

An Assessment of the Effectiveness of Telecentres in Bridging the Digital Divide: A Case Study of the Telecentre at Mapela Multipurpose Community Centre in Mokopane, Limpopo Province

by

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DECLARATION

I, **Motlanalo Emily Mmako**, declare that this mini dissertation on the **An Assessment of the Effectiveness of Telecentres in Bridging the Digital Divide: A Case Study of the Telecentre at Mapela Multipurpose Community Centre in Mokopane, Limpopo Province**, is hereby submitted to the University of Limpopo for the degree of **Master of Development** has not previously been submitted by me for a degree at this or any other university; that it is my own work in design and in execution, and that all material contained herein has been duly acknowledged I before for any degree or examination at any university.

Signature: 

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14.09.09

Date

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DEDICATION

This study is dedicated to my late grandmother, Chaisa Moroma Mmako who denied herself an opportunity to enjoy her pension grant and invested it in my studies. *O šomile tau !*

ABSTRACT

This report encapsulates the main findings of the study on the assessment of the effectiveness of a MPCC based telecentre at Mapela in bridging the digital divide. The first chapter of the report contextualizes the digital divide and a synopsis on its manifestation globally. The last part of the chapter highlights the key issues that give shape to the study, i.e., research objectives and questions.

Fieldwork for the study was carried out between October 2006 and November 2006, which is approximately two months. Data was collected through the following techniques:

- Administration of questionnaires with telecentre users
- Conducting of focus group discussions with representatives of the disabled people's forum, poultry project, tribal council and ward committee.
- Interviews with telecentre operators and the MPCC manager

The telecentre in Mapela was found to be playing a roles towards bridging the digital divide, but to a limited extent. The facility has been found to have introduced new technologies that the people in the village. However, only a few individuals and groups in the village were found to be utilizing the telecentre to the own benefit while the majority of the community perceive the facility as a programme for the elite on the basis of age, educational qualification, gender and income.

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List of Abbreviations and Acronyms used in the study

DAI	Digital Access Index
ECA	Electronic Communications Act
ICT	Information and Communication Technology/technologies
IDCR	International Development Council for Research
ITU	International Telecommunications Union
MDGs	Millenium Development Goals
MPCC	Multipurpose Community Centre
OECD	Organization for Economic Cooperation and Development
PRA	Participatory Rural Appraisal
USAASA	Universal Service and Access Agency of South Africa
USAF	Universal Service and Access Fund
WSIS	World Summit on Information Summit

CHAPTER 1

ORIENTATION OF THE STUDY

1.1. Introduction

Information revolution in the 20th century has introduced significant changes in the nature of human interactions and relations between people and nations. The changes are linked to the adoption and usage of Information and Communication Technologies (ICTs) in the contemporary society (Etta & Parvyn-Wahamiu, 2003:12-13). Furthermore, ICTs are further argued to have the potential to eliminate the boundaries of time and space. This could simply imply that ICTs have a developmental role. The potential roles that ICTs could play in the modern society have been summarized by the United Nations Development Programme (2001:2) as, namely, the facilitation of access to information and knowledge resources in a cost effective manner, as well as ensuring improved delivery of basic service such as education and health.

However, there are disparities between developed and developing countries as far as access and usage of ICTs is concerned. The disparities between countries and regions have been highlighted as a concern by the International Telecommunications Union (ITU); the body responsible for the regulation of telecommunications services and policy worldwide, in 1985 through the Maitland Commission Report. The ITU refers to the mal-distribution of ICTs as a “new form of poverty”, that is, information and technology gap (Centre for Democracy and Technology, 2005). According to the Maitland Commission Report, in 1985 alone, Tokyo city had more telephones than the rest of Africa. ITU (2005:24) further indicates the Digital Access Index of most African countries as falling within the low and middle access categories that range between 0.10 and 0.49, while high Digital Access Index (DAI) figures of 0.50 to 0.85 have been notably observed in countries such as the United States of America. South Africa is within the middle category with the index of 0.45. The recent study commissioned by ITU (2006:1) also affirms the idea as top Sub-Saharan Africa

countries' performance range between 0.39 and 0.59, with Seychelles topping the list. According to the study, western European countries such as Sweden, Norway, just to mention a few, are top performers as their DAI range between 0.79 and 0.85.

Mjwara (2004:5-6) also summarizes Digital Divide in Africa in terms of the number of fixed lines for every 100 persons, mobile subscription and access to the Internet. Despite an increase of fixed telephones lines from 12.5 million to 25.8 million between 1995 and 2003, i.e., 100% increase, telephony penetration is still five (5) times less than the average income country. The mobile subscribers in Africa have increased from 1.6 million in 1995 to 67 million in 2003. This is an overwhelming increase of 600%, but the increase does not translate in the Digital Divide being addressed due to the unaffordable nature of the equipment. The Internet subscription has also increased from 1.7 million to 20.4 million in 2003. This amounts to 20% increase. Africa accounts for 1.6% of the Internet users worldwide. This translates into African countries having a relatively low level of telecommunications services access.

The telecommunications service provision in South Africa is characterized by inequalities. Statistics South Africa's 2001 census reveals that access to telecommunications in urban dominated provinces is higher than that of rural dominated provinces. In 2001, for instance, there were 298 6290 public phones available within a walking distance in Gauteng Province while rural provinces such as Northern Cape and Limpopo had 268 627 and 266 8377 public phones, respectively. However, the national access to telecommunications services was rated at 38.5%. This manifests into information that people could access from either the government or any institution being unevenly distributed to the citizens.

Contrary to this, the *Constitution of the Republic of South Africa* (Section 32, Act 108) reads as follows:

- a) Every one has the right of access to information that is held by the State; and
- b) Any information that is held by another person and that is required for the exercising or protection of any right.

This translates into access to information as a fundamental right. Therefore, poor telecommunications service in rural areas could be perceived as a denial of a basic right. Individuals and communities could be able to change their social, economic and political situations, among other things if they have access to information. The State, as a key role player in development, is then faced with the challenge to ensure that information is evenly distributed among all citizens, regardless of their area of residence, age, education level, etc. This challenge is being addressed through social programmes such as telecentre roll-out. The telecentre programme is expected to provide solutions such as digital inclusion, social-equity and local development in the society.

