2.3.4 Attract international and local investment.
2.3.5 Improve quality of life of all citizens (http://www.itu.int.org, 09/08/02).

Self-expanding network logic pervades and transforms all domains of social and economic life. Gradually it absorbs and subdues pre-existing forms, without discarding them altogether. This pervasion goes for networks of production, distribution, financial circulation, power, information, communication, images and experience, individually or together they are currently known as e-commerce.

With new information and communication technology, the network can be centralised and decentralised, and instead of instructions we have interactions. Large corporations that are being replaced by small and medium businesses that do not mean multinationals are obsolete. In the network world it is quite the opposite because of merger mania taking place around the world. Examples are Citicorp merging with Traveller Insurance, Bank of America leaving its "heart" in San

Francisco but moving its money to North Carolina, Daimler Benz swallowing Chrysler, Volkswagen upgrading itself to Rolls Royce status and American banks digesting Asian banks and financial corporations in an historical revenge of the West against the high-growth areas of the Pacific, that is why information is important (http://www.thechronicle.demon.co.uk/archive/castells.htm, 07/05/2002).

Major financial institution; such as United States Agency for International Development (USAID) and World Bank (WB) have shown interest in ICTs development with special reference to rural areas internationally. The community needs assessment is the backbone of community development.

2.5 COMMUNITY NEEDS ASSESSMENT

Community participation in community development projects helps to provide resources relevant to community needs. Needs assessments are vital to avoid problems that were caused by imposing services on communities. This has been a lesson to South Africans since the duplication of Colleges of Education led to the closure of many colleges, which offered the same academic courses e.g. general subjects such as english, history, biology and very few which offered mathematics, natural science and/or commerce.

Now is the time for rural communities to contribute to or become part of the Global Information Society and Development (GISD) by hiking to information highways. Information communication technologies are proven to be the fastest way of passing information globally. Dissemination of information to the world using modern technologies is the way to avoid the negative impact of the digital divide. In rural areas the state budget has been spent mostly on schools and clinics regarded as the basic needs of the people living there. An increase of state budget expenditure on transport and telecommunication is expected, because telecommunication is the main link between rural productions from farming, cultivation, and traditional hand-made products and the right market or consumers (http://www.globalknowledge.org, 07/05/2002).

Communities should be assisted in assessing their needs and utilisation of their resources in a systematic manner to determine the feasibility of plans and actions, given the scarce resources and endless needs. Planning, management, implementation and evaluation of any community telecentre is essential for the telecentre's sustainability. The process never stops; it involves all stakeholders such as organisers or facilitators, community members, donors and authorities if applicable. This is a useful way of providing feedback and the estimate of the project's effectiveness to determine the future of the project, (http://www.vifu.de.new.areas.information, 02/3/2002.)

Few would deny that lack of access to ICTs is an element of poverty in the way that insufficient nutrition or inadequate shelter is. If being poor is defined as lacking access to the Internet, for example, it would imply that, no one in the world escaped poverty before 1969, when the first network was built. Community needs assessment in Chile demonstrated the importance of such ICTs in their development process and willingness of the poor to pay for the service. They showed that the poor in Chile consider telecommunications such a basic service that they spend more of their income on telecommunications than on water. Furthermore, the average Chilean spends more of their income on telecommunications than on electricity and water combined. This disproportionate expenditure is a reflection of the perceived opportunities associated with acquiring ICTs. The capacity to raise income and improve the economic growth rate alone are enticing incentives, but ICTs also offer opportunities to improve the environment, educational outcomes and health service delivery, as well as other government services, (http://www.unesco.org, 07/07/2002).

Once a community needs assessment is done, the needs would be identified. The next step is to identify the development approach suitable for the special particular community. Participatory approach it recommended for sustainable development.

2.6 PARTICIPATION IN COMMUNITY DEVELOPMENT

Improving services in rural areas has been on the government's agenda for, "Co-ordinating programmes, which among other things will address issues such as pension

payout-points that should be automated". This programme will be effective and useful if done with the help of the communities involved - for instance pensioners to provide:

2.5.1 Ideas e.g language and terminology.

2.5.2 Types e.g text or pictures.

2.5.3 Ways of availability e.g time and place.

2.5.4 Machines to be used to accommodate literate, illiterate and disabled users

(Mbeki, 2001: 1-2).

Development institutions such as the Canadian International Development Agency (CIDA), International Telecommunication Union (ITU), World Bank (WB), Non Governmental Organisations (NGOs) etc., strongly emphasise a client-based participation in community development projects. A participation approach has been the most appropriate way as it is aimed at replacing a top-down model of development (Pottier, 1993: 1). Turning the digital divide into a digital opportunity for developing countries is important, especially in rural areas. Sustainable action directly benefits communities (http://www.techaccess.org/programs/surveyform.htm, 03/04/2002).

The choice between clean water and ICTs in rural areas is a difficult choice but ICTs can be one way to fight poverty and many other problems i.e. through fundraising for water schemes using modern ICTs and exchanging existing information with different people worldwide (Worldlink 2001: 20). The best tool for evaluating the ICTs projects is by using the survey method. Community members can be asked to complete the questionnaires through the Internet or walk-ins at the centre. The questionnaires can test phobia resistance in the community. (http://www.techaccess.org/programs/surveyform.htm, 03/04/2002).

A participatory approach involves the need for education. Education is an ongoing and never ending process.

2.7 EDUCATION AND ICTS

ICTs are now part of educational programmes. There has been a huge move from the old way of passing on information and responding in a classroom examination to the

modern automated systems. Nowadays one can get examination results on a cellular-phone call or short message system (sms). 'What is ahead of this is uncertain and unclear" (Lankshear argued, 1997: 8). Ellington and Harris (1997: 189) agreed that the education system is currently moving away from assessment by examination to Outcomes Based Education (OBE). The teacher is seen more as a manager and organiser rather than as a presenter of knowledge.

The inclusion of learning technologies within education at all levels is becoming a reality; it is something educators cannot ignore (Warren *et al*, 1998). Not all people have good presentation skills therefore supplementary tools such as computers are necessary. "Computers are vital elements in teaching and learning and can no longer be considered only as a teaching tool but as part of teaching and learning" (McNally, 1997:8). It is clear that modern youth should be prepared for a world in which computers will play a prominent role (Hattingh *et al,* 1983: 8-9).

Beautiful as they are, computers are not here to replace human interaction completely. New technologies do not induce unemployment as has been repeatedly demonstrated by empirical research. In fact, according to a Cisco Systems personnel officer worldwide there have been massive job creations worldwide. The number of jobs available in the Cisco Systems industry alone is proof.

The ability to move into the information age depends on the capacity of whole societies to be educated and to be able to assimilate and process complex information. This education should start from primary school to University level, (http://www.cisco.com, 17/07/2001). An example of the successful use of radio and television as an important tool for reaching the rural poor is a case study done in Mexico. In Mexico over 700 000 secondary schools scholars in remote areas now have access to the telesecundaria program, which provides televised classes and a comprehensive curriculum through closed circuit television, satellite transmissions, and teleconferencing between students and teachers.

Results have shown that, the program is only 16 percent more expensive per pupil served than normal urban secondary schools. Additionally students benefit from much smaller student – teacher ratios. Rural students enter the program with substantially

lower mathematics and language test scores than their counterparts at traditional urban schools, but by graduation, they have equalled their math scores and cut the language score deficit by half (De Moura *et al*, 1999). Educational radio has been utilised as follows:

- Mexico and Mali for literacy training;
- Thailand, to teach mathematics to schoolchildren, and for teacher training etc.
- The Dominion Republic and Paraguay to support of primary education etc.

Education pertaining to ICTs at schools will raise technology awareness and able to:

2.6.1 Provide quality, technology-focused outreach and education to families of colour and low income families

2.6.2 Involve families and the community in the technology arena and our global society

2.6.3 Educate families of colour and low-income families on the importance of technology to success in school and subsequently, the job market.

2.6.4 Inform families about the economics of technology and the uses of technology in daily lives

2.6.5 Inform families of the opportunities available in their communities to access technology and acquire computer literacy skills.

2.6.6 Encourage increased volunteer participation during after-school hours in community technology centres (www.techaccess.org/programs/awareness.htm, 09/09/2002).

The African Virtual University (AVU) brings world-class educational instruction to the most remote and isolated communities in sub-Saharan Africa. As a "university without walls," termed e-learning, AVU has helped more than 24,000 students and over 3,500 professionals to join the information age. Based on an interactive model that allows African students to engage in real-time discussions with professors both on the continent and abroad, the AVU has proven to be sustainable and replicable.

From business management to engineering and e-commerce, the AVU uses the Internet, satellite technologies and ICTs to bridge the digital divide between Africa and the rest of the world. Since its inception in 1997, the AVU has been an important

institution for integrating Africa into the global information society, (http://www.itu.int/osg/spu/wsis-themes/ict_stories/AVUcasestudy.html, 03/03/02).

Education and culture go hand in hand. They both sometimes cause conflict in one-way or the other. Often misinterpretation is the main problem in areas.

2.8 CULTURE AND ICTS

The White Paper states that of telecommunication and the severe disadvantages experienced by members of rural communities under apartheid should receive special attention. Gone are the days when the wealth of rural communities depended on farming, forestry and fishing only. Nowadays communities must be diversified in a way that attracts new business and better access to external markets, decision makers, information providers etc. This includes global interaction in different spheres (Bayes *et al*, 1999). Daily life in rural areas evolves around or depends on culture or tradition. Culture controls not only the natural or biological sphere but also intervenes in acquiring of skills, experience and information. Thus potential personal development is negatively influenced.

The space flows and timeless time produce a culture of real virtual which allows multicultural exchange worldwide. Networks integrate all kinds of messages, signs, news, education and exhibition in a common cognitive pattern blurring their contents. Moreover, they capture most cultural expressions, in all their diversity, simultaneously increasing the social stratification of producers and consumers (http://www.unesco.org, 12/08/2001).

Birkin *in* (1995: 4), agues that cultural diversity plays a very important role in any community work, because, in order to convey a message well, one should have knowledge of the languages used and a broad knowledge of different cultures. ICTs allow communication with international communities. This can create major problems if not used correctly or if there is no awareness of the country's culture. This can happen during the cross interaction such as advertising local products to other countries for example Chevrolet executives could not figure out why the Chevy Nova was not selling well in Latin America. They then learned that although

Nova means “new” in Spanish. No Va means, “it doesn’t go” in Latin (http.www.unesco.org, 12/08/2001).

Cultural diversity always provides pitfalls, as shown by the following example; “German and Swiss executives think that a person is uncouth if he or she uses first names, particularly at public events”. In South Africa the different tribes use different languages and have different cultural backgrounds. Since the free movement from one province to another the cross culture interaction has increased. The lack of understanding of one another’s culture is considered “culturally uneducated”. This misunderstanding leads to tension amongst the parties concerned. For an example, the Majola snake is allowed in the family by the Xhosa tribe and is not allowed in Zulu tribe. Xhosa’s Majola family respects the snake as a symbol of the ancestors’ visible visits. When the Zulu Majola tribe are scared to death and even beat the snake to death, which will mean misfortune to the Xhosa Majola families on the other hand (Zanemvula, 2003).

Change is not easy so it requires strategies to effect change known as development. This is to adapt to the changing world environment. “Culture substance is seen most clearly when people confront unfamiliar situations and the routine application of existing understanding is impossible” Bates (1998: 19-20). “This is the way things are; and that is why they ought to be, as they are”. This happens when people avoid change as if culture is fixed. For example, story telling has been the traditional way to African people to groom a child for its expected behaviour therefore story telling is part for African culture. The author defines culture as the style or beliefs that people imbibe in before, currently and in future. Culture changes with generations and the micro and macro demand. Therefore we cannot let culture hold us back as it can be flexible (Charles *et al*, 2000).

Culture and education influence choice relating to types of communication technology to be used.

2.9 ICTS AVAILABLE FOR COMMUNITY DEVELOPMENT

Listed below are the list of various ICTs are available so that communities who wish to make use of this technology. Basic information about the uses, benefits and problems of each when it is applied in developmental settings is given. It is hoped that this will enable communities to make informed choices about the technology that would best suit their needs. The author does not at any point intend to recommend any tool over and above another; the choice of appropriate ICTs depends on the specific context, which could be finance, infrastructure, importance and urgency of information. Despite the growth and popularity of the electronic media, the print media plays its role in different spheres (Head *et al*, 1987).

2.9.1 Newspaper and print media

The print medium holds great potential for communities where most people can read. In urban and rural areas, newspapers, posters, pamphlets and booklets have been used successfully. There are different kinds of newspapers and suppliers. There are international, national, provincial or local newspapers. There are daily, weekly and monthly newspapers and magazines. One newspaper can be read by a number of persons together or by passing it around. It can be read at community meetings or family gatherings. The reader has the choice of what to read first and there is a wide range of sections e.g. announcements, entertainment and education. Newspapers are published in different languages and even indigenous newspapers are available. Problems with literacy, distribution limits and costs hinder the usage of this information and communication tool. One possible solution to the problem of illiteracy is to use graphic posters and brailed prints for the blind (http://www.globalknowledge.org, 10/09/2000).

2.9.2 Community Newspaper/magazine, posters and flyers

A community can form a group and share responsibility for producing a community magazine. Students can gain practical experience in producing the magazine, e.g. in fieldwork and computer skills. For instance, the journalism students can collect data (such as community events and announcements), pass the information to secretarial students for typing while graphic design and photography students can also be asked for their expertise. The magazine can be printed for free distribution or at low or little

charge to cover operating expenses. Posters and flyers can be produced in an indigenous language and distributed. The common method in South Africa is the local community news paper e.g. Chatsworth's and Cato Manor's (Izwi) Community Newspapers (http://www.cmda.org.za, 10/08/2002).

2.9.3 Television and Video Production as a tool of communication and participatory development

Television:

According to Head *et* al, (1987: 37-431) television is a tool, which provides images and sounds of pre-recorded material or live broadcasting. It provides multi-channels for viewing. The state employees decide what television programs are broadcast. Additional coverage like DSTV and MNET in South Africa can be rented to extend viewing choices. The audience/consumer and commercial demand can also make an impact on what should be transmitted. It is however often difficult for the marginalised to get their voices heard in order to have a say in the type of broadcasting they want. It is expensive to open a television channel specially with a local community focus (community television). Therefore, video-recorded materials can play a vital role for the development of communities.

Video:

Video is a form of expression, accessible to all including those that cannot read or write. It has feedback capacity (you can view and edit what is included in the video) that stimulates participation in evaluation planning and decision-making. It also facilitates communication between people who will not and cannot engage in face-to-face communication e.g. community, policy or decision-makers.