The Electronic Communications Act (ECA), Number 34 of 2005 makes provision for the continued existence of Universal Service Agency (USA), but effected changes to the name of the agency to be called Universal Service and Access Agency of South Africa(USAASA) (section 80(1)). Section 82(1) of the ECA further stipulates two of the functions of USAASA, among others, as follows:

[T]o strive for the promotion of the goal of universal service and universal access to information and communication technology, encourage , facilitate and offer guidance in respect of any scheme to provide universal access and universal services to telecommunications services as part of reconstruction and development projects.

This could be translated into USAASA being tasked with the responsibility of playing a leading role in ensuring that universal service and universal access service to ICT are realized in South Africa. Section 87 (1) of the ECA also prescribes for the continued existence of universal service fund, but with changes to the name to Universal Service and Access Fund (USAF). The fund has been

established to assist USAASA to make the goal of universal access realized through fostering the adoption and use of new methods of attaining universal service and universal access. The Agency has also adopted the telecentre model in its attempt to ensure that universal access and universal service goal is attained. However, the telecentre model that the USAASA is using is criticized for focusing more on deploying ICT equipments and technology rather than the realization of the universal access and universal service goal (Benjamin, 2001a:6).

The established telecentres alone can rarely attain the goals that they were established for. The most common attribute being that of ideas related to the setting up of the telecentre, which is based on the thinking that the facility will address the information gap between the “haves” and the “have nots”. The thinking does not take into consideration the fact that the success of a telecentre depends on the collective meaning that the intended beneficiary community and the implementing agencies have of the facility. The technology that is provided often does not have concrete purpose that is relevant to the recipient community's daily lives. Carvin (2005:1) views the process of availing ICTs through telecentres as a global configuration. This means that the implementing agencies and facilitators of the telecentre just assume that if a telecentre in one area was found to have succeeded in addressing the Digital Divide, the same thing would happen if the facility is established somewhere else.

Section 82(1)(c) of the ECA states one of the functions of USA as, namely, to foster the adoption and use of new methods of attaining universal access and universal service. The telecentre roll-out has been adopted and implemented by USA as a kind of a social programme that is intended to benefit the poor, particularly in those areas that have low tele-density. The programme is a strategy of the government to promote the goal of universal service and universal access to basic Information and Communication Technology (ICT) services among the poor.

The focus of this study is to assess the telecentre facility at Mapela Multipurpose Community Centre (MPCC). The facility is located within Mogalakwena Local Municipality in Waterberg District, Limpopo Province. The telecentre was rolled out in November 2003 and it is envisaged to provide a variety of ICTs services such as email, the Internet, telephones, computer literacy, photo copying, printing services and facsimile. The study may also be utilized to draw lessons for best practices and make recommendations on how best can the programme be implemented in order to ensure that it bridges the information gap between rural and urban residents effectively.

1.2. Problem Statement

Digital Divide exists not only between countries and regions. It goes beyond country or regional boundaries and takes the form of disparities between urban and rural areas within the same country (Centre for Democracy and Technology, 2005:4). This statement holds true also in the case of South Africa as it has been alluded to by Burger (2003:130). This simply means that rural and urban areas are not on an equal footing when it comes to ICT access and use. Urban areas are relatively more advantaged, and, as a result, the developmental state compelled to assist the rural areas as an attempt to address the problem in the form of the telecentre programme.

The infrastructure, among other things, in the under-serviced areas, which are mostly rural, is often under-developed and poor. This ranges from transport, electricity to telecommunications. Some villages have regular power failure or no electricity at all. This implies that telecentre services are likely to be interrupted, and, in extreme conditions services, are suspended for some time as power interruption would have caused damage to the equipment. However, there is no formal study that has ever been conducted to analyze the magnitude of the problem so that appropriate strategies can be developed to improve access in rural areas.

1.3. Motivation for the Study

The researcher worked with USAASA between the period 2000 March and 2003 November. The researcher was prompted to conduct the study by the observation that the majority of telecentres rolled out have not been informed by the needs of the people on the ground. The facilities are rolled out with good intentions, but the people for whom the facilities are meant, are often left out in the process. The evaluation processes that have been done this far have been focused on assessing USAASA' s performance towards the attainment of the abovementioned goal in terms of the number of telecentres rolled out and their operational status, but little on the telecentre as an appropriate model in bridging the Digital Divide.

1.4. Aim of the Study

The main purpose of this study is to assess the effectiveness of the telecentre at Mapela MPCC, with regard to its intended purpose of reducing the Digital Divide.

1.5. Objectives of the Study

- To assess the extent to which the MPCC based telecentre bridges the Digital Divide between rural and urban areas;
- To examine the operations of the telecentre in accordance with users, services and the demand;
- To explore the monitoring and evaluation mechanisms that are used at the Mapela telecentre; and
- To make recommendations on best practices for bridging the Digital Divide.

1.6. Research Questions

This study strives to answer five major questions that appear below. The questions also serve as a guide that ensured that the study remained focused on the issue at stake.

- What are the intended objectives of the telecentre in Mapela MPCC?

- Who are the users of the telecentre? For what services? What is the nature of the demand for such services?
- How user-friendly is the telecentre facility?
- How has the MPCC based telecentre impacted on the lives of people in Mapela community?
- What are the monitoring and evaluation mechanisms that have been put in place to ensure that the facility achieves its intended objectives?
- How was the telecentre at Mapela designed?
- To what extent did the community participate in the telecentre design?
- What are the lessons that could be drawn from the telecentre at Mapela?

1.7. Definition of Concepts

The concepts that are used throughout this study are defined below to avoid misinterpretation and ambiguity.

1.7.1. Digital Divide

Goldman (2002:1) and Hellstrom (2005:15) define Digital Divided as a gap in access to use ICT, measured in the form of teledensity and skills base. The concept is mostly used to indicate the disparity between rural and urban areas in use and access to ICT. In this study, Digital Divide is used as an indication of disparity between, on the one hand, those people who use and have access to ICTs through the telecentre and, on the other hand, those without access.