Video production can be used for community development. The community can use this tool for many different reasons such as: education and training among communities or individuals, selling the recorded material to the public and storing the recorded material for memory events e.g. traditional festivities. This tool can be used in one specific area and final results are available for everyone to see and learn from. It can be used to record the development and the recorded material played back as part of training or in the educational development process, a case in point being the

media communication that creates new attitudes among farmers in Nicaragua (http://www.fao.org/waicent/faoinfo/sustdev/cddirect/cdre0053.htm, 03/02/2002).

Videos are also used to gather information, to make and store records, to monitor and evaluate activities. The making allows participation as video work needs a number of people (crew) to be involved in production (participatory tool, if local community members are involved). Women and youth are the most targeted audience and their behaviour and attitudes can be changed through mass media. Since women and youth spend more time at home, they are the most exposed to these tools and enjoy using them. Audio-visual media are popular with illiterate rural women. These media give communities an opportunity to see and discuss complex techniques e.g. for farming, business skills, ICTs before using the techniques. For instance, a video describes step by step how to use video recording camera. Audio-visual technology improves mental retention, and for this reason, educators are utilizing videos, television programmes, films, slides and pictures for training purposes (Wilson, *et al,* 2000).

In Ahmedabad, India the SEWA (Self Employed Women's Association) has been training poor and illiterate women in the production and use of the video as a tool for empowerment Balit (1999). They can document the issues affecting women and youth by highlighting their concerns. Video is an integrated component of SEWA activities. There are video programs produced by rural women associated with the group that have been used for the next generations to teach new skills and advocate policy change. They help to promote and encourage self-confidence and development.

Communities and individuals can also taken on video production to generate income. By recording functions, for instance weddings etc., and charging for exchange of the recorded material. For example, people in Inanda (Durban) were motivated to do acting after receiving some video training. This group then produced a video in which people from the area were the actors. So far this has been an informal exercise based on the people's daily lives but could become a source of income for them if they are able to show the video for a small charge (perhaps in a telecentre), sell the video, or gain employment as actors (Majola *et al*, 2000).

In addition, classroom lessons can be video-recorded and then used as a teaching aid for future reference and for extra lessons for the school pupils. Some textbooks come with the videocassettes that provide practical learning.

Equipment needed includes: electricity, battery, charger, recording machine, videocassette (tape), television screen with the video playback and additional or optional is a microphone and video recorder stand.

For successful results with video usage the following points should be considered:

- Pre-project research - needs of the specific community
- Formative evaluation - feasibility of tool usage
- Continuing research - monitoring the progress, playback, discussion etc.
- Community participation in planning - structure, administration etc
- Community involvement in programming e.g. comments, format, schedule etc.
- Interaction with community should be maintained and encouraged
- Use of local language
- Indigenous support – involvement of local leaders and authorities, interaction with political authorities and indigenous authorities (Balit, 1999).

Radio:

This tool provides audio/sound material only. The radio is a very popular and affordable tool (and many people in rural areas have access to radios) in delivering information. State employees, the audience or consumer and commerce demand decide the radio programmes to be transmitted. Radio has a number of channels, including educational, entertainment, sports, news and many more programmes. To open a radio station requires an application for a broadcasting license. To obtain a frequency license to run/open a radio station is sometimes costly and difficult and since the government safeguards the licensing in orders to keep a check on the information broadcast (Head, 1987).

Traditional information and knowledge can be transmitted using indigenous methods such as songs, story telling, poems, drama and plays. Radio has been used to educate communities and influence attitudes towards family size, female genital mutilation,

teenage pregnancies, women's issues, HIV/AIDS or other sexual transmitted diseases, healthcare, human rights, literacy, child nutrition, agriculture practices, voter education and many more (http://www.cmda.org.za, 10/08/2002).

2.9.4 Community radio station

Community radio is a broadcasting network that addresses the needs of a specific community or group with a community e.g. Izwi community radio that covers adisadvantaged area in Durban known as Cato Manor or Mkhumbane. Community members get together to seek funding, survey the community needs, let the community decide the name of the station and types of programmes wanted. This station can also be a kind of commercial radio because they offer space for advertising. It promotes *dialogue and debate* on the major issues of rural development as well as providing a platform for the expression of rural women's needs, opinions and aspirations. In this way radio is a participatory tool. It can include public shows, quizzes and village debates.

Communities in Mali have more than 75 radio stations established by private individuals, associations, local communities, commercial associations, religious, and political organisations. They focus on issues concerning the every-day life of their listeners and they also promote local development. A station can focus on problematic areas e.g. voter education (http//www.apnic.net/mailing-lists/s-asia-it/archive/2002/04/msg00007.html, 20/06/2003).

For small communities the Hi Fi system can be used for community announcements, and other programs. Umzinyathi, a rural area in South Africa – 90km from the city Durban, is the researchers experience of this type of the radio. People use the Hi Fi system, microphone, power, and radio announcer as an informal means of communication. The community likes and uses this station as their source of information. This method could be used to broadcast information obtained from the Internet so that those who are unable to make use of the telecentres for finding information can still benefit from community access to the Internet (Majola *et al*, 2000).

2.9.5 Free radio station

This is a non-commercial radio station, non-racial and non political. It is only funded by members' donations. The station is free because it has no financial support from the government so it can broadcast whatever the people feel is important without fear of losing financial support. This is formed by a group of individuals in a community e.g. Hamburg (Germany) who get together with a common goal to air their own programmes. It features people's interests e.g. Hamburg women's club. Members hold monthly meetings to discuss the progress and feedback from the community and also to correct shortfalls. Professional members offer their expertise to run this station e.g. accountants, sound engineers and clerks. The station started in 1975 and to date it is running (http://www.radiost.paula.de, 10/09/2000).

Radio can be used to promote participation in development as seen in the above site. In rural areas the radio can be used to provide information on agricultural and household, education. Tape recorders can be used to record events, story telling and sold to the public or made available in local libraries.

2.9.6 Telephones

In some areas access to telephone networks has been problematic due to lack of electricity as well as terrain that makes telephone installation expensive, and for some countries not viable. This problem has been resolved to some extent with the introduction of satellite telephones as well as mobile telephones. Mobile telephones, unlike landline telephones, do not require cable connections, thus the cost of the telephone infrastructure is reduced. For this technology to be viable people must be able to afford the purchase of the mobile telephone as well as the call charges and the required satellite transmission stations must be in place (Legaobe *et al*, 2000).

An often quoted a more recent study of the benefits of telephones for development is the example of the Grameen Telecom Village Phone programme in rural Bangladesh. Only a brief description will be included here in the study. The full version is available online (http://www.telecommons.com/villagephone, 16/08/2001).

The Village Phone programme was initiated in an effort to achieve universal access to a telephone. According to Grameen Telecom (a non-profit organisation), it is not

feasible for all people to own a telephone, but everyone should have access to a telephone within a ten-minute walk. A Grameen bank member (usually a woman) purchases a mobile telephone from Grameen Telecom using a lease-financing agreement. Each phone operator is responsible for making the services of the telephone available for incoming and outgoing calls to customers in her area or village, collecting the payments for calls, telephone maintenance and remitting payments to Grameen Telecom.

To date, this programme is leading to high consumer savings (savings of between 2.64% and 9.8% when the village phone is used in place of traveling to the city to make a call) and immeasurable quality of life benefits for rural Bangladeshi people. In particular the Village Phone is important for reducing the risk of receiving remittance payments from overseas family workers, which is an important source of income for the rural villages.

In addition the income that the Village Phone operator makes accounts for about 24% of the household income on average, thus these women are economically and socially empowered. An important point that is highlighted by this study is the high demand for communication in rural areas, and the profitability of this. Telecommunication investment companies often argue the opposite, but here we see how the private sector can be involved in development initiatives whilst still making a profit (http://www.telecommons.com/villagephone/, 10/09/200).

This case study is a good example of the importance of telephones (or other ICTs) for development, especially for quality of life improvements. It is, however, essential to note the specific context in which this programme is taking place. It could not simply be replicated in any other setting. For example, there is widespread access to electricity in rural Bangladesh and the required regulatory and technical circumstances were in place at the start of the programme, including the successful Grameen Bank micro-lending organisation, which has not had much success when replication attempts have been made in other countries, (http://www.unesco.org, 10/07/2003).

2.9.7 Office equipment (fax machines, printers, photocopiers)

Photocopying is often the most used service provided by telecentres. There are many reasons why people may need documents or other information copied, printed or faxed, and these services should be available in all communities. Some uses include copying of important personal documents e.g. ID and certificates, for preparing job applications or for typing of official letters. Basic business services such as fax machines, printers and copiers are important for community or individual small business ventures, as entrepreneurs need to communicate with their clients, banks, suppliers (http://www.officedigest.com/advertorials/career_success.asp, 20/09/2000).

2.9.8 The Internet

What is the Internet? The Internet is an international network of computers that are linked together via cables or satellite to exchange data or information. The core of this network consists of computers permanently linked through high-speed connections. Anybody with access to a telephone and a computer can access this network if the country or region that they are in has an Internet Service Provider (a company that sells access to the Internet, or owns one of the permanently linked up computers). Once one has access to this network, one can find information, documents, books etc on almost any topic and also make one's own information available for anyone in the world to read. For this reason, the Internet is called a 2-way communication medium. It is important to remember that not all information that is available is necessarily 'good' information. For more about what the Internet is, how it works and details on how to get connected, the reader is referred to the Rough Guide to the Internet 2000, which provides a clear, accessible and comprehensive coverage of this topic (Kennedy, 1999).

Many people have been critical of the Internet (and other ICTs such as telephones) for development contexts noting that poor people in rural areas need food, roads, schools and hospitals, not computers or Internet access (Ernberg, 1998). However, (Richardson & Paisley, 1998) argues that there are five main areas in which the Internet can be useful for development, particularly (but in the writers opinion not only) rural areas. These are: economic development through access to market and other important information (such as for agricultural producers), community development, (see below), research/education via distance education, online books,

research reports; Small and Medium Enterprise development, including telework and other web-based income generation, and media networks, particularly the provision of news services.

In the section on the use of the Internet for community development Richardson & Ramirez, (2000) identifies the following areas of applicability:

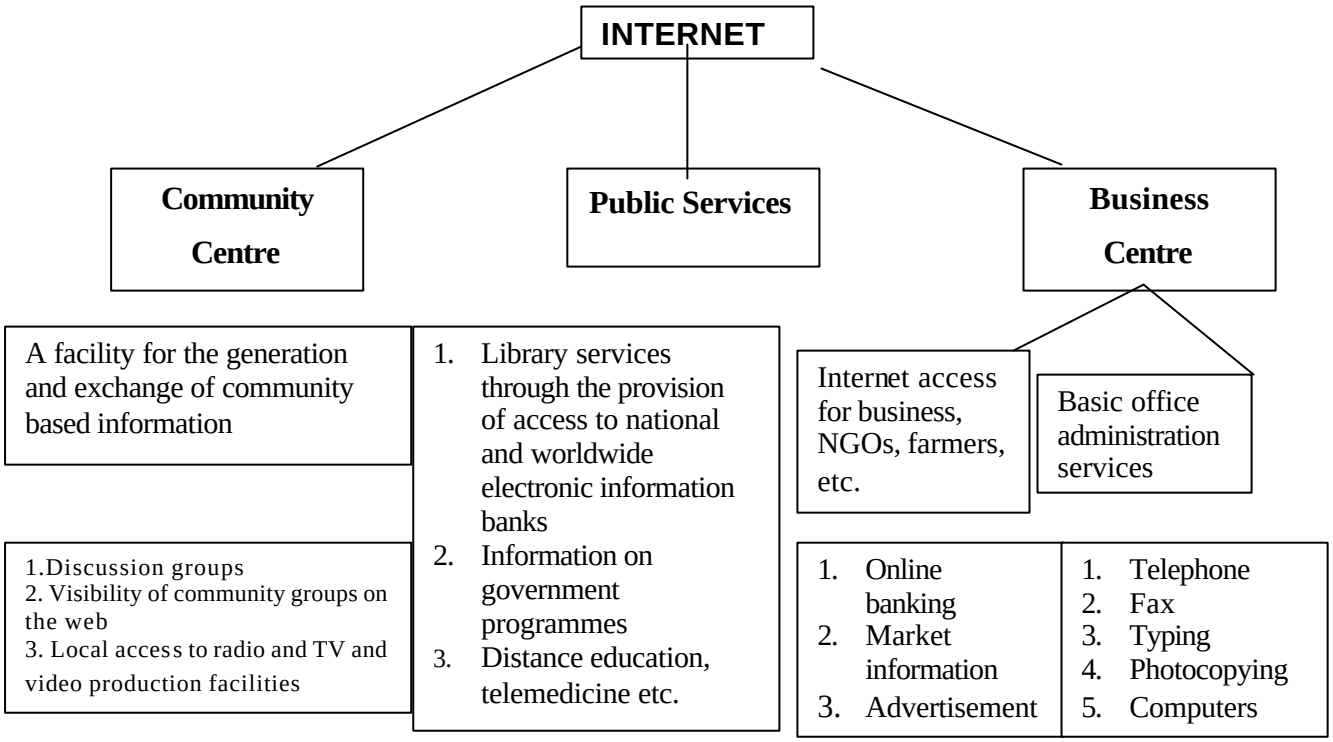
- To develop locally applicable applications and creative services to meet the needs of the marginalized.
- Provision of knowledge about development strategies.
- To enhance organisational efforts (locally, nationally and globally).
- To improve access to information, training, research and educational resources that can be used for development.
- To enable young rural people to learn about computers (employment).
- To provide technical information for rural professionals (health care workers, vets, engineers, teachers). This may encourage these qualified people to work in rural areas instead of migrating to cities.
- As a marketing tool for rural tourism and locally produced products.
- Enable NGOs to maintain a global presence, and access funding.
- Sensitise urban policy makers to the demands and needs of the rural community.