1.7.2. Information and Communication Technology

Etta and Parvyn-Wamahiu (2003:9) define Information and communication technologies as instruments through which information and/or data are transmitted from one person to another or from one place to another. Such instruments include facsimile, telephone, television, video, print media and computer-mediated modes (e.g., e-mails, the Internet and video conferencing). In the study, ICTs is used for facsimile, photo copying, printing and computer-mediated communication such as e-mails and the Internet.

1.7.3. Multipurpose Community Centre (MPCC)

Burger (2003:134) defines the MPCC as a government's one-stop service centre. This is the place where community members get information on government services and programmes, and also the actual service delivery point. The use of this concept in this study also refers to the place where there is integrated information services provision, regardless of whether the structure is government owned or privately owned.

1.7.4. Telecentre

A telecentre is defined as a facility that provides access to telecommunications services, as well as broader range of ICT services (Townsend, 2002:4). The definition of a telecentre is, as such, aligned to the technology supplied together with the services that are rendered through the available technology. In this study, the concept is used in reference to a public or shared site that provide access to ICTs in the form of telephony, photo copying, printing, the Internet and computer training services at an affordable cost.

1.7.5. Universal service

USA Annual Report (2003:4) defines universal service as the availability of a reliable connection to a communication network that enables any form of communication to and from any part of South Africa. In this study, the concept is used to refer to telephonic connection in every household in a given locality.

1.7.6. Universal access

Universal Service Agency Annual Report (2003:4) defines universal access as the ability to use a communication network at a reasonable distance and affordable price. Universal access in this study is used in relation to access enhancing and prohibiting factors such as content, appropriateness of

technology, cost of service in relation to distance, and the time that one has to travel in order to access a service.

1.7.7. Under-serviced areas

Under-serviced areas are defined by Burger (2003:130) as areas with less than 5% tele-density for every 100 people. These are areas wherein telephone penetration is still low, and at the same time such places have a poor infrastructure that negatively impacts on access to public services. Under-serviced areas in this study would refer to rural areas that are characterized by underdevelopment and poor telecommunications infrastructure.

1.8. Significance of the Study

This generates knowledge in the field of Social Science research in the sense that there has never been any research conducted at Mapela Telecentre prior it. The generated knowledge will serve as a foundation for further research. The study develops recommendations for best practices in telecentre operation for practitioners, including operators and sponsors. The generated knowledge could also be used to influence policy formulation processes, and telecentre beneficiaries in and outside Mapela can use it for lobbying.

1.9. Structure of the Mini-dissertation

Chapter 1: Orientation of the study

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Findings and Analysis of data

Chapter 5: Discussion, conclusion and recommendations

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

This chapter comprises a presentation of literature review. The journey in this chapter begins with an overview on the potential role of ICTs in the society; the Digital Divide concept as a challenge to the realization of ICTs potential; and ends with the possible bridges that could assist in addressing the Digital Divide. There is also a snapshot on methodological review that also influences the selection of the research methods in Chapter 3.

2.2. Potential Role of ICT in Development

The potential role that ICTs have in development in the contemporary society is indisputable. ICTs are, therefore, perceived as having taken the world by storm, especially when it comes to information society (Etta & Parvyn-Walnahiu, 2001:1). Countries, individuals and regions are able to participate in the global economy through ICTs. This can be translated into ICTs being enablers of development. The enabling role of ICTs in development is explained hereafter.

2.2.1. ICTs for Information dissemination and social mobilisation

The centres have the potential capacity to enable the communities and individuals a lee way to access, apply and transfer information and knowledge in every aspect of human engagement. This capability has been summarized by Huyer and Sikoska (2003:5) as ICTs having the ability to re-shape, re-organize and re-structure working methods. In simple terms, ICTs are said to enable application, communication, dissemination and storage of information in ways that were not possible prior to their adoption and introduction. Mokgobu (2005:38 & 87) supports the idea as he cited ICTs as having been used by the Zapatista movement in Southern Mexico and the Nation of Islam in America to aid political mobilization in their respective regions. This could have been made possible due to the fact that ICTs know no bureaucratic, cultural, time and

distance limits. The above-mentioned organizations used the Internet to communicate and mobilize their supporters and sympathizers beyond their physical, political and social boundaries. However, the challenge for the movement was that only people who had access to the Internet and those who were able to use the facility could contribute in the shaping of the movements.

2.2.2. ICTs for social transformation and democratization

ICTs could play a significant role in the transformation of the society as well as realization of democracy. This role has been tested and implemented in Australia and Scotland whereby states had set up websites to give citizens an array of opportunity to interact with government (Mokgobu, 2005:82-83). This system enables citizens to participate in governance through inputting on government legislation and policies on line. Moreover, citizens are also able to comment on the government policies and programmes without any fear of victimization.

The negative side of ICTs for social transformation could be in instances whereby people use the same facilities that are meant for them to have a stake in governance process to mobilize against government. Moreover, contribution to government using ICTs is limited to those people who have skills and access to reliable infrastructure.

2.2.3. ICTs for improved service delivery

Many individuals and institutions have adopted ICTs and apply them in their daily lives to deliver business, education and health services. This has been evidenced by Milicevic and Gareis (2003:1-6) that ICTs have the potential to improve access to basic services, especially education and health. Basic health services could be access digitally in the form of a patient being diagnosed and given medical prescriptions without physically being observed by the physician.

Education as a basic service can also be realized through ICTs. This has been confirmed by El-sobsky (2002:5) in the study he conducted in Egypt. ICTs have been found to be playing an important role in reducing the cost of learning through cutting time for traveling, attending lessons and distributing learning materials. More and more people in Egypt, as such, prefer to learn on line due to the reduced costs, especially for tertiary education. For primary and secondary education, there are telecasts that are earmarked to reach out and add on the classroom lessons. Learning online and telecast education form a basis for the notion of e-learning. This implies that learning does not have to take place in the traditional way wherein learners converge in a classroom and the tutor/teacher facilitates lessons. Therefore, e-health and e-education (e-learning) are perceived as typical examples of ICTs capability to enhance service delivery.