2.9.9 Telecentres

ICTs centre is the information shop, which provides different services and the final product being information circulation. Different names are used in different places e.g. Telecommunication Centre, Information Kiosk, Info Shop, and Community Telecentre. Facilities available in community telecentres include premises, staff, equipment and information. Telecentres may take many forms, ranging from single telephone line shops to multipurpose telecommunication technology access centres. Richardson & Paisley (1998:7) state that telecentres "offer a practical and community-oriented way to bring new information and communication technologies to the service of rural people". For development aims to be reached, the telecentre needs to be integrated into larger community development initiatives. Access to advanced ICTs will be meaningless unless people have use for such tools (Ernberg 1998). The model of Multipurpose Community Telecentres (MCT) attempts to do just

this by providing training, access to government information, access to libraries and business guidance to the community in addition to providing access to the ICTs. In this way, the technologies can be used to enhance autonomous community development. Rose (1999: 2) provides a useful model to show the Three basic functions that a MCT should include:

Figure 2: Functional Scheme for an MCT



Source: (Rose J, 1999: 2)

While MCTs may sound like a suitable means of using ICTs for community development initiatives, this approach is not without difficulties. Some of these include problems with power supplies and Internet access when the bandwidth is insufficient (the bigger the size of the pipeline, the bigger or more data flow) is insufficient. It is difficult to train people in methods of using the Internet or computers when there are frequent 'crashes' as this is frustrating and off-putting to learners. It is also difficult to make the services easily available to illiterate members of the community. Visits to a MCT in Nakaseke, Uganda, have shown that in some instances differences between educated and uneducated, rich and poor within a community may be created or reinforced when the MCT does not cater for the needs of all these

groups of people. According to evaluative studies of telecentres in South Africa, funding is commonly a central problem faced by the telecentre managers and users (Dahms, 1999).

Telecentres, by definition, are placed in areas that are far from the backbone of the main infrastructure. As a result, the costs of Internet access may be exceptionally high (USA, 2000) and (MPCC Research Report, 1998). In another recent study of telecentres and MPCs in South Africa it was found that demand for services, other than telephones (document creation, scanning, Internet) was limited or non-existent. Some of the possible reasons cited for this included problems of affordability, lack of marketing and awareness rising of the existence of the services and of the potential benefit, development and up-liftment impact of the services (Benjamin, 2000).

According to Benjamin, the following are the characteristics of ICTs Centres:

Location: Telecentres need to be located in a busy public place, which is easily accessible to the community, with telephone and power infrastructure. The building and premises should be properly erected and secure. The location could be shopping centres or school premises.

Staff: Hand-on staff to co-ordinate and organise the whole activity, help users, keep the place clean, equipment maintenance and offer training are needed. The staff should be properly trained to handle the users. The staff should aim to manage, keep equipment safe and the place running and keep useful to the community.

Equipment: The equipment is important because it is the backbone of the centre. Different types of communication tools are necessary. This includes telephones, fax machines, computers with Internet access, printers, scanners, photocopiers, video production facilities and equipment, video conferencing systems and broadcasting facilities. Video conferencing and broadcasting of services need to be offered on demand.

Services: Services vary from centre to centre and are determined by community needs; therefore it is the usage of the equipment available by the community. The centre also needs to offer conference venues and suitable equipment.

2.9.10 Computerised communication technologies

Computers have been around from 1951 using vacuum tubes to process data. In 1959 transmitters were introduced replacing over the vacuum tubes as the second generation; the third generation came into being in 1963. The integrated circuit was used as the data processor and later the fourth generation was Very Large Scale Integration (VLSI). The microprocessor chip was perfected in 1975 (Baber 1998: 43). The microprocessor chip has reduced the size of the computer to the desktop version as well as palm top e.g. Nokia cellular-phones. The huge size difference has come with wonderful computer features such as the Internet, word-processor, and graphics.

Whilst appreciating computers we should ask ourselves whether computers are in charge or whether people are in charge of computers and to what extent communities are concerned about the impact of computers. Computer activities involve creation, storage, manipulation and transmission of data, which makes work much easier. There are some limitations that hinder the potential usage of computers such as cost, space, time and technical support (Baillie & Percoco 2000: 13). Worst of all is that most computer-related products are imported thereby boosting foreing economies. Imported products create problems such as the language and terminology used.

2.9.11 Can ICTs centres be the bridge?

The initial study that was done after the establishment of ICT centres in rural areas and low-income urban settlements showed the problems and success of these centres. First centres were established in Denmark in 1985. These centres were either privately or some publicly owned. This successful concept spread all over the world in 1998. Recent studies have highlighted a number of problems facing ICT centres and therefore a thorough survey of community needs and ways of providing this service are necessary to provide sustainable successful centres. Diversified rural business (economy) is hampered by the lack of easy access to suitable information, the distance to the right markets and other appropriate services (http://www.itu.int.org, 09/08/02).

All ICTs included in this study are available for anyone who is able to pay the price and has the skills to use the technology. The introduction of community telecentres is the best way of reducing the personal impediments such as capital, skills, culture and

education. The follow is a case study on current practices in the Durban Metro marginalised areas, with special reference to Cato Manor area previously known as Umkhumbane.

2.10 CURRENT PRACTICES

In total according to Karaki & Benjamin (2000: 1-2), there are 235 multi-purpose community centres also known as telecentres in South Africa. Statistics indicated that 54 MPCCs were in the Eastern Cape, 52 in Gauteng, 46 in KwaZulu-Natal, 30 in the Western Cape, 23 in Northern Province, 9 in Mpumalanga, 8 in the Free State, 7 in the North West and 6 in the Northern Cape. The major focus of the study was the use of ICT in the centres. The data was analysed to give details regarding the number with telephones, computers and email. In 2001, 87 % of MPCCs had telephones, 66 % had computers and 30 % had email were. Broken down into provinces the following is where over 10 MPCCs were found in telephone penetration were as follows:

Figure 3 MPCCs telephone penetration in percentages per province

PROVINCE	% TELEPHONE	% COMPUTERS	% EMAIL
Gauteng	100	94	38
Western Cape	97	87	57
KwaZulu-Natal	87	37	28
Eastern Cape	76	61	20
Northern Province	61	35	9

Source Karaki & Benjamin (2000: 1-2)

The statistics shown a high level of usage; even in rural areas as 73 % have telephones, 47 % have computers and 18 % have email. 36 % of the MPCCs had 5 or more computers. For the MPCCs that did not have a phone, they were asked the distance to the nearest phone they could use. The average was 12 % that did not have a phone within in 5 km (http://www.sn.apc.org/nitf/mpcc/summary.html, 15/10/2004).

2.10.1 Cato Manor Development Association (CMDA)

In 1993 the Cato Manor Development Association was formed to begin implementing the re-development of Cato Manor (CMDA). CMDA focus was, amongst other things, aimed to develop housing, transportation, social, educational and recreational facilities, infrastructure, economic development and multipurpose centres. Earlier communication between the community and the CMDA staff was impossible until the day the newspaper was introduced and later the radio was used as a means of communication. Today there is an Internet café used by the community (http://.www.cdma.org.za, 20/10/2002).

2.10.2 Multi-Purpose Centres

Innovative planning and close liaison with community representatives and relevant departments of the Provincial and Metro Government has resulted in the development of a Multi-Purpose Centre. This combines specific social facilities, thereby reducing duplication and concomitant development costs (capital and running costs) while increasing the accessibility and levels of utilisation of the facilities. Both the Umkhumbane Multi-Purpose Centre in Old Dunbar Rd (RDP funded) and the Cato Crest Multi-Purpose Centre in Trimbourne Rd (EU funded) illustrate this unique concept, where primary and secondary educational facilities have been combined at the planning and implementation stages, with a community hall, a public library and a sports field to create an integrated and highly cost effective complex. Here all the facilities will be combined through a joint management philosophy which will promote the shared utilisation of the facilities by school users and the surrounding communities. This centre also houses the Internet Café. The community is using this café for Internet surfing as well as printing on a computer at a reasonable price (http://www.godisa.net/, 20/10/2002).

In this centre the most popular services are community radio, Izwi a newspaper and the Internet café. Staff also attends to walk-in queries from visitors or by appointment.

Community Radio station and Izwi newspaper has been running for more than a year now. The radio station is based in Pinetown. Preparation and the office work is done in Cato Manor. The broadcast programme covers entertainment, current affairs,

social needs and community development session. The European Union, through the CDMA fund-raising team finances this station. Broadcasting is successful because of the number of letters, phone calls we receive that is encouraging us. A survey conducted in 2000 was also positive and reflected a high demand for broadcasting in the community. The station is guaranteed that it will be sustained as long as it is useful to the community (http://www.cdma.org.za, 10/08/2002).

The Internet café opened in September 2000 through a SA Government initiative. The centre is open to all communities and the public at large. The centre provides a range of facilities (http://www.godisa.co.za/kznsc, 02/02/2003).

The researcher visited CDMA, Bamshela and Etafuleni telecentres.

2.11 CONCLUSION

Dahms & Faust-Ramost *in* Floyd *et al,* (2002: 277) stated that research has shown that about 80% of projects failed due to problems that have not been clearly defined in any of the studies yet. Working with people from the community will clarify the need and the way forward as to the action plan for the ICTs community projects. In Ward Three and Bamshela house-to-house telephone and electricity installation has been the most important innovation for the community. About 85 % of applicants received the service. After six months the service was withheld due to a lack of affordability. Number of community members failed to pay their dues for the services received.

The failure to afford the service led to the system vandalism i.e. solar panels was destroyed and electricity facilities were tempering with. This indicated that the telecentre could be the route to go because of its affordability. Telecentres help the communities who cannot afford the individual supply of communication services e.g. Internet, telephones and faxes.

Is culture flexible enough such that the old traditional African means of grooming the child through story telling (folklore) be improved or changed to the use of ICTs? Can the past imbalances and inequities be addressed through the use of ICTs e.g. provision of infrastructure in rural areas? One of the proposals from the Science and Technology White paper is to establish mechanism to re-locate government spending according to new priorities, particularly the problems of the disadvantaged rural communities. This study intends to find strategies as means of addressing the problems that hinder the well functioning of the telecentre and strategies to establish sustainable and useful ICTs centre.

This chapter discussed the overview of the study, literature survey of the study such as the stand of the South African policy makers and ICTs. Globalisation is a key factor in directing the ICTs usage worldwide. Be on the net of be left out that reflected a win or lose situation. The needs assessment portion, confirms the basic need for a well-sustained community project to be the needs identification. Community participation in community project that is the key factor in identifying the community needs, planning, implementing and evaluating the project.

ICTs are now part of education. Ignoring technology in class is not the solution since computer literacy has become one of the most important job's requirements. It has become clear that we need not allow culture to be the obstacle to modern development since this can hinder progress.

The availability of different ICTs can create a problem when deciding which one to use but it all depends on the users' needs, accessibility and affordability. The conclusion summarises the context and provides alternatives to a sustainable community telecentre and the model needed to start and sustain one.

CHAPTER 3

RESEARCH METHODOLOGY

INTRODUCTION

This section of the study provides details of the research design. The survey methodology was discussed, followed by the sampling procedure and the research instruments used. Lastly, the data collection methods and data analysis programme were discussed. This study intended to find the possibilities for community development (in rural areas) by using information communication technologies. The literature review has shown that development and economy globally is led by information communication technology. Countries that avoid and or ignore the pervasion of ICTs face challenges and backlogs in their economies (http://hjem.get2net.dk/gronlund/Castells.html, 24/07/2002).

Telecentres had proven successful in different countries such as Denmark, Wales and several African countries such as Uganda, Mali and South Africa is one of them. (http://www.plan.aau.dk/~mona/pub.htm, 09/08/02). Communities living in Bamshela and Ward Three were the respondents in this study. Bamshela is an area that has a telecentre that is currently operating. The Ward Three area does not have a telecentre.

Personal interviews, using questionnaires, were conducted to ensure that the questions were understood and answered accurately. From the responses the conclusion was drawn and recommendations were made about the best possible ways of making ICT's available, accessible, usable for the benefit of the community. While this study remains largely quantitative, it will include an important component of qualitative method. The focus group structure interviews were held to strengthen the questionnaire responses. For that reason a brief discussion of the two methods and a justification for the choice was made as follows.

3.2 DATA

3.2.1 Quantitative method

The quantitative method uses a deductive form of logic where theories and hypotheses are tested in a cause and effect order (Creswell, 1997: 7). In this methodology the researcher designed the research project with well-defined and clearly distinguished variables and hypotheses, as these remain fixed until the end of the study. Throughout the study the researcher remained distant and independent from the object of research. This method is seen as objective and is evident in the language used in writing the report. For instance, the researcher has to impersonalise the language used when presenting findings.

3.2.2 Qualitative method

The qualitative method is interpretative insofar as it advocates continuous interpretation of data while it is being collected. In this methodology there is a great deal of interaction between the informants and the researcher, which may even include the researcher spending some time at the research site. Here the researcher acknowledges and report differently from what is said when using quantitative methodology in the sense that the researcher may use the first person (Creswell, 1997: 7). The qualitative methodology deals mainly with descriptive data such as descriptions of people, places, words and pictures which are not easily handled by statistical procedure (Wickham, 1997: 5). Data will be of a two-folded type i.e. primary and secondary data.

3.2.3 Primary data

Primary data is gathered through direct interaction between the researcher and the researched also known as field research in that one gets the information "from the horse's mouth". This method is known as the closest to the truth and its contribution to findings and recommendations is important (Leedy, 1993: 117). Primary data for this study is obtained from Bamshela and Ward Three. This data is analysed by the statistical programme (SPSS) for accuracy and presented on Microsoft word.

3.2.4 Secondary data

Secondary data is obtained from the relevant stored collection such as library books, reports, websites, journals etc. This is basically known as literature review. Other people's research is part of this section since it quotes various works done by different researchers as reviewed in Chapter 2 and throughout the study. The secondary data is analysed systematically together with the primary data to illustrate the status of information communication technologies in rural areas in relation to the two areas e.g. Bamshela and Ward Three.

The qualitative method is used to supplement the quantitative method because quantitative data will form a major part of the gathering exercise from both areas and most data will be more likely to be of the researched tendency, likeliness and possibility.

3.3 SAMPLING PROCEDURE

An attempt is made in this study to calculate a sample, which is as representative and generalisable as possible. However, it should be acknowledged that designing a truly representative sample was not always possible, given the fact that in most instances "researchers are dependent on the goodwill and availability of subject" as Bell (1998: 83) puts it. Respondents were drawn from the people who were available at home from both areas during normal working days. Whether the person was on leave, un-employed, or self employed as long that person is available for the interview or to attend focus group meetings.

It was important to obtain a reasonable sample from both communities made up of different community stakeholders. The combination of two methods of sampling was used, that is, the stratified random and systematic sampling method. The stratified random sampling method was used because although the community was not homogeneous, it had different categories that could be grouped together to draw a sample e.g age and gender. The systematic sampling method was used together with the stratified random sampling method where necessary e.g. every third house was visited and every sixth person on the local road was approached.

3.3.1 Stratified Random Sampling

The community was grouped according to age groups. People from 17 to 60 years of age were targeted. This age is reasonable because most people are able to read and write. These are the people who are perceived to be the most active people especially in the field of communication and technologies.