2.2.4. ICTs for Sustainable employment opportunities

The notion of tele-working came in the employment arena with the introduction of ICTs as an enabler for performing duties at the workplace. As ICTs began to spread worldwide, people began bit by bit to consider flexible working conditions such as working from home or on line. This notion has also become a relief to workers as family and work obligations do not longer compete. People have begun to work at home and at the time suitable to them (Millicevic & Gareis, 2003:6).

However, these flexible working conditions that come with ICTs are not universally realized as not every individual has access or ability to use ICTs. To most of the working class, computers and the Internet are also available at the workplace and once they go back to their respective homes, there is no such a facility. Thus, only a few individuals who have the facilities can work from home or even complete exercises that they started while at work in the comfort of their homes.

2.2.5. ICTs for the enhancement of the quality of life

The combination of ICTs as tools for information dissemination, basic service delivery, social transformation and sustainable employment opportunities are viewed by some scholars, such as Islam and Mia (2007:5), as having a stake in the enhancement of quality of life. This notion is realized through people no longer having to worry about balancing their social and employment lives, as well as reduction in time and distance. The time that people would have used traveling to work, institutions of learning and government offices to access information, is rather spend on attending social obligations that were compromised prior to ICTs coming into the picture.

ICTs offer tremendous potential to empower people in order that they overcome development obstacles. ICTs could, therefore, be said to be neither panacea (i.e., universal solution) nor replacement for development, rather an enabler. However, the disparities in access and penetration in the society are still a challenge that needs to be dealt with.

2.3. Digital Divide: A Challenge to Development

There is no single word to describe and define the concept of Digital Divide. Digital Divide is a multi-dimensional concept that has to be analyzed from different angles. Such dimensions include economic, technical, physical and legal and/or regulatory angles. Many scholars have attempted to define the concept in relation to the users' viewpoint, thus taking into consideration the different dimensions. EL-Sobsky (2005:4), OECD (2001:5) and UNDP (2001:2) define Digital Divide as a gap between, on the one hand, people and communities who have access to ICTs, and can make effective use of these new technologies; and, on the other hand, those who neither have access to nor can they effectively use technology for their own advancement. In simple terms, Digital Divide refers to the extreme unevenness in access to ICTs, deployment and diffusion thereof. The unevenness in access and diffusion of ICTs makes it

impossible for world societies to exploit the opportunities they offer to their own advancement.

The basic indicator for the Digital Divide that has been used worldwide entails the number of fixed telephone lines per 100 inhabitants (OECD, 2001:7). This enshrines the well-known concept of tele-density in the telecommunications cycles. The Digital Divide is also said to change over time and space. For instance, there were 6.6 million fixed lines in China and 1.6 million lines in countries with low income per capita (GDP) in 1998, when compared to 87.4 million lines for China in 1998. Furthermore, of the 94 million Internet hosts in the world in the year 2000, 95.6% were in OCED countries whereas only 4.4% hosts were in areas outside OECD. However, this tends to be a misleading observation in the sense that telecommunication companies often determine access to the Internet on the basis of subscription not usage. In other words, the number or percentage of ICT facilities available in the country does not necessarily translate into usage. A country or region may have a high percentage of Internet subscription, but the usage may be relatively low or not existent.

Sorj and Guedes (2003:4) maintain that Digital Divide is not only about the “haves” and the “have nots”, but includes aspects such as the quality of access and relevancy of the facilities. While the quality of access relates to connection speed; accessibility time slots; and costs, relevancy relates to different types of users having different types of facilities that are in accordance to their needs. More on this dimension is elaborated in determinants for Digital Divide and ICT penetration.

2.4. Factors that determine the Digital Divide and ICT penetration

Since it has been indicated above that Digital Divide is a multidimensional concept, there are several factors that are used to determine it. The most common factors being the following: physical access; appropriateness of

technology; affordability; relevant content; legal framework; as well as socio-cultural factors. Each of the mentioned factors is elaborated upon below.

2.4.1. Affordability

The usage of technology is often determined by individuals' affordability. This has been evidenced by Fox (2005:5) that individuals whose annual income is high tend to afford other services beyond the basic needs such as ICTs. The individuals whose annual income is approximately \$ 75 000 were found to be using ICTs more than people whose income fell within the \$ 30 000 range per annum. While the later group's usage of ICTs lied at 30%, the former group was at 60%. The disparities in ICTs access and usage have been purely based on affordability. This implies that individuals whose earnings are low, are likely not to use ICTs even if they can be readily available as they do not become that individual's priority.

2.4.2. Appropriateness of technology

Goldman (2002:1) highlights that the availability of technology does not always translate into access but appropriateness thereof. Technology could, as such, become a barrier instead of an enabler if the available hardware can not be accessed by the intended users. This statement is confirmed by Benjamin (2001b:1) that equipment provided in public access points in some developing countries are not informed by the needs of the targeted beneficiaries. For instance, equipped community telecentre without Braille component could imply that people with visual disabilities in that community cannot use the facility. In simple terms, the technology provided could be said to be inappropriate for the visually impaired people.

2.4.3. Infrastructure development

Disparities in ICTs diffusion is also attributed to telecommunications infrastructure provisioning. In areas wherein infrastructure provision is lagging, ICT services will also be non-existent or be lagging, as highlighted by

Millicevic and Gareis (2003:3). The two researchers further noted that infrastructure provision differs in terms of physical space, population size and time. This implies that urban areas tend to be prioritized for infrastructure development due to the fact that they have dense population while rural areas are sparsely populated. The cost of rolling out infrastructure in rural areas is relatively high as confirmed by the OECD (2001:27), hence implementing agencies would always push back in time the deployment of infrastructure in rural areas.

A further perception has been created that the usage of basic ICTs tends to be more in urban regions than in rural regions (Millecevic & Gareis, 2003:7). The perception can also be argued to be based on the cost-benefit analysis. If it is discovered during the feasibility study that there is no likelihood of people utilizing the infrastructure, there will also be no urge to push for the implementation of such a project.