3.3.2 Systematic Sampling

The community was approached in a systematic way and every sixth individual on the street and waiting rooms was approached as part of the study. Every third house was visited and one person per home interviewed.

3.3.3 The following sample was used

Bamshela is made up of 3258 members and Ward Three has 3904 community members. At least 40 respondents per area to make a total of 80 respondents were targeted for the analysis, plus ten from the group interview bringing the number to 90 respondents. The researcher managed to strike a balance between the gender and age group of community members responding to questionnaires.

The researcher collected data personally. One sub-area was visited per day. Data collection took five days to complete per area. The same applied to the other area – Ward Three. The statistics were obtained from Census SA (Durban) for both areas. Bamshela was the first area to be visited for data collection. Data collected from Bamshela was meant to support or reject the statement put forward for the study and do the same regarding the overall findings, therefore data would verify and strengthen the questioning of the second area known as Ward Three. This system will encourage cross checking of the possibility of establishment of the telecentre in Ward Three. Despite all the problems related to sample design the study was ensured that the design of the sample in this study produced both valid and reliable results.

3.4 VALIDITY AND RELIABILITY

Validity is defined by Grinell (1992:111) as the degree to which a measuring instrument is measuring what it is supposed to measure. The reliability is defined as the degree of accuracy, or precision, the instrument reflects. For this study, a questionnaire is a valid instrument because it is designed to measure exactly what the researcher intends to measure as the questions are designed accordingly in a structured form.

3.4.1 Validity

To ensure validity the instrument was specifically designed for the project, in order to obtain the required data for the study. Questions were intended to assess the information regarding communication technology necessity, awareness and community involvement. Two areas were targeted and two different questionnaires were prepared for each area. One area was Bamshela; its questionnaire comprised of 19 closed ended questions. In addition a structured focus group interview was conducted with 10 questions. The second area (Ward Three) had a questionnaire comprising of 25 closed ended questions.

3.4.2 Reliability

To ensure the reliability of the instrument, questions were based on information communication technology usage. Ten community members per area were used to pre-test the questionnaires. All twenty-community members were excluded from the actual study. After the pre-testing of the instrument it was checked and errors were corrected before the actual study.

3.5 DATA COLLECTION METHODS

There are no standard measuring instruments or formulae regarding the problem statement as well as sub-problems. Consequently the researcher had to design the measuring instrument based on the literature reviewed as noted in chapter two.

3.5.1 Data interpretation

The descriptive statistic analysis and inferential statistic analysis will be used. A descriptive statistic system will help to summarise raw data collected. Later the results will be interpreted further as information about the population at large (inferential statistics). Questions were closed-ended questions. This allowed the respondent to provide information, which the researcher needed for data analysis.

3.5.2 Limitation of the instrument

The limitation of the instrument is that it was time consuming. People knew that they were being tested and therefore may have provided answers to impress or please. Respondents can expect some kind of return after filling in forms, which could improve their live, community development projects, or otherwise they feel that they were used (Melville & Goddard 1996: 43 – 51).

3.6 QUESTION DESIGN

3.6.1 The content validity of the questionnaire

The content validity of the measuring instrument needed to be determined clearly to ensure that it covered the necessary content that would be relevant to the hypothesises that had been formulated (Rudestan & Newton 1992: 67). The researcher pre-tested the questionnaire before data collection. The HSRC advised that the questionnaires be tested before the actual study to increase content accuracy of the questionnaires in terms of relevance, clarity and understanding.

Both areas were contacted formally to obtain the right to access the area to conduct the study. Authorities of both Bamshela and the Ward Three are governed by both municipal and traditional leadership.

The data collected was captured, manually analysed and SPSS used to determine the rejection or the support of the hypothesis. The statistical tools used for each sub-problem is discussed below.

The problem statement of the study is to examine rural community development through information community technologies in Ward Three of Durban Metro.

3.6.2 First problem

The first sub-problem investigated was the means or strategies that can pave the way to ICTs accessibility by the community. This investigation should identify the obstacles of ICTs accessibility so as to identify reasonable means to overcome obstacles.

3.6.3 First hypothesis

The community is unable to or cannot access ICTs.

3.6.4 Data needed

Data for testing the hypothesis was provided from the responses by both communities to questionnaires and for Bamshela, questionnaires were supplemented by the group interview responses on ICTs.

3.6.5 Location of data

Only people from the selected sample (n=40) per area (Bamshela and Ward Three), that completed the questionnaires and ten interviewed (Bamshela) were included in the study.

3.6.6 Means of obtaining data

The data needed for the study was collected by means of questionnaires as well as focus group interviews.

3.6.7 Treatment of data

Completed questionnaires were screened to determine whether all questions were completed. Only questionnaires that were fully completed were included and considered in the study.

3.6.8 Analysis of data

The correlation and Chi-square statistic was used to analyse data, in order to establish whether a categorical variable in this case the obstacles to access ICTs - was determined through the frequency responses from the community.

3.6.9 Second sub-problem

What can be done to familiarise people with ICTs?

3.6.10 Second hypothesis

The solution to the problem is not known.

3.6.11 Location of data

Only the responses through questionnaires and interviews from the selected sample were included in this research.

3.6.12 Means of gathering data

The data was collected by means of questionnaires and interviews.

3.6.13 Treatment of data

Completed questionnaires were screened to establish whether the questions were all responded to. Questionnaires that were fully answered were included in the study.

3.6.14 Interpretation of data

The co-relation statistical procedure was used to establish the relationship between the two findings from Bamshela and Ward Three as a means of comparison with the factors that could hinder the usage of ICTs.

3.6.15 Third sub-problem

How can communities use ICTs to spread and get information to improve their standard of living e.g. education, health awareness, human rights etc.?

3.6.16 Third hypothesis

ICTs can be used as a means to improve and empower the community.

3.6.17 Data needed

Data was needed to test the third hypothesis through the questionnaires completed and interviews held. This was to establish the means of empowering the community through ICTs as compared to difficulties to access the ICTs.

3.6.18 Location of data

Only responses from the selected sample obtained that completed the questionnaires and interviews were included in the study.

3.6.19 Means of obtaining data

Data required was collected by means of the questionnaires and interviews.

3.6.20 Interpretation of data

The Chi-Square tool to determine whether there was a significant relationship between the ICTs and community development at large was used.

3.7 CONCLUSION

This chapter has outlined of the details of the methodology for the study. The introduction, data, sampling procedure and question design was discussed. The next chapter aims to present and interpret data for the study.

CHAPTER 4

DESCRIPTIVE OVERVIEW

INTRODUCTION

This chapter presents data analysis and a brief description of the data is given per table or graph. Different policy makers, researchers and communities at large support community development. The community development approach in South Africa is one of the many strategies to fight poverty. Therefore, a study to examine rural community development through ICTs in ward Three of the Durban Metro, was conducted. This study is one of the means of empowering communities to fight techno-phobia, cyber-phobia and overcome poverty. The stated statement simply highlights the critical questions of this study, which are as follows:

- How can a community gain access to ICT's?

- What can be done to familiarize people in Ward Three with Information Communication Technologies (ICTs)?

- How can a community use technology to spread and get information to improve their standards of living e.g. education, health awareness, human rights etc?

The responses to questionnaires were checked for completeness, accuracy and inconsistencies. Data was coded and classified in relation to the critical questions. Data is presented in different ways to provide the most meaningful summaries; tables and graphs are therefore used to present the data. Word-processing and Statistics programmes are used to present the data. Percentages in this study are not rounded to whole numbers but show exact percentages. Both qualitative and quantitative statistics were used in this study. The researcher grouped the questionnaires into three categories: Personal details of the candidate, ICTs awareness and community participation in community development projects.

4.2 RESULTS

Forty community members per community area completed the questionnaires. A telecentre manager and ten community members were interviewed using the structured group interview technique. The research results from this study were presented in the form of tables, graphs and descriptive statements. Results were as follows:

4.2.1 Description of the Sample.

4.2.2 Information Communication and other technologies awareness.

4.2.3 Community project involvement.

4.2.1 Description of a sample of Bamshela area

Table 4.1 Profile of respondents according to gender

Gender	Frequency	Percent
Female	21	52.5
Male	19	47.5
Total	**40**	**100.0**

Table 4.1 reflects that 52.5 percent are female and 47.5 percent are male respondents, this reflects the normal distribution of gender across the population.

Table 4.2 Profile of respondents according to age

Age	Frequency	Percent
18-24	25	62.5
25-33	11	27.5
34-43	3	7.5
44	1	2.5
Total	**40**	**100.0**

Table 4.2 reflects that 62.5 percent of respondents were between the age of 18 – 24, and 2.5 percent were 44 of age, which is a true reflection as the 19 – 24 age group is perceived to be more active that they are using the centre than the age group <18 and >44 years old.

Table 4.3 Profile of respondents according to status

Status	Frequency	Percent
Student	11	27.5
Employed	8	20.0
Unemployed	15	37.5
Other	6	15.0
Total	**40**	**100.0**

Table 4.3 reflects that most respondents are not employed as 27. 5 percent are students and 37.5 percent are unemployed. This equals 65 percent altogether. Self-employed (15 percent) and 20 percent employed equals 35 percent employed; this is common for rural areas.

Table 4.4 Profile of respondents according to monthly living allowance

Living Allowance	Frequency	Percent
R0-R999	25	62.5
R1000-R1999	6	15.0
R2000-R2999	5	12.5
R3000-3999	1	2.5
+R4000	3	7.5
Total	**40**	**100.0**

Table 4.4 reflects that 62.5 percent of the sample is living within the scale of R0 – R999, most of it made up of pensioners and a few security personnel and domestic workers. 10 percent of the sample is living on R3000 – R3999 per month because of the area and job types available around e.g. police persons, nurses and teachers.

Table 4.5 Profile of respondents according to educational level

Educational Level	Frequency	Percent
Grade 7	13	32.5
Grade 8 Grade 12	2	5.0
Tertiary undergraduate	21	52.5
Post graduate	4	10.0
Total	**40**	**100.0**

Table 4.5 reflects that 52.5 percent are undergraduates and 5 percent fall within grade 8 and 12, which indicates that more respondents have been to colleges, ranging from 3 months, 1 to 3 years' training in different careers.

4.2 Information Communication and other technologies awareness

Table 4.6 Number of visits to Bamshela Telecentre per month

Usage	Frequency	Percent
Never	13	32.5
Once	7	17.5
2-5 Times	9	22.5
6-15 Times	3	7.5
+16 Times	8	20.0
Total	**40**	**100.0**

Table 4.6 shows that 32.5 percent of respondents never visited the centre for different reasons. 67 percent had been to the centre at least once per month and some more than 16 times per month. People therefore are aware of and did use it.

Table 4.7 ICTs used in the Bamshela Telecentre

ICTs	Frequency	Percent
Computer & Copier	1	2.5
Tel, Copier & Fax	4	10.0
Telephones	8	20.0
Tel & Copier	13	32.5
Other	14	35.0
Total	**40**	**100.0**

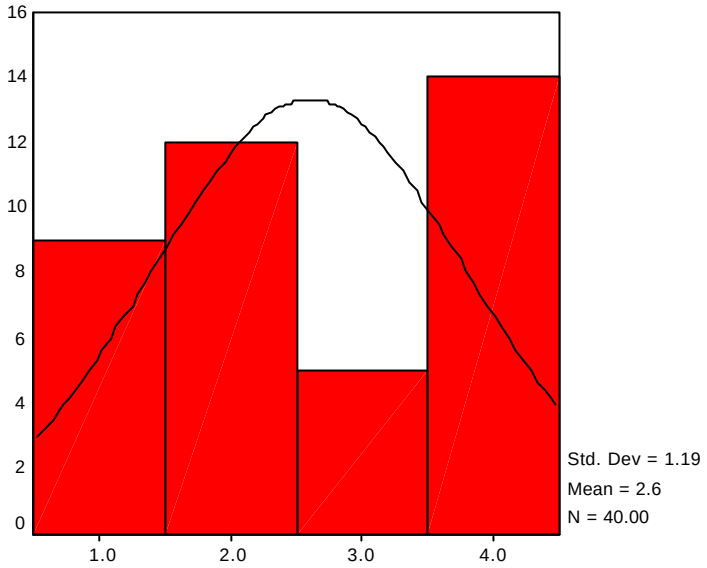
Table 4.7 shows that 35 percent of respondents used different ICTs in the centre, including telephones, videos, computer service, fax and copiers. 32.5 respondents had used common domestic machines such as telephones and photocopying machines more frequently than computers. Computers obviously need special skills.

Table 4.8 Statistics – mean and standard deviation

		Are you aware of the Bamshela Telecentre?	How often per month do you use the Telecentre?	What ICTs do you use at the Bamshela Telecentre?
N	Valid	40	40	40
Mean		1.25	3.28	5.03
Std. Deviation		0.439	1.55	2.22

Table 4.8 presents the average awareness – 1.25 usage; 3.28 and type of ICTs used – 5.03, with no missing variables. The following graph shows the normal curve.

Graph 4.1



Graph 4.1 illustrates the accuracy of the sample generalisation (normal distribution curve) for the study.

Table 4. 9 Bamshela Telecentre awareness

Awareness	**Frequency**	**Percent**
Yes	30	75.0
No	10	25.0
Total	**40**	**100.0**

Table 4.9 indicates that 75 percent of the samples are aware of the Telecentre and 25 percent are not aware.

Table 4.10 Computer usage

N 40	Word Processing	E-mail	Graphics	Internet	Other
Yes	6 = 15 %	5 = 12.5 %	3 = 7.5 %	5 =12.5 %	27 = 67.5 %
No	34 = 85 %	35 = 87.5	37 = 92.5 %	35 = 87.5 %	13 = 32.5 %

Table 4.10 illustrates that very few respondents used the computer even though they have a centre locally. This indicates a lack of computer literacy.

Table 4.11 Amount spent for communication per month

Amount spent	Frequency	Percent
R10.00	8	20.0
R20.00	11	27.5
R30.00	7	17.5
+R40.0	14	35.0
Total	**40**	**100.0**

Table 4.11 indicates that 35 percent are spending over R40.00 on communication. Availability of ICTs is a must for community needs satisfaction as the table shows that all respondents spend money in order to communicate.

Table 4.12 Distance between Bamshela Telecentre respondent's home

Distance	Frequency	Percent
Very far	14	35.0
Far	17	42.5
Not far	9	22.5
Total	**40**	**100.0**

Table 4.12 states that only 22.5 percent are not far, others are far and very far from the centre. Distance between houses is more than a one-kilometer part; that means the community communication centre is far from the community.

4.2.1 Description of a sample of the Ward Three area

Table 4. 13 Statistics – Mean and Std Deviation

N	Valid	40
Mean		1.48
Std. Deviation		0.506

Table 4.13 shows that the average population is 1.48 and standard deviation is 0.506 and this shows a normal distribution curve.

Table 4.14 Profile of respondents according to gender

Gender	**Frequency**	**Percent**
Female	21	52.5
Male	19	47.5
Total	**40**	**100.0**

Table 4.14 shows that 52.5 percent are females and 47.5 are males, which reflects the normal distribution of gender across the population and strike a balance between respondents.

Table 4.15 Profile of respondents according to age

Age	**Frequency**	**Percent**
18-24	11	27.5
25-33	13	32.5
34-43	13	32.5
44	3	7.5
Total	**40**	**100.0**

Table 4.15 shows that an active 32.5 percent are aged between 25 – 33 and 32.5 percent are 34 – 43; which reflects the centre of the overall age range that excludes children below 18; people over 44 elder persons are mature and use ICTs for the important needs and children only if they are sent to use ICTs.

Table 4.16 Profile of respondents according to status

Status	Frequency	Percent
Student	4	10.0
Employed	16	40.0
Unemployed	14	35.0
Pensioner	2	5.0
Other	4	10.0
Total	**40**	**100.0**

Table 4. 16 reflect that there is 40 percent are employed, 5 percent are pensioners and 10 percent are self-employed; that makes 55 percent are stable income respondents. 35 percent are unemployed and 10 percent are students which means 45 percent of respondents live on other people's contributions.

Table 4.17 Profile of respondents according to living allowance per month

Income p/m	Frequency	Percent
R0-R999	17	42.5
R1000-R1999	7	17.5
R2000-R2999	4	10.0
R3000-R3999	6	15.0
+R4000	6	15.0
Total	**40**	**100.0**

Table 4.17 shows that 42.5 percent of respondents live on R0 – R999 per month, because of pensioners and types of jobs available in the area and in the nearby cities. Teaching, nursing and policing are a common profession in the area and the best income range in the communities at 30 percent (income level R3000 – R4000).

Table 4.18 Profile of respondents according to educational level achieved

Education	Frequency	Percent
Grade 7	2	2.5
Grade 8 – Grade 12	19	50.0
Tertiary undergraduate	9	23.0
Post graduate	9	22.0
Other	1	2.5
Total	**40**	**100.0**

Table 4.18 states that 2.5 percent of respondents are at the highest level of education and 2.5 percent are equal or below grade 7. 95 percent are computer literate as they have been to high school (50percent), attended tertiary institutions (23 percent) and 22 percent are postgraduates.

4.2.2 Information Communication and other technologies awareness

Table 4.19 Number of respondents regarding computer usage

PC usage	Frequency	Percent
Yes	23	57.5
No	17	42.5
Total	**40**	**100.0**

Table 4.19 indicates that 57.5 percent had used a computer before the study and 42.5 had never used a computer. More people have had computer access and used it.

Table 4.20 Respondents' intention to use a computer in the future

Future usage	Frequency	Percent
Yes	35	87.5
No	5	12.5
Total	**40**	**100.0**

Table 4.20 presents that 87.5 percent intended to use a computer in the future and 12.5 did not intend to use it. This shows there is a need for the facility in the area for the community to benefit.

Table 4.21 To use a computer to do WP, Email, Internet and other

Used pc	Frequency	Percent
Very low	8	20.0
Low	9	22.5
Average	17	42.5
High	6	15.0
Total	**40**	**100.0**

Table 4.21 indicates the average intention to use a computer for one or other need as 42. The table reflects the need for a facility.

Table 4.22 Respondents familiarity with: ATM, vending machine, radio and telephones

Other machines	Frequency	Percent
Very low	4	10.0
Low	2	5.0
Average	12	30.0
High	20	50.0
Very high	2	5.0
Total	**40**	**100.0**

Table 4.22 illustrates that 50 percent are highly familiar with electronic machines. All machines here are computerised and responses show that people are aware and familiar with them.

Table 4.23 Difficulties and no difficulties in using electronic machines

Difficult	Frequency	Percent
Yes	8	20.0
No	32	80.0
Total	**40**	**100.0**

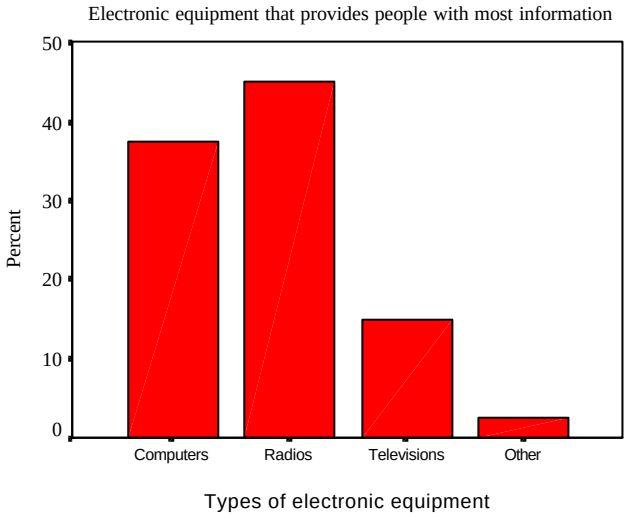
Table 4.23 illustrates that 80 percent of respondents have not encountered difficulties when using electronic machines and only 20 percent encountered difficulties.

Table 4.24 Preferred to be trained before using

Training	Frequency	Percent
Computers	32	80.0
Videos	5	12.5
Other	3	7.5
Total	**40**	**100.0**

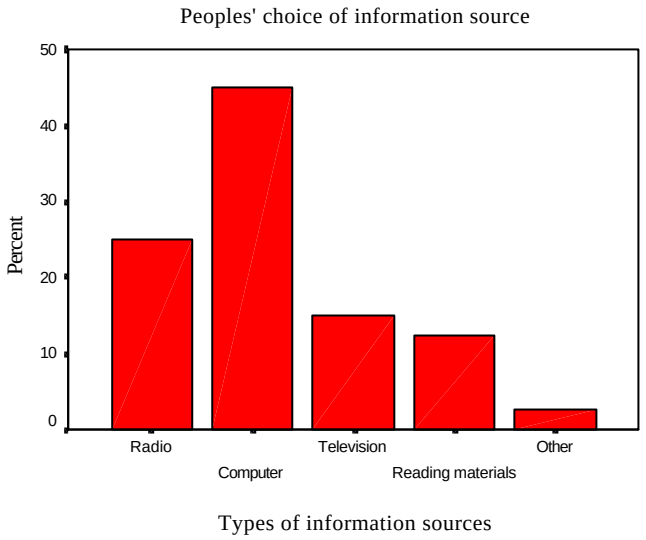
Table 4.24 states that 80 percent of respondents need to receive computer training before they use computers. This is understandable, as computers have more advanced features as compared to the other electronic machines.

Graph 4.2



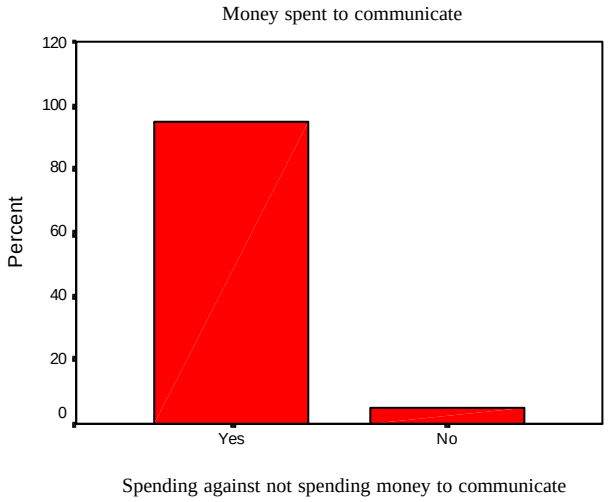
Graph 4.2 demonstrates that 45 percent of respondents say radios are the most informative ICT. The next important communication technologies are computers as the community has 37 percent users. Only 2.5 percent use reading materials and attend meetings to get information.

Graph 4.3



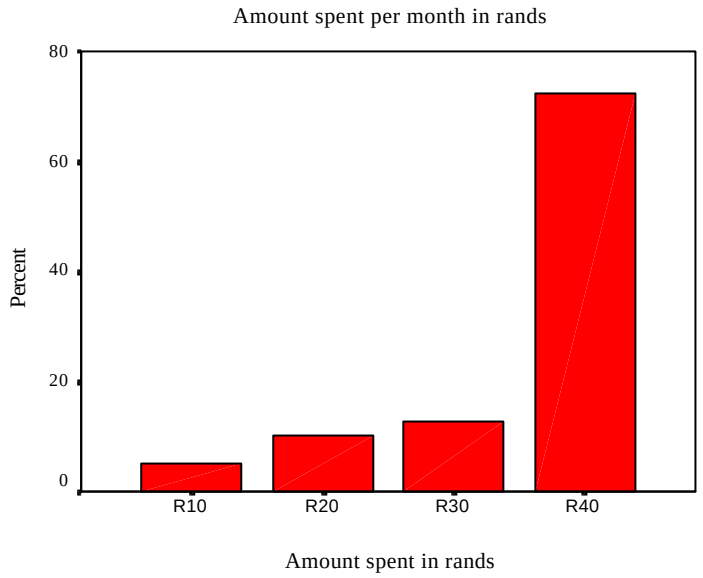
Graph 4.3 points out that most people prefer computers as preferred communication technology. Radios follow. Currently radios are the main source of information as shown in graph 4.2.

Graph 4.4



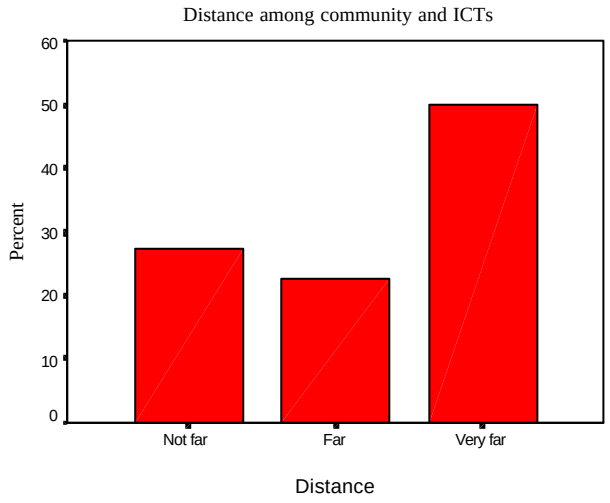
Graph 4.4 demonstrates that 95 percent do spend to communicate. Despite low rates of income people do spend money in order to communicate. The other 5 percent could be marginalised by the distance or income.

Graph 4.5



Graph 4.5 demonstrates that 72.5 percent spend more than R40.00 per month. This confirms that, despite the low rate of income and the distances in the area, people do spend to communicate so therefore the facility is necessary.

Graph 4.6



Graph 4.6 illustrates that most people's home are far from the ICT centre. Very few stated that they were nearer to communication technologies and as most people live very far from communication technologies. This can affect the usage and ICTs benefits to the community.

Table 4.25 Telecentre necessity

Necessity	Frequency	Percent
Nil	2	5.0
Very low	9	22.5
Average	4	10.0
High	16	40.0
Very high	9	22.5
Total	**40**	**100.0**

Table 4.25 points outs that 40 percent say it is of importance and 5 percent say it is not a pressing necessity. 5 percent of respondents are people who spend money to communicate as per graph 4.4 demonstrations.

Table 4.26 Telecentre services awareness

Understanding	Frequency	Percent
Nil	15	37.5
Very low	2	5.0
Low	4	10.0
Average	8	20.0
High	9	22.5
Very high	2	5.0
Total	**40**	**100.0**

Table 4.26 illustrates that 37.5 percent of respondents do not understand telecentre services at all. Workshops and good advertisements for the centre are necessary. Most respondents know and understand telecentre services. Awareness campaigns are important for community education and the efficient usage of the centre.

Table 4.27 Telecentre necessity for community development

ICTC need	Frequency	Percent
Nil	10	25.0
Yes	29	72.5
No	1	2.5
Total	**40**	**100.0**

Table 4.27 illustrates the point that 72 percent say a telecentre is necessary. (The process of its establishment will be taken care of later). Only 2.5 percent of the respondents say telecentre is not necessary.

Table 4.28 The most important communication tool in the telecentre

ICTs Types	Frequency	Percent
Computer	21	52.5
Video Machine	4	10.0
Telephone	13	32.5
Other	2	5.0
Total	**40**	**100.0**

Table 4.28 illustrates the fact that 52.5 percent need to use a computer in the centre, therefore computers must be available at the centre for public use as well as public telephones.

Community project and community participation

Table 4.29 Telecentre establishment responsibility

Responsibility	Frequency	Percent
Community organisations	19	47.5
Government	14	35.0
Private Companies	4	10.0
Other	3	7.5
Total	**40**	**100.0**

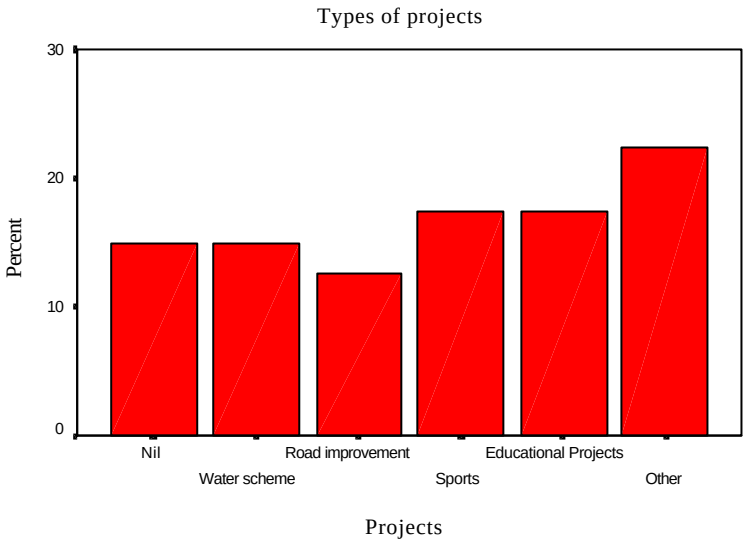
Table 4.29 indicates that 47.5 percent state that community organisations are responsible for establishing the centre. Furthermore, government is expected be involved part in the process as well as private companies.