2.4.4. Socio- Cultural Factors

Fox (2005:2) argued that socio-cultural factors such as age, gender, education and race play an important role in measuring the Digital Divide. This argument was based on the study conducted in the United States of America wherein disparities in access and usage to ICTs were found to be based on the socio-cultural factors. For instance, the study revealed that 26% of Americans who are 65 years and above use the Internet when compared to 67% of those who are within the 50-64 years category, while 80% of those that falls between 30-49 years category use the Internet, against 84% of people who fall within the 18-29 years category. This implies that the younger the person is, the more chances are for that person to use ICTs facilities than their elderly counterpart.

Race also becomes a determinant factor as only 57% of black Americans were found to be using the Internet vis-à-vis 70% of white Americans,

according to 2005 survey (Fox, 2005: 2). This notion had something to do with certain races being more elite than others. However, there could be possibilities of people within the elite race who do not have access to ICTs nor skills. Serunkuna (1999:1) further argues that telecentre in Nakaseke, Uganda, is perceived as being meant for the elite. The elite refers to users who are able to afford to pay for the services, to use the technology and to read and write; and only the wise people can use computers. Therefore, to a certain extent, access to ICTs is determined by social class that individuals belong to.

On the other hand, education was confirmed to be a contributing factor to ICT access and usage as only 29% of non-high school graduates was found to be utilizing ICTs, when compared to 61% of high schools graduates. Ono (2005:10) concluded that inequalities in ICT diffusion are rooted in the pre-existing inequalities in the society. This implies that while ICTs utilization could be on the basis of ethnicity and race in some countries, education and gender could be the main determinants in other countries. Thus, the socio-cultural factors as determinants for ICT utilization will differ from one country to another.

Table 1: Illustration on ICT penetration on the basis of age, GDP per capita, and gender

Country	No. of respondents	GDP per Capita	ICT usage					
			Overall usage in %	Age			Gender	
				18-29 years	50-59 years	60 years	M	F
Czech Republic	1 706	\$ 18.100	50	32	39	15	54	47
Hungary	3 970	\$16.100	33	65	21	4	36	30
Singapore	1 000	\$29.900	70	94	41	10	75	77
USA	2 269	\$42.000	76	94	83	45	75	77

Adapted from Gabacz & Smahel (2007:2-5)

Table 1 above illustrates how socio-economic factors give shape to ICTs adoption and usage in different countries. The United States of America has

a high income per capita and high percentage of overall ICT usage across different age categories and gender, whereas Hungary has the lowest income per capita and the lowest percentages of ICT usage across all age groups and gender, except for the 18-29 years age group.

The disparities in ICT penetration and usage do not only exist between countries and regions as it has already been alluded to above. The difference can also be observed between individuals within one country, region or town. Below is a typical example of Digital Divide within a city, viz., Cape Town, in South Africa.

Table 2: Demographic illustration on computer access in Cape town in 2002

Description	Classification	Percentage on computer access		No. of respondents
		No	Yes	
Income	Unemployed	74	26	418
	Low	73	27	96
	Middle	56	44	50
	Upper	31	69	70
Gender	Female	70	30	380
	Male	62	38	324
Age	0 -14 years	40	60	5
	15 – 18 years	69	31	32
	19 – 25 years	66	34	211
	26 – 35 years	61	39	205
	36 – 45 years	70	30	141
	46 – 55 years	68	32	71
	Over 55 years	83	17	35
Location type	Informal	83	17	392
	Low income	59	41	233
	Middle income	19	81	97
Education	No formal edu	89	11	35
	Grade 1-7	99	1	94
	Grade 8-11	85	15	258
	Matriculated	66	44	140
	Post matric qualification	27	73	82
Physical ability	Disabled	80	20	71
	Not disabled	69	31	506
Race	Black	74	26	601
	Coloured	24	76	75

Adapted from Bridges.org (2002:7)

From Table 2 above, it is clear that access to computers in Cape Town by the year 2002 was confirmed to differ in accordance to income, age, gender, race, etc. The difference is worse between people who have different educational qualifications and physical ability, respectively.

2.4.5. Relevant content and language

English has been used worldwide as the language of business, the Internet and technology at large. This is evidenced by about 94%, i.e., 2.9 million, of the Internet linkages on secure servers being in English, whereas other languages account for only 6%, i.e., 112 103 links (OECD, 2001:23). Ono (2005:8) supports by indicating that 90% of online contents tend to be in English. Thus, the language in which websites contents are in can, in a way, impact on the adoption and usage of ICTs. The reality is, the content that is available in English already side-lines people who are not able to read and write the language. For instance, English is not an official language in Japan and the adoption of ICTs has been relatively slow amongst the people who cannot speak the language, whereas in Singapore, the adoption of ICTs has been relatively due to the fact that English is considered as an official language.

Mokgobu (2005:109) highlighted that the disparities in the diffusion of ICTs in the world today, has led to polarization of communities, countries, individuals and regions on the basis of age, gender, wealth and educational qualification, among other factors. Communities and Individuals are further alienated from others as pointed out by Herselman (2002:2) and Ono (2005:10) through unequal access and distribution of ICTs, thereby making them dysfunctional. This could also exacerbate class divisions in the society, which in worse cases can lead to social turmoil and socio-economic instability. Therefore, it could be summed up that Digital Divide manifests itself in the form of unequal distribution access to ICTs that may result in the

technologically advanced and underdeveloped countries, individuals and regions.

2.5. Overcoming the Digital Divide

There have been several efforts in the form of policies and programmes worldwide towards addressing the Digital Divide. The foundation towards addressing the disparities in the diffusion of ICTs are contained in Article 19 of the United Nations' Universal Declaration of Human Rights of 1948 that:

Everyone has the right to freedom of opinion and expression. This right includes freedom to hold opinions without interference and seek, receive and impart information and ideas through any media regardless of frontiers.

This article compels the responsible states to create a suitable environment through which citizens can participate in the information society without any hindrance. Common approaches and mechanisms through which different states and countries embark upon to overcome the Digital Divide are summarized below.

2.5.1. Policy and regulatory framework

Liberalization of the telecommunication industry worldwide has been based on the notion of universal access and service to basic ICTs to ordinary citizens, especially those who cannot afford to make ends meet. Liberalization, as argued by OECD (2001:6) and UNDP (2001:3), has been instrumental to ending monopoly of the established telecommunication companies, thereby introducing new players. This process is believed to encourage competition, stimulate new investments and encourage operators to find innovative ways to reduce prices in order to attract new customers.

The industry also needed some form of regulation in the form of attaching strict license conditions to operators that promote universal access and universal

service. The license conditions have been set as obligations for operators such as Cell C, Telkom, MTN and Vodacom in South Africa (Benjamin, 2001). Operators are given targets as part of their social responsibilities to roll out public access points.

2.5.2. Subsidization of new role players

Liberalization of the telecommunication industry alone cannot assist states to attain universal access and universal service to ICTs. Governments in developing countries have been taking proactive steps by making funds available towards setting up telecommunication infrastructure in under-serviced areas. In South Africa, this has been done through subsidization of new comers in the telecommunication sector in the form of Under-serviced area licensees (USALs) as reported by Etta and Parvyn-Walnahiu (2001:16). USALs were given start-up grants to the tune of R15 million each in three tranches to ensure that they roll out ICT infrastructure in designated areas. By subsidizing USALs, the South African government is hoping to reach out to the disadvantaged people in designated areas as the cost of telecommunication services rendered by subsidized entities will relatively be low.

However, the subsidization of USALs has its own limitations. Firstly, competition with established telecommunication companies makes it impossible for the new comers to move an inch. This is attributed to the fact that the new comers do not have any infrastructure backbone and they always revert to established companies for assistance. On face value, monopoly is reduced while in actual fact established companies benefit from the subsidization schemes through agreement that they enter into with new comers in the disguise of helping them to kick-start their programmes. Secondly, the actual benefit to the poor does not often get realized as subsidies are limited to infrastructure investment.

2.5.3. Introduction of special programmes

Governments and international players, like the ITU, started to introduce new programmes such as the telecentres, cyberlabs (typical schoolnet programmes) and mobile ICT access centres in order to diffuse and improve access to ICTs Among marginalized groups. Benjamin (2001a:2) mentions that special programmes such as telecentres were envisaged to serve as social experiments in promoting the use of ICT across various sectors of life. The common feature for the special programmes is that access to ICTs has been centralized and available at public places. It is, however, not yet proven as to whether telecentres in this era are still deployed for the same purpose as the initial ones worldwide. This is further confirmed by Burger (2003:129) and Hlongwane (1997:5) when stating that these are geared to improve public service delivery in the South African context. This translates into the use of ICT to deliver educational, health, business development and access government information. However, the practice has been that service delivery at public access points is not constant due to unreliable connectivity and regular power interruptions.

2.5.4. Partnerships

Governments in developing countries have been partnering with private entities to establish telecentres with the intension to infuse technology into disadvantaged areas, mostly rural in nature. Mani (2003:2) describes the deployment of telecentres as partnership effort to promote access to ICTs, and, at the same time, narrowing the digital gap between the technological advanced areas and less advanced areas. The notion of forging partnerships between private and public sectors to ensure even distribution of ICTs is, in a way, a step towards the realization of Millenium Development Goal number 8 (United Nations, 2005).

2.5.5. Integration of ICTs in development programmes

Herselman (2002:5) and UNDP (2001:4) emphasized the need for ICTs to be integrated development programmes since they are means to an end. This could

be done through making ICT an integral part development such that every development programme incorporates the new technologies. Thus, governments too should be seen to be adopting ICTs for social service delivering, sharing information and building capacity.

2.5.6. Promotion of local content

UNDP (2001:4-5) points out that local content should be promoted in order to maximize ICT usage. Promotion of local content can take the shape of websites and on-line portals on development issues that are pertinent to national interests, like it has been evidenced in Lebanon's agricultural development and Venezuela's publicity on disaster.

From the above-mentioned strategies, it is apparent that overcoming the Digital Divide is a staged process that begins with a problem and ends up with the resourced people as alluded to by Herselman (2002:5). The bridge between the problem and the resourced people is underpinned by understanding the nature and the extent of the problem, before one could come up with the solution. This implies that whatever solution that individuals and states come up with to address the Digital Divide, it should be anchored on the principles of understanding and sustainability.

2.6. Methodological Implications

Literature review provides useful insights in terms of making decision on research methodology and determination of important indicators and variables for assessing a social phenomenon. In this study, literature review has, to a certain extent, played a role on the choice of research methodology as well as variables for assessing the effectiveness of telecentres. For instance, Fox (2005:8) decided on telephone interviews as a means to collect data in a survey that was geared towards understanding digital divisions in the United States of America. The population of the study was also selected on the basis of listing in the telephone directory. This implies that a sample of respondents was drawn from

the names that were listed as fixed line telephony subscribers at the time of the study.

This method is, however, perceived as flawed as people who had phones but not listed in the telephone directory and those without phones altogether were deliberately left out. There could have been potential respondents left out in the study, especially those that there were not at home during the time of the call, those whose lines could have been busy and households that were listed in the telephone directory but their lines were suspended. Besides excluding some potential respondents, which could be justified as being on the basis of a Judgmental or Purposive Sampling method, the respondents rates for telephone interviews could relatively be very low, i.e., below 50% (Fox, 2005:12).

On the other hand, individual questionnaire administration, coupled with Systematic Random sampling of respondents as evidenced by Etta and Parvyn-Wayhum (2003), tends to produce relatively better results than the former technique. Systematic approach stems on the principle that every nth object stand an equal chance to participate in the study. Thus, the Systematic random sampling and selection of respondents was adopted in the study for the administration of questionnaires.

Over and above the research techniques that one decides to use in the study, an approach to the study can also influence the results in a noticeable manner. This has been evidenced by Herselman (2002:3) wherein he adopted a Case Study approach for its ability to provide a holistic view of the situation, taking into account contextual conditions that are pertinent to the study. This approach is therefore adopted by the researcher as indicated in Chapter 3 of this report.

Table 2.2, as adapted from Bridges.org (2002:7), is a clear indication on how literature review can contribute to the researcher's decision on variables to assess the effectiveness of telecentres. If variables such as age, gender and

physical location, etc, could determine access to computers in a locality, thus the same variables can also shed a light on the effectiveness of telecentres in bridging the Digital Divide.