Table 4.30 Participation in community project

Participation	Frequency	Percent
Yes	28	70.0
No	12	30.0
Total	**40**	**100.0**

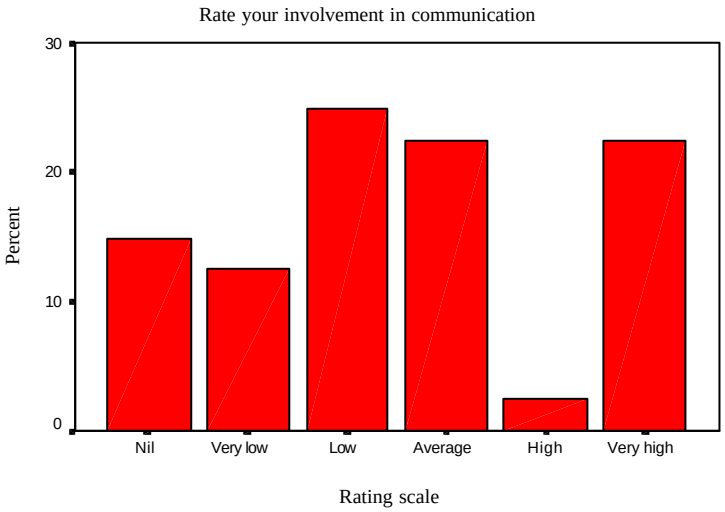
Table 4.30 shows that 70 percent have been involved in community projects. 30 percent have not been involved in any of the community projects. Community participation is grouped into four categories such as communication, decision-making, implementation and evaluation. Their involvement rating is shown on the graph 4.8, 5.9.4.10 and 4.11. Their involvement rating scale is nil, very low, low, average and very high.

Graph 4.7



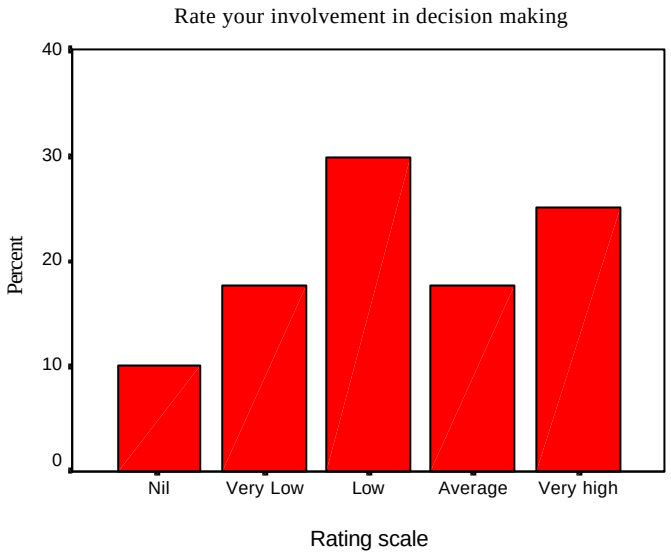
Graph 4.7 demonstrates different types of projects that community members are involved in. Community members do therefore participate in community projects, which is the suggested approach to sustainable and successful community projects.

Graph 4.8



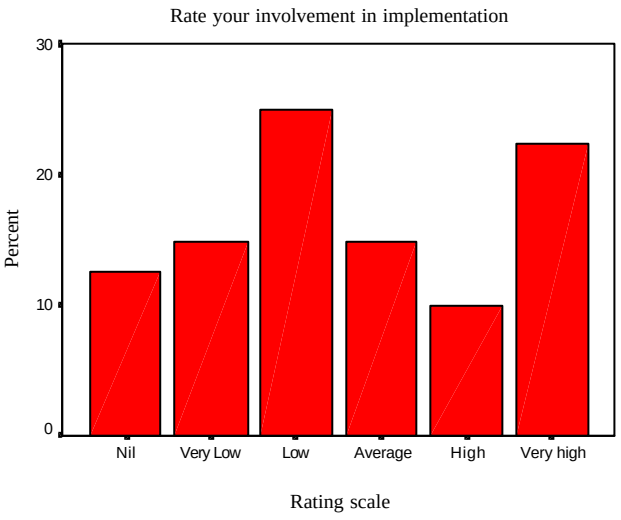
Graph 4.8 demonstrates that respondents on average are participating in communication. Communication, as one of the most important management function is currently useful and most people seem to agree.

Graph 4.9



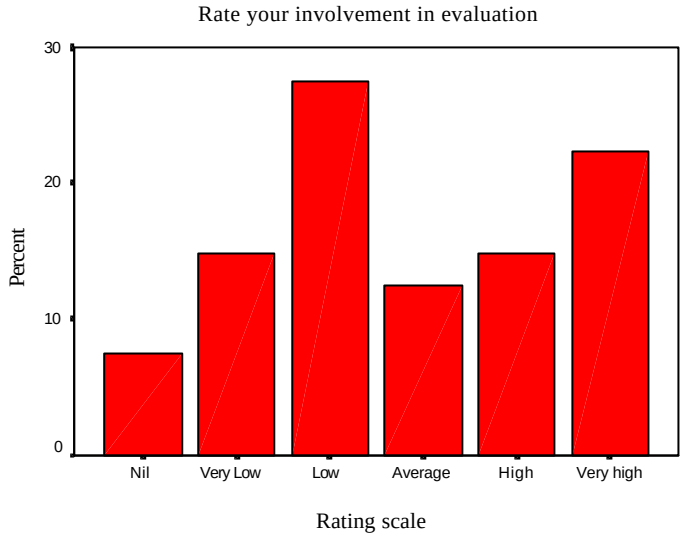
Graph 4.9 demonstrates the fact that respondents participate in decision-making but mostly at a low level. The control of the project lies with the decision-makers and for rural areas it is the common practice currently. This might improve with the democratic strategies that are being introduced all over South Africa.

Graph 4.10



Graph 4.10 demonstrates the fact that respondents participate in the implementation of the project to an average extent. More community participation is recommended for better and sustainable community projects.

Graph 4.11



Graph 4.11 demonstrates the fact that respondents are involved in evaluating the project but to an average extent. Evaluation ensures the smooth running of the project as people learn and improve on their mistakes and standards.

4.3 CONCLUSION

This chapter displays data as it was obtained from respondents. Data is presented in the form of tables and graphs accompanied by a brief description of the results. The results indicate the important areas that need to be addressed individually in order to have a sustainable telecentre.

The data illustrates:

- Firstly, a good balance of gender.
- Secondly, the relevant age range indicating that only literate people were participants in the study.
- Thirdly even though some residents are self employed and not included here, there is a difference of 50 percent from both areas. The employment rate in Ward Three is higher than Bamshela. That means that Ward Three is more advanced than Bamshela.
- Fourthly, both communities show high percentages that live within the R0 – 999 ranges, which is normal within rural areas.

- Lastly, regarding the educational level, Bamshela has 62.5 percent of tertiary and under and post graduates respondents, while Ward Three had 90 percent for both.

According to Vroom's theory of expectancy, the current practiced behaviour determines future expected behaviour. The Bamshela community behaviour is more likely to be repeated by the Ward Three community members. The awareness raising of the peoples' ICTs centre, willingness to spend money and the actual expenditure on communication say it all. There is 75 percent awareness, 100 percent communication expenditure and 35 percent of respondents spend more than R40.00 per month, which is far more than the researcher's expectations. With regard to Ward Three, their intention to use the computer equals 87.5 percent, familiarity with different technology is more than 85 percent, and only 20 percent experienced difficulties in using technologies. Given the facilities the behaviour will be multiplied. 80 percent clearly stated that, they need to be trained for computer use, which could be the reason for the low rate of computer usage in Bamshela compared to telephones (lack of training as respondents highlighted).

Analytical data is presented on chapter five.

CHAPTER 5

STATISTICAL ANALYSIS

5.1 INTRODUCTION

This section states the fact that rural development needs have taken an upswing from the usual water pipes and electricity cables being installed to new trends in development which are now more into Information and Communication Technologies as a means of upgrading remote rural areas and as long-term investment and development strategy. The previous chapter allows us to reflect on the findings of the study, as the normal distribution curve stated for both communities. The results should be understood on the basis that the targeted population focused on the people who were at home during weekdays. The reasons could be that some were on leave or no longer employed as the study was done during working hours.

The Statistical Package for the Social Science (SPSS) computer programme was used to interpret the data. Descriptive and inferential statistics were employed in this study. Paired-Samples T test and One-Way ANOVA was employed in this study where appropriate. Findings are reported in terms of the 95 % confidence level ($p<0.05$).

5.2 CROSS TABULATION

The following is the cross tabulation that illustrates the computer usage among respondents per description category from both communities - Bamshela and Ward Three. The categories investigated included gender, age, group status, income and educational level.

Regardless of categories, each area respondents have used computers. As it can be expected in Ward Three there were more respondents that used computers there than in Bamshela, although Bamshela area already had a community centre. Ward Three, however, is a more advanced area. This may explain why there were more computer users than in Bamshela even though they did not have a community centre available

locally. It can be predicted that if there were no computer centre in Bamshela there would be less computer users from that area. Focus group interviews clarified the areas that need to be attended to as a solution to the problem faced by the community Details are provided as appendix 3.

Cross tabulation of Bamshela and Ward Three computer usage

Table 5.2.1 Frequencies in all categories against computer usage

Description	Have you used a computer before?			
	Bamshela		Ward Three	
	Yes	No	Yes	No
Females	1	20	11	10
Males	6	13	12	7
Age =>18	1	6	0	0
Age 19 – 24	1	17	9	2
Age 25 – 33	3	8	8	5
Age 34 – 43	2	1	6	7
Age =+44	0	1	0	3
Students	0	11	3	1
Working	5	9	14	6
Not working	2	13	6	10
R0 – R999	1	24	8	9
R1000 – R1999	2	4	6	1
R2000 – R2999	1	4	3	1
R3000 – R3999	0	1	2	4
<=R4000	3	0	4	2
=>Grade 7	3	10	1	1
Grade 8 – 12	0	2	7	12
Tertiary	2	19	8	2
Postgraduate	2	2	7	2
Sum	**35**	**165**	**115**	**85**
Percentage (%)	**17.5**	**82.5**	**57.5**	**42.5**

Break through according to categories

Table 5.2.1 states that 165/200 (82.5 %) respondents from Bamshela had never used a computer and only 35/200 (17.5 %) used the computers, where as in Ward Three, 115/200 (57.5 %) used computers and 85/200 (42.5 %) had not. Most respondents that had used computers were working people from both areas. Bamshela ranged from 0 – 6 and Ward Three ranged from 0 – 14 users.

Computer usage refers to anyone using a computer for any purpose.

5.3 INFERENTIAL STATISTICS

Response to statement: A1 – A5 against B6

Table 5.2.2 Percentaged computer usage according to gender.

Gender	Bamshela		Ward Three	
	Yes %	No %	Yes %	No %
Female	2.5	50	27.5	25.0
Male	15	32.5	30	17.5
Total	**17.5**	**82.5**	**57.5**	**42.5**

Table 5.2 indicates that 15 of 17.5 percent were male in Bamshela as compared to 30 of 57.5 percent male respondents who had used computer from Ward Three. 27.5 percent Ward Three females and 2.5 percent Bamshela female respondents had used a computer. Fewer females had used computers, while males were privileged in that they were allowed to go to school or find job; they therefore had access to a better life. Today this is known as gender discrimination, which hindered female empowerment.

Table 5.2.3 Computer usage according to age

Age	Bamshela		Ward Three	
	Yes %	No %	Yes %	No %
<=18	2.5	15	0	0
19-24	2.5	42.5	22.5	5
25-33	7.5	20	20	12.5
34-43	5	2.5	15	17.5
=>44	0	2.5	0	7.5
Total	**17.5**	**82.5**	**57.5**	**42.5**

Table 5.2.3 reflects that 7.5 of 17.5 percent, aged 25 – 33 of respondents had used computers in Bamshela, and 22.5 of 57.5 percent, aged 19 – 24 from Ward Three. This shows that most computer users are at the middle adult age group. Current behaviour is said to predict future behaviour. Age group 19 –33 is nearing middle age when a person creates, evaluates and modifies his/her major life structure.

Table 5.2.4 Computer usage according to respondents status

Status	Bamshela		Ward Three	
	Yes %	No %	Yes %	No %
Student	2.0	27.5	7.5	2.5
Employed	12.5	22.5	35.0	15.0
Unemployed	50.	32.5	15.0	25.0
Total	**19.5**	**80.5**	**57.5**	**42.5**

Table 5.2.4 reflects that most computer users are employed as 12.5 of 19.5 percent in Bamshela and 35 of 57.5 percent are also employed users from Ward Three. Most users are employed people i.e. 47.5 percent altogether from both areas used computers because they were employed people. They spent most of their time at work or colleges and consequently accessed and used computers.

Table 5.2.5 Computer usages according to respondents' income

Income	Bamshela		Ward Three	
	Yes %	No %	Yes %	No
R0-R999	2.5	60.0	20.0	22.5
R1000-R1999	5.0	10.0	15.0	2.5
R2000-R2999	2.5	10.0	7.5	2.5
R3000-3999	0	2.5	5.0	10.0
+R4000	7.5	0	10.0	5.0
Total	**17.5**	**82.5**	**57.5**	**42.5**

Table 5.2.5 reflects that 7.5 of 17.5 percent of respondents that have used computers are in a high of income ±R4000.00 from Bamshela and 20 of 57.5 percent from a low income level of (R0 – R999) are from Ward Three. Only one percent difference when comparing the highest levels from both Bamshela and Ward Three. Generally Ward Three is more advanced than Bamshela e.g. in education, income and other developments but unfortunately it does not have a centre locally as does Bamshela. With their own communication centre the usage is expected to increase.

Table 5.2.6 Computer usage according to educational level

Education	Bamshela		Ward Three	
	Yes %	No %	Yes %	No %
Grade 7	7.5	25.0	2.5	2.5
Grade 8 - 12	0	5.0	17.5	30.0
Undergraduate	5.0	47.5	20.0	5.0
Post graduate	5.0	5.0	17.5	5.0
Total	**17.5**	**82.5**	**57.5**	**42.5**

Table 5.2.6 reflects that 7.5 of 17.5 percent are from grade 7 and 10 percent shared by under graduates and postgraduates in Bamshela. Twenty respondents who had used computers were undergraduates followed by 17.5 in grade 8 – 12 and 17.5 the postgraduate group in Ward Three. This table indicates best opportunities for investment as all age groups used computers.

Response to statement: A2, A4 & A5 against B6

Table 5.2.7 Relationship between age and computer usage

Age	Bamshela		Ward Three	
	Yes %	No %	Yes %	No %
18	2.5	15	0	0
19-24	2.5	42.5	22.5	5
25-33	7.5	20	20	12.5
34-43	5	2.5	15	17.5
44	0	2.5	0	7.5
Total	**17.5**	**82.5**	**57.5**	**42.5**

$p>0.05$

Table 5.2.7 reflects no significant relationship between age and computer usage (χ^2 = 2.403, df, p =.101). This suggests that there was no notable difference existing between the influences of computer usage and who are spending, from different age groups to the statement. 7.5 percent of computer users were at the aged 25 – 33. There was 22.5 of respondents who were spending money to use computers were aged 19 – 24.

Table 5.2.8 Relationship between income and computer usage

Income	**Bamshela**		**Ward Three**	
	Yes %	No %	Yes %	No %
R0-R999	2.5	60.0	20.0	22.5
R1000-R1999	5.0	10.0	15.0	2.5
R2000-R2999	2.5	10.0	7.5	2.5
R3000-3999	0	2.5	5.0	10.0
+R4000	7.5	0	10.0	5.0
Total	**17.5**	**82.5**	**57.5**	**42.5**

P<0.05

Table 5.2.8 reflects a highly significant relationship (χ^2 = 19.365, df 1, p = .000). This reflects that a notable difference exists in the responses of different income groups to the statement. 60 percent of the sample living within the scale of R0 – R999 had not used a computer in Bamshela. 22.5 percent living on the same scale had not used computers in Ward Three. 2.5 and 20.5 percent of the respondents in the same scale of living allowance had used a computer. Once again Ward Three community members proved to be the most frequent computer users. That can be increased with infrastructure available locally.

Table 5.2.9 Profile of respondents according to educational level

Education	**Bamshela**		**Ward Three**	
	Yes %	No %	Yes %	No %
<= Grade 7	7.5	25.0	2.5	2.5
Grade <= 8 – 12	0	5.0	17.5	30.0
Undergraduate	5.0	47.5	20.0	5.0
Post graduate	5.0	5.0	17.5	5.0
Total	**17.5**	**82.5**	**57.5**	**42.5**

P>.05

The table 5.2.9 shows no significant relationship (χ^2 = .007, df = 1, p = .938). No notable difference exists in the responses of different educational level groups to the statement. 5 percent of respondents were at the undergraduate level in Bamshela and 20 percent from the same level in Ward Three area were the most frequent computer

users. Very well educated or high school level did not matter since technology benefits attracts all.

5.3 CONCLUSION

The results were not predictable. This takes one to the next level of needs i.e. the "what to do"? The ICTs needs and usage and availability are important, but what can communities do to access these ICTs for their benefit and development. Recommendations are outlined in the last chapter, which follows i.e. chapter 6.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

INTRODUCTION

This chapter highlights the areas that need attention and a possible solution is suggested together with the details as in appendix 4 focusing on the Ward Three area. The focus group interview will be described in appendix 3.

6.2 CONCLUSION

The Community development concept, a term coined by the International Union for the Conservation of Nature (IUCN), must me the needs of the present without compromising the ability of future generations to meet their own needs: the goal of this research is community development through information communication technologies in Ward Three of Durban Metro, it is necessary for the Ward Three community to join or hike on the information highway. As Castells stated earlier, one chose to join or be left out and bear the consequences and as the researcher said if you cannot beat them join them.

The study had revealed that neither distance, cost, age, education nor income can stop a rural community from using information communication technologies. Ward Three is no different. Ward Three residents spend money in order to communicate but the distance to telecentres bothers them. Despite the cost and low level of income of the Ward Three community, they are forced to use a public centre that is not in their area. The fact that they have to take a taxi or bus to find a public communication centre means that they are disadvantaged by distance and therefore marginalised when it comes to information communication technologies. The expense alone is an inconvenience.

With their low income, they should be supported in spending money judiciously with the help of the government and non-governmental organisations. Private companies

should also give a hand and support such rural communities by developing useful public communication centre.

"People first", "Batho pele" is the current South African government slogan and information is one of government basic principles. Community members are educated enough to use and work at the centre. They are capable of participating in establishing the centre. The research showed that all kinds of community members were involved in different types of community developments. There were road construction projects, water schemes, crèches, burial clubs and many more projects that were running in the area and are community driven projects. It has been practiced in other parts of South Africa; Ward Three should be the next focus area as they have spoken.

6.3 RECOMMENDATIONS

Community development is aimed at empowering communities and strengthening their capacity for self-sustaining development. The community development approach has been widely used in rural areas of developing countries, yet it is not only a rural development strategy. The integration element is that different role players in development should co-ordinate their efforts. Government, non-governmental organisations and local communities should work together in order to maximise the impact of their efforts and to avoid unnecessary duplication of projects or conflicts.

Proper structure of community development facilitators takes care of felt needs, participation and educative process. With the current status the felt needs can be identified without a problem but the process to fulfill the needs still needs attention; for instance, community involvement and community education processes.

Community involvement in different projects is important and it's a way of measuring community successes. Community Based Organisations (CBOs) are therefore the preferred vehicles. For the participatory and community managed projects to be successful, they need support from community development workers. Long-term commitment is required, together with the adoption of management styles that

coaches and facilitates rather than supervises and dictates. Sam Joseph recommends a 10-year plan period of support for each individual community-managed project in order to ensure continuity and consistency regardless of changes of staff and structure (Blackburn and Holland 1998:84).

Education processes involve learning three different useful skills such as technical skills, administrative skills and problem-solving skills. Good teamwork increases the possibility of implementing projects successfully.

Appendix 3 states clearly that the community prefers public communication centres as compared to the personal or house-based projects for different many strong reasons. The old traditional ways of doing things e.g. going out for firewood gathering, fetching water from the rivers, have changed to having running water at home or close by and electricity in houses. This reduces chances for community members to meet and socialise informally. Communication centres are the only means left for community to meet and socialise with other community members, locally and internationally. Business could be conducted successfully via ICTs centres. In the Bamshela area, schoolteachers use the centre to prepare their lessons, print and copy their notes. Students as well use the centre as much as the community members at large do. Formally, students/pupils are taken to the centre to see and learn about ICTs as part of the current education policy Outcomes Based Education (OBE). Bamshela will never be the same; the community is progressing very well with more projects being established for and with the community members e.g. bookkeeping for local small business. A potential solution is shown in Appendix 4 as the Ward Three proposed profile for the community communication centre as recommended by people of Ward Three. This project could serve as a development project for the well-being of the community and the country at large.

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APPENDIX 1

WARD THREE QUESTIONNAIRE

Section A Biographical Details

(Please tick in the relevant box)

1. Gender of the candidate

   1. Female ÿ 2. Male ÿ

2. In what age group do you fall?

   1. #18 ÿ 2. 19 - 24 ÿ 3. 25 - 33 ÿ 4. 34 - 43 ÿ 5. $44 ÿ

3. To which group do you belong?

   1. Student ÿ 2. Employed ÿ 3. Unemployed ÿ 4. Pensioner ÿ

   5. Other (specify) ……

4. What is your monthly income after tax?

   1. 0 - R1999.00 ÿ 2. R1 000.00-R1 999.00 ÿ 3.R2000.00-R2999.00 ÿ

   4. R3 000.00-R3 999.00 ÿ 5. +R4 000.00 ÿ

5. What is the highest educational level you have achieved?

   1. # Grade 7 ÿ 2. Grade 8 # Grade 12 ÿ 3. Tertiary undergraduate ÿ 4. Post-graduate ÿ 5. Other ……..……..

Section B Technology awareness and needs assessment

6. Have you used a computer before? 1. Yes ÿ 2. No ÿ

7. Do you intend using a computer in the future? 1. Yes ÿ 2. No ÿ

8. For what purpose?

Word Processing: 1. Yes ÿ 2. No ÿ 3. Other……

E-mail: 1. Yes ÿ 2. No ÿ 3. Other ……

Internet 1. Yes ÿ 2. No ÿ 3. Other ……

Other e.g. games ……..……..……

7. Are you familiar with the following electronic machines?

ATM 1. Yes ÿ 2. No ÿ

Vending machines 1. Yes ÿ 2. No ÿ

Radios 1. Yes ÿ 2. No ÿ

Telephones 1. Yes ÿ 2. No ÿ

Other (specify) …..……..…….

8. Have you encountered any difficulties when using the above equipment?

1. Yes ÿ 2. No ÿ

9. Which technology would you need to be trained for, before using it?

1. Computers ÿ 2. Videos ÿ 3. Other (specify) ……

10. Which electronic equipment do think, you provides people with most information?

1. Computers ÿ 2. Radios ÿ 3. Televisions ÿ

4. Other (specify) …….

11. Information can be exchanged in different ways. Which one is your choice?

1. Folk-lore ÿ 2. Radio ÿ 3. Computer ÿ 4. Television ÿ

5. Reading material ÿ 6. Other (specify) ……..

12. Do you spend money to communicate e.g. by telephone, mailing, fax etc?

1. Yes ÿ 2. No ÿ

13. If yes, how much do you spend per month?

1. R10.00 ÿ 2. R20.00 ÿ 3. R30.00 ÿ 4. +R40.00 ÿ

14. How far is the communication equipment from your home?

1. Not far ÿ 2. Far ÿ 3. Very far ÿ 4. Not available ÿ

Section C Community Involvement in decision-making and needs assessment

15. Have you heard about a telecentre? 1. Yes ÿ 2. No ÿ

16. To what extent do you understand telecentre services?

Very low	Low	Average	High
Very high			

17. Is telecentre necessary for community development? 1. Yes ÿ 2. No ÿ

18. If yes, to what extent

Very low	Low	Average	High	Very high
1	2	3		4

is it necessary?

19. What would you like to use in the centre for communication?

1. Personal Computers ÿ 2. Video Machines ÿ 3. Telephones ÿ

4. Other (specify)……

20. Who do you think is responsible for providing such a centre?

1. Community organisations ÿ 2. Government ÿ

3. Private Companies ÿ 4. Other

……

21. Have you ever been involved in any community projects in your area?

1. Yes ÿ 2. No ÿ

22. If yes, what type of projects? 1. Water schemes ÿ

2. Road improvement ÿ 3. Sports ÿ 4. Educational Projects ÿ

5. Other ……..

23. Please rate your involvement in community projects with regards to the following aspects:

		1	**2**	**3**	**4**	**5**
a.	Communication	ÿ	ÿ	ÿ	ÿ	ÿ
b.	Decision making	ÿ	ÿ	ÿ	ÿ	ÿ
c.	Implementation	ÿ	ÿ	ÿ	ÿ	ÿ
d.	Evaluation	ÿ	ÿ	ÿ	ÿ	ÿ

(1. Very low 2. Low 3. Average 4. High 5. Very high)

Thank you for your time and support in completing this questionnaire

BAMSHELA QUESTIONNAIRE

Section A Biographical Details

(Please tick in the relevant box)

1. Gender of the candidate

   1. Female ÿ 2. Male ÿ

2. In what age group do you fall?

   1. #18 ÿ 2. 19 - 24 ÿ 3. 25 - 33 ÿ 4. 34 - 43 ÿ 5. $44 ÿ

3. To which group do you belong?

   1. Student ÿ 2. Employed ÿ 3. Unemployed ÿ 4. Pensioner ÿ

   5. Other (specify) ……

4. What is your monthly income after tax?

   1. 0 - R999.00 ÿ 2. R1 000.00-R1 999.00 ÿ 3.R2000.00-R2999.00 ÿ
   4. R3 000.00-R3 999.00 ÿ 5. +R4 000.00 ÿ

5. What is the highest educational level you have achieved?

   1. # Grade 7 ÿ 2. Grade 8 # Grade 12 ÿ
   3. Tertiary undergraduate ÿ 4. Post-graduate ÿ

Section B Technology a awareness and needs assessment

6. In which area do you frequently shop?

   1. Bamshela ÿ 2. Verulam ÿ 3. Tongaat ÿ 4. Stanger ÿ

7. How often do you visit Bamshela shopping centre?

   1. Once a month ÿ 2. 2 –5 times a month ÿ 3. 6 –15 times a month ÿ
   4. 16 and more times a month ÿ 5. Never ÿ

8. Are you aware of the Bamshela Telecentre? 1. Yes ÿ 2. No ÿ

9. How often (per month) do you use the Telecentre?

1. Once ÿ 2. 2 –5 times ÿ 3. 6 –15 times ÿ 4. +16 times ÿ

5. Never ÿ

10. How useful is the Bamshela Telecentre?

Very low	Low	Average	High
Very high			

11. What services do you utilise at Bamshela Telecentre?

1. Telephones ÿ 2. Computers ÿ 3. Photocopying ÿ 4. Fax ÿ

4. Other ……

13. Do you use the computer to do the following?

Word Processing:1. Yes ÿ 2. No ÿ

E-mail: 1. Yes ÿ 2. No ÿ

Internet: 1. Yes ÿ 2. No ÿ

Spreadsheet: 1. Yes ÿ 2. No ÿ

Other e.g. games ……..……..……..

13. Do you spend money to communicate e.g. phone, mail, etc?

1. Yes ÿ 2. No ÿ

15. If yes, how much do you spend per month?

1. R10.00 ÿ 2. R20.00 ÿ 3. R30.00 ÿ

4. +R40.00 ÿ

16. How far is Bamshela Telecentre from your home?

1. Very far ÿ 2. Far ÿ 3. Not far ÿ

Thank you for your time and support in completing this questionnaire

APPENDIX 2

PROFILE: WARD FIVE AND WARD THREE

	Ward Five (Bamshela)	**Ward Three (Umzinyathi)**
Leadership: Chiefs	Chief Luthuli Chief Mlamuli Chief Gcwensa Chief Nodwengu	Chief Ngcobo Chief Chili Chief Gwala
Leadership: Councilors	Mr B V Thabethe	Mr M W Frans
Population	7 258	10 238
Female	4 105	5 600
Male	3 153	4 638
Children	50.8 %	46.2 %
Youth	19.6 %	21.1 %
Elderly	5.3 %	3.6 %
Employment	3.5 %	14 6%
Electricity	1.5 %	50.5 %
Water	0.1 %	3.2 %
Houses	27.9 %	29.7 %
Sanitation	0.0 % (self services only)	1 %
Telephone at home	1.86 %	0.1 %

Description of area: Ward Five (Bamshela)

This study covers Ward Five areas. They have traditional leadership as well as democratic elected leadership. There are four traditional leaders known as Chief Luthuli, Chief Mlamuli Nyuswa, Chief Gcwensa and Chief Nodwengu. This area is a portion of Ndwedwe Municipal District. There is one Council headed by Councillor Ninela. Ward Five is made up of different sub-areas known as Nambithani, Ozwathini, NewsPaper, Ezimpangeleni, Deda, Ezikotshini, Nkivane, Emlwandle, Ngcongangca, Mandlakazi and Esigedleni. There are 50 schools altogether. There are 27 Primary and 23 High Schools. There are four pre-schools (crèche).