2.7. Conclusion

Digital Divide is a multi-dimensional phenomenon. This implies that, for one to understand it, s/he has to consider both technical and non-technical factors that often present themselves in the form legal, physical, socio-economic and technological manner. These are also interdependent factors such that one cannot determine the extent of the Digital Divide by isolating some of the factors from others. The concept of Digital Divide needs to be dealt with holistically by tackling it from different angles. Any approach that development agencies decide upon to address the Digital Divide should encompass socio-economic issues that a particular society is experiencing at a particular time.

This notion is informed by the observation that Digital Divide differs from one area to another and so is the spread or usage of ICTs. There are areas or regions where telecentres are used as means towards addressing the digital divide while other areas resort to individual access to ICTs through internet cafés, house access, school cyberlabs, just to mention a few. However, the effectiveness of telecentres in bridging the digital divide also differs from one area to another. This is exacerbated by the fact that telecentres are public facilities hosted by either government or Non Government Organisations and are supported for a limited period with a focus on operating on a self-sustaining cost recovery basis. Therefore, most of the public access points of this nature are found to be effective during the support period. Once, the government or NGO withdraws support, the services discontinue. Discontinuation of services tends to nullify efforts that development agencies are taking towards addressing the unequal diffusion of ICTs. The efforts are further undermined by lack of responsive policies, poor infrastructure, lack of skills and little resources allocation on facilities that specifically geared towards benefiting poor people.

In other instances, poor infrastructure, inappropriate technology and lack of local content tend to contribute significantly to the disparities in ICT usage between regions, communities and people within the same locality.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Introduction

This chapter focuses on the research design, methods of data collection, techniques and potential ethical issues that are likely to be encountered in the study. Each item is discussed in detail below as the chapter unfolds. The chapter gives an insight on the study area; the population of the study; data collection methods and techniques; data analysis; as well as the ethical issues that were considered during data collection.

3.2. Research approach

There are two types of research approaches that a scientific study may follow. The study may either be conducted through a Qualitative Approach or Quantitative Approach. There are studies that combine the two approaches and, in most instances, a Social Science study is conducted using Qualitative Approach, while a natural science research is conducted through Quantitative Approach. The basic distinction between the two approaches is that Qualitative Approach often relies on descriptive and interpretive techniques to analyzing a social phenomenon, whereas Quantitative Approach involves variables and measurements to analyze relationships in a social phenomenon (Denzin & Lincoln, 2000:8). Despite their differences, the two approaches complement each other. The complementary role could be captured in the sequential usage of the two approaches such that one could use some elements of Quantitative Approach to analyze qualitative data, e.g., the deployment of descriptive statistics.

A Qualitative Approach is used in the study. The rationale for choosing Qualitative Approach is that the study is not grounded on any theory. The study would generate knowledge on the telecentre operation. The use of Qualitative Approach, according to De Vos (2003:81), entails the construction of detailed

descriptions of social reality. This translates into the production of data in the respondents' own words, either spoken or written on or about their experience of the social phenomenon. Since Qualitative Approach to research is conducted in a natural setting and the researcher is the key instrument of collecting data, the study is undertaken within the habitat of the respondents. Therefore, data collected in the form of focus groups discussions, interviews, observation and questionnaires are presented descriptively in numbers and in words to express the view points of participants.

3.3. Research design

Mark, Henry and Jules (2000:81) identify four modes of inquiry that could shape a scientific study. The four modes are, namely, descriptive, classification, casual analysis and value inquiry. Each of the four modes would lead to different results if adopted in a study. Value inquiry, for instance, could be used to determine the impact of an intervention, policy or a programme. Babbie (2001:333) refers to an inquiry that is intended at analyzing and/or assessing a social intervention as evaluation. Evaluation could take place in two different forms, namely; formative and summative evaluation. Formative evaluation is aimed at shaping the social intervention as the focus of data collection is to clarify goals (Clarke, 1999:8 & Robson, 2000:50). It could be referred to as a monitoring tool that could assist programme implementers to identify ways in which the intervention could be improved. Hudson (2001:1) and Reilly and Gómez (2001:2) view formative evaluation as a feedback process that focus on gives programme or project implementers feedback on how well the intervention is working, what changes could be made, as well as drawing lessons for future projects. This kind of design is not used as a determinant for the fate of the programme. In other words, formative evaluation ensures that the proposed services are actually delivered, and allows the project team to review and refine project deliverables before it is too late. Contrarily, summative evaluation could be viewed as a means to provide definitive judgment on the programme or policy's merit and worth (Mark et al., 2000:51). It is this kind of evaluation that is utilized to decide

on the fate and future of the intervention. If the evaluation results are found to be negative, the programme implementers might decide to cease operations.

Research design that is pursued in this study is formative evaluation. This choice of a design is informed by the fact that a telecentre programme is quite new as it is not older than five years and, as such, little is known about the viability of the facility to address the Digital Divide. De Vos (2005: 272) points out that in the case where the social phenomenon under investigation has been in existence for a short period of time, Case Study approach could be followed. The Case Study entails an in-depth analysis of the social phenomenon over a period of its existence. The analysis could be done as part of evaluation of an intervention or a programme in order to identify areas of improvement.

3.4. Area of study

The telecentre is situated at Mapela Village, which is approximately 35 kilometres West of Mokopane town, within Mogalakwena Municipality of Limpopo Province. The village comprises 26 wards under one of the nine tribal authorities within the Mogalakwena Municipality (Smith, 2002:8). Leadership in the community is in the form of the Tribal Authority that has Kgoshigadi Langa as the head and 26 indunas who are placed under her, in different wards. The area is further divided into 5 municipal wards whereby each municipal ward is constituted by an average of 5 tribal wards.

Mapela, as illustrated by Mogalakwena IDP (2004:56), has the potential to develop into a rural node within the municipality. However, the area has limited commercial opportunities. The only export-oriented activity in the village is Amplats Platinum mine, and the community does not derive any direct benefit from the mining operations beside the employment of a handful of residents.

The physical infrastructure at Mapela comprises gravel roads. There is a road-tarring project that is off the ground (Mogalakwena IDP, 2004:30). Once

complete, this will constitute the only tarred and main road that passes through the village. This road links the village to neighbouring villages, and serves as the most important means of communication. People from other villages use the same road to and from the MPCC. Social facilities at Mapela include a clinic, a post office, 27 schools and an MPCC that was launched in November 2003. The MPCC is strategically located as it is at the main cross-roads that links roads from various villages.