Description of area: Ward Three (Umzinyathi)

This study also covers Ward Three. Mr Nkosi M A Ngcobo is the traditional leader of the Qadi Tribe. Ward Three is a portion or part of the Qadi Tribe. There are two other chiefs known as Chief Chili and Chief Gwala. This area is also within Durban Unicity Metro, a portion of Northern Durban Municipal Local Council. This area is made up of different sub-areas such as Lower and Upper Mantungwa, Lower and Upper Kumanaza, aportion of Lindelani, Ngonweni, Ebuhleni and a portion of Emachobeni, Amatata and Amatikwe. There are 30 schools altogether. There are 8 Lower Primaries, 16 Higher Primaries and 6 High Schools.

Population

There are about 10 238 people African blacks living in the Ward Three area. They use isiZulu as their home language. They range from 0 - 120 years of age, and the age is distributed as follows:

Children – 0 to 20 years = 46.2 %
Youth – 21 to 35 = 24.8 %
Middle age – 36 to 65 = 21.1 %
Elderly – 65 and over = 3.6 %
Unemployment – across = 14.6 %

There are about 7 258 people African blacks living in the Ward Five area. Their home language is isiZulu. They range from 0 - 120 years of age. The age distribution is as follows:

Children – 0 to 20 years = 50.8 %
Youth – 21 to 35 = 23.7 %
Middle age – 36 to 65 = 19.6 %
Elderly – 65 and over = 5.3 %
Unemployment – across = 3.5 %

Electricity Supplies

There are 58 % of families have electricity from Durban Electricity Municipal, 5 % use the Energy Renewal Solar System and 37 % do not have power at all. People without an electricity supply normally use wood, paraffin, gas and coal to cook or warm or light their houses. The companies have problems in running cables because

houses are far from one another with hills and mountains in between so it becomes very expensive and difficult to install electricity.

Water

With new developments is hoped clean water can be distributed evenly to needy communities. Only about 5 % of the area has clean running tap water. Currently people are using river-running water, springs and boreholes. People have to travel/walk long distances to get water (not clean water, just water). The schools and other families depend on rainwater collected in tanks.

Houses and Families

In both areas there are traditional houses and so-called sophisticated missionary houses, similar to town houses. The traditional houses are made up of mud, wood, wooden windows, grass or metal sheets. There are rondavels and four-cornered houses. The sophisticated houses are made up of modern material such as plaster, bricks, asbestos or tiles with glass windows.

Families are made up of married couples, children sometimes with extended family, such as uncles, aunts and grannies on one lot. Each home has about a hectare of land. The land is also used to cultivate/plough maize and beans for a living. Usually the elders are employed in different places e.g. Durban City and Johannesburg City.

During the weekends the main entertainment for people is to get together for traditional parties, attending church services as well as funeral services – which are becoming a regular community gathering nowadays due of HIV/AIDS pandemic.

Roads

The tarred road is miles away from the people's houses. Public and access roads are in a bad condition. The community leaders and members of the community are planning proper road construction currently.

Telecommunications

Telephones

There are telephones in about 40 % of the area. Telephone installation is very slow because the houses are far from one to another; therefore it is expensive for the telephone companies to wire such areas fast. Some people cannot afford home telephones. There are public phones. Some of the main areas, like schools, clinics and royal families (chiefs) do not have telephones. There are two types of telephones i.e. satellites and standard telephones.

Cellular Phones

This type of phone is becoming popular. About 40 % of people have and use cellular phones. For the whole area there are only 3 cellular phone aerials, which are insufficient to cater for the whole area. This results in failure of the network connection. Cellular phones have become more popular because people can buy the phone that he/she can afford and can use it immediately, rather than going to public phones and queuing to make a phone call.

Post Office

There are two main post offices, namely Inanda and Indwedwe Post Office. They are open from 08:30 till 16:00. Both are very far from most people. In some areas there are post boxes. The development committee appointed one person to transport mail from the main post office to the local post boxes. Most of the people get their mail from schools or shops if there are no post boxes nearby.

Schools

Most of the schools do not have suitable teaching aids e.g. equipment, science laboratories and libraries. Schools with library building and services do not have suitable study materials such as books. Schools run day programs only. There are many reasons for this, the main one being the lack of electricity. About 20 schools have telephones, water and electricity. Most of the schools depend on rain, water trucks, and rivers for water.

One school (Mqhawe High School) for example has a computer class with 30 computers and pupils that need to learn computer subjects but they do not have a

qualified teacher to teach an information technology (IT) class. The same thing applies to the Technical Drawing (TD) classes. They had one teacher for 6 classes who resigned for a better job and those children are left unattended due the teachers' shortage to teach TD. On the other hand there are a number of qualified teachers without jobs (unemployed) but their speciality is on different stream e.g. languages and commerce. There a good supply of teachers in certain subjects and short supply for IT and TD.

Leadership

This is made up as follows: we have families, izinduna (foremen), councillors and then the Chief per area as listed. This is the traditional reporting structure. Each group has its own foremen e.g. men, boys, girls etc. The chief's word is final. For example, if one Chief feels that his tribe might defeat the other he then challenges the other to a fight. The winner then takes over the area and all the royalties the defeated King had.

New Developments

Part of this area is now under Durban Metro. This happened on 10 March 2000. Before this date the whole area was under the Regional Ilembe Council. The belief is that the Durban Metro Area will be developed much faster than the regional Elembe Council area. Some people do not like the new boundaries and are resisting the changes.

HIV/AIDS

KwaZulu is one of the worst areas in South Africa affected by the AIDS pandemic. It is estimated that HIV affects one in Three adults in the province. The groups mostly affected are the youth and middle-aged people. There is a desperate need to educate people about this pandemic. The use of information technology can spread this message quickly. There need to be more community information centres in rural areas as well as places of higher learning to disseminate information (prevention is better than cure).

Why these two areas – Ward Five and Ward Three

- Both areas are in rural KZN rural areas
- Both areas' leadership is Metro and traditional combined
- Development is almost at the same level, i.e. electricity, water, schools, clinics.
- Ward Five has a Telecentre operating already
- Ward Three does not have a Telecentre operating
- The main objective of the study is to estimate the demand for the Telecentre.

APPENDIX 3

FOCUS GROUP DISCUSSION

Focus groups compiled in Bamshela and surroundings

A group of ten community members gathered for an informal discussion based on to the schedule of structured questionnaires. The researcher recorded data by taking notes only on points that five and more candidates agreed on. Focus of the interview was on the available ICT centre in the area. Focus group meetings and interviews were held in Bamshela and surroundings on 2003 May17.

What is the difference between using private phone and public phone?

A private phone can be a cell phone or a landline installed in a house. Using a private phone is very convenient: privacy, availability and the status counts. The main problem is the cost therefore it is not readily available to every community member. "My house phone was cut off because of high bills and I could not pay for the phone" a Bamshela resident stressed.

Public phones are cheaper, but very scarce, busy, noisy, lines faulty and take a long time to be repaired. Distance from home is the problem. Public phones, however, are very useful to the community.

Why do people use communication devices?

The main reason for using information communication devices is to receive and send messages, especially information that is important e.g. reporting a death, sickness in the family, organising family feasts and gathering information. We need to know where information comes from and what you can do with the information. Information is a way to success, and a means of communication, but only if it is clear, efficient therefore good information communication technology is important. Once informed one gains knowledge that can be applied to improve one's life skills.

There are a number of sources of information such as television, radio, newspapers and the Internet. Telephones are more convenient than any other technology because one get directly in touch with person the other. You hear the voice, feel the tension

or joy and stories are most of the time personal e.g. finding a job, reporting a death in the family, talking to a loved one.

What information is important in your life?

Educational information we get from schools. It helps us to learn to master skills - doing something to improve ones lives. One gets information from reading books and magazines, newspapers and novels. Also, there are sometimes workshops, conferences, and meetings in the community like this one and then we get some new important information. Environment and culture provides information, like in summer we know that it rains more. Road signs, TV and the radio also provide information that we use all the time. Social workers provide information to elders, the community at large, the church and peer groups.

The type of information depends on what you need to do with it maybe ones need information about a disease (SARS or TB). One gets this from the nearest clinic, reads pamphlets and hears from radio and television. We do not have a library or access to the Internet locally, only in town and it is expensive. Computer knowledge, since it is one of the most used and important tools for daily life e.g. for banking, office work is certainly done on computers.

Access to government information is important, now we have to go to town to the municipality if we need that information. We always have to go into town when we need to get information; computers and the Internet could help with this.

I owned a small business, but achieving success was difficult because I was unable to control the profits and to manage correctly, so for me business information is needed. I studied computer courses in town, I can do a spreadsheet and word processing but I do not have a computer to start my own business to make a living and assist small business people and the community.

What are the benefits of computers and the Internet?

They are a means of transmitting information and knowledge and they speed up the spread of information, like government information. We would welcome the Internet

in our rural areas! It provides a larger band of information than any other source. The computer can store information for a long time.

We can communicate with institutions, do banking and buy groceries. The computer can be used for educational purposes, storage of information, compiling memos, CVs, programmes for events, calendars, business cards, student cards, graphs etc.

It is safe; you can save money by shopping on the Internet. It has privacy so it is safe from criminals. You can use computers for clear legible letters. Also, it is useful for keeping records, and it can remind you of what you have done. Typing of CVs and job applications is important.

They can save time and energy, provide quick communication, you get information as you need it and you can get the latest information. You can also store information, print CVs, invitation cards and wedding cards.

The computer is like a diary and you can use your computer for any information that you need. Most work is now done on computers so you have to be able to use them. You can type CVs. Computers provide an improved standard of living for people because everything is simpler and faster. There would be no need to buy the newspaper everyday so it can save money, and pupils could get practice with matric questions. Crime can be minimised as you can do your shopping without having to go there with money in your hands. You can also watch TV and movies. Computers and the Internet are useful for choosing a career because you can learn about what jobs already have too many qualified people.

We can communicate using technology no matter where the person is. It saves time and it gives more information from around the world, like politics, education, donors for projects, games and trackers for security. It can help with job opportunities. Banking services and other trading on the Internet would be useful.

They save time; most of the time is spent looking for jobs and instead you can put all your information on the Internet. You can use the computer for compiling CVs and to

store information. Family information can be stored e.g. dates of birth. You can also play games and use the computer for scanning and enlarging ID photos.

What are the problems with computers and the Internet?

The lack of technological information can cause problems with tertiary education, especially for rural scholars who have not used a computer before. Also, electricity is a problem as it runs out often and is expensive. There are not enough teachers with IT skills. Ignorance is a problem we did not even know that there were computers in the Telecentre! The main problem is a lack of informed community members.

Most of the community members are "computer illiterate" so we can't make use of the computers. There is a high crime rate through the use of the Internet. There is a problem for people to acknowledge that they don't know how to use a computer. Computers are programmed with the human mind so they can make mistakes, but people think that they are always right. You need to have computer skills to get a job nowadays and that makes finding work much more difficult for many people.

The cost is also a problem. Using computers is very expensive and people, especially here in the rural areas, can't afford to use them. It would be better to know the parts of the computer before you pay for training. We need notes or maybe a model to see how the computer works before we try to learn to use it.

The last problem is that all the information is in English and not all people speak and understand English.

It is not easy to use if you don't know how to use a computer. Computers get viruses. You get emails and you don't know who they come from. Broken computers take time to be repaired. No electricity, no computers. Technologies are moving faster than human beings. The community has to keep track of it. Also, computers minimise work opportunities, but research has proven otherwise.

How can computers and the Internet be used for community development?

It is hard for people here to look at the importance of computers because we were excluded from using them until 1994 so this is why training is especially important. It is not that we rural people can't use computers or are scared to use them; it is that we

are not given the chance to do so. People here would really appreciate computers because they have problems with getting jobs, they need training and computers are also needed at schools. It is expensive to go to town to learn to use computers so we need training in the community.

We need to make sure that people get information about attending workshops whenever possible. Access to information is problematic. We need to ask teachers to provide information about how to visit Internet sites. People can pay for training rather than paying bus fair to get to town. Even people who are employed risk losing their jobs due to inadequate computer skills so training is very important. After-hours training is needed for those who go to work during the day.

Computers are also good for children; it keeps them busy, rather than loitering around and getting into trouble. At the beginning, free training should be provided, and then people can pay for the training. The demand for the training will determine the price.

POTENTIAL SOLUTION

Information and Communication Technology Centre

An Information and Communication Technology Centre is currently commonly known as a telecentre. A description is given further on this page. The estimated cost is not stated due to price fluctuation. This potential solution is ideal for community development. Community involvement, government and private companies should play an important role with different input by organising, implementing and evaluating the project.

Summary of telecommunication centre developments

Regarding telecentre developments, the author has already conducted fieldwork research. The author organised a place and premises for the project in the Ward Three area. The premises and the building need more security e.g. fence and burglar guards. The next thing to do is to get a number of computers; for a start ten computers would be enough and be installed in a currently available building. These computers could be used for different purposes like printing, Internet searching, study on your own software e.g. English and Mathematics. Other computerised functions such as faxing, photocopying, telephones etc. would also be in place.

Once the project is successful the installation of video presenters and a video library would be opened. This will help to educate women on family planning, HIV & AIDS awareness, woman and child abuse. Women need to know about their rights in this country. This will also promote networking. Conference rooms are one of the most important needs for open screening and meetings. To sustain the project a small fee charge for consumables would be charged. Fundraising will be the key capital provider.

Estimated equipment (subject to the current best quote excluding the building)

Quotations can be obtained from current best operating and reliable IT suppliers. This must be the one, or any of the major suppliers of information technology to Durban tertiary institutions. Suppliers can be contacted for more quotations in due course.

- 10 telephone lines for community use
- 10 computers for Internet and typing for public use
- 5 internet booths with money slots
- Black & white LaserJet printer - the current best model
- a fax machine
- a photocopying machine
- 5 video presenters or digital video recorders and players
- Attendants x 3 per day and one free lancer or volunteer
- Conference room
- Technology awareness campaign projects

With help from private companies, government departments, Non Governmental Organisations in collaboration with Ward Three community members, the dream can be realised. The community can be encouraged to take advantage of and use technology. Most people fear technology because they do not know how to use it or for any other reason that can be overcome. This problem affects even well educated people like teachers, lecturers and directors.

Establishing telecommunication centres also encourages people to spend their social time seeking for information, transmitting information, broadening information knowledge and enhancing technology usage and getting familiar with different means of electronic interaction.