3.5. Population of the study

Babbie and Mouton (2001:100) and De Vos (2003:107) argue that population of the study relates to the objects from which data is collected. In this study, the population comprises telecentre users, telecentre operators, tribal council, Ward committee and USA personnel that has been involved in the establishment of the centre.

The population of the study consists of a total of 157 persons, broken down as follows: 26 tribal councilors, 50 Ward committee representatives from 5 wards, 2 telecentre operators, 3 municipal officials, 8 committee members for Reamogeleng Disabled Group, 8 committee members for Tshwarelanang Poultry project and 50 telecentre users. The population constituted of people who are engaged in the day to day running of the telecentre; decision makers at the tribal, ward and municipality levels; women's group; and the persons with disabilities.

3.6. Sampling method

Sampling is considered as a method through which the population of the study is drawn from the population frame (Babbie: 2001: 178). He further notes that non-probability sampling is used in cases wherein the researcher relies on available subjects for data collection. In this study, both Purposive and Spatial sampling methods were used to select an appropriate size of respondents from the telecentre users, telecentres operators, tribal council and Ward committee. De Vos (2003:207-208) argues that Spatial Sampling method is appropriate in cases

wherein the population frame comprises of temporary units. Thus, the units assemble only at certain times and once they disperse, the population frame does not exist. Telecentre users constitute a highly temporary component of the population. They visit the telecentre at the time that they want a service, thereafter it would be difficult to assemble them. They were as such selected following spatial sampling method. Only telecentre users whose visit to the telecentre coincides with the researcher were engaged. On the other hand, purposive sampling in the study was used to select participants from the tribal council, Tshwarelang Poultry Project, Reamogeleng Disabled persons' committee, and the Ward committee. The respondents were members of the tribal council and Ward committee that are within 5 kilometres distance from the MPCC. This means that not all members of either the tribal council or the Ward committee were involved in the study. The telecentre operators and the MPCC manager constituted the permanent component of the population. Since they are only three, all of them formed part of the study. The rationale for the choice of mentioned groupings was that each group represented a certain perspective of the community. For instance, traditional council represented the perception of traditionalists on the telecentre while ward committee represented the perception of the contemporary youth and development workers. However, the sampling method used were not earmarked at obtaining representative figures from the populations frame. Therefore, the results of the study can not be generalized.

This translates into a sample of 58 respondents targeted for the study from the sample frame of 157 units. The sample was structured as follows: 2 telecentre managers, 1 municipal worker, 5 tribal councilors, 7 Ward committee members, 6 disabled committee members, 32 telecentre users and 5 women's group committee members. This break down brought the sample to a total of 37% of the overall population of the study.

3.7. Data collection methods/Choice of methods

There were two categories of data that were gathered in the study, namely, primary and secondary data. Each category of data required a different method/s of data collection. The methods that were used include document analysis, interviews, focus group discussions and questionnaires. Neuman (2006:149) refers to the combined or mixed use of data collection methods as triangulation. Therefore, triangulation could be argued to entail observing a social phenomenon from different view points in order arrive at certain conclusions. In the study, the concept has been used through the deployment of different data collection methods as alluded to above. Each of the method is discussed in detail below. Furthermore, the concept has been adapted to gathering different kinds of data, namely; primary and secondary data. Primary data are obtained through interviews, questionnaire administration and observations, whereas secondary data could be obtained through document analysis, analysis of audio/visual materials, etc.

3.7.1. Document analysis

Denzin and Lincoln (2000:706) view document analysis as a systematic method of data collection that entails the interrogation of documents such as government policies, reports on the social intervention or programme, records and review of related literature. The method was hoped to have the potential to provide information that may not be available in spoken form and such information can be accessed easily, and at a relatively low cost. The information could also give a historical insight about a legislation and policy framework that influenced telecentre roll out. In this study, a review of relevant literature, ICT policy at international and national level, analysis of the telecentre programme roll out plans and telecentre records overtime was done.

3.7.2. Interviews

This method, according to De Vos (2003:292), is a predominant mode of data collection in qualitative study. Interviews ensure active participation of both the

respondents and the researcher. They also help the researcher to understand the world from the respondents' perspective.

Individual interviews were used to collect data from telecentre operators, Mogalakwena municipality official responsible for the MPCC programme, namely; the MPCC manager. Face-to-face interviews were conducted for the study with the abovementioned respondents using a pre-interview guide that is attached as **Annexure B and C**. The tool enabled the researcher to ask follow up

3.7.3. Focus group discussion

Focus group discussions is a data gathering technique that is socially oriented and assists a researcher to capture data on the real life experiences of the respondents (Babbie, 2001:294). This method is some kind of collective activity as respondents are grouped in accordance with the criteria as set by the researcher, and the data generated cannot be identified with any individual, but rather a group as a whole. Focus group discussion also provides an opportunity for participants to learn from each other on a social phenomenon (Cresswell, 2003:4).

As the discussion unfolds, experience and knowledge sharing takes place, thereby enabling participants to exchange ideas on the unit of analysis. Silverman (2004:177) points out that questions by the researcher keep the discussion flowing and enable all group members to participate actively. This technique could be used interchangeably with group interviews, although in this case questions are not directed to individuals but rather a group as a whole. This could result in low research costs and high face validity according to De Vos (2005:301) as the same sets of questions are asked to different focus groups. Therefore, the researcher does not need extra time to design questions for each group and some of the information is clarified as the researcher gets responses from different groups. Focus group discussions can assist in generating a large amount of data in a shorter time, although several meetings or schedules will need to be arranged with each focus group in order to collect data. However, the

flip side of the method could be that one person or gender could dominate the discussion and that poses a control challenge by the researcher (Siverman, 2004:180). The process may results in imbalanced views if not handled carefully.

Focus group discussions were held with the sampled tribal councilors, Ward committee members, poultry project committee (women's group) and committee for persons with disabilities. The focus group discussions were used to gather information regarding the community perceptions on the telecentre.

3.7.4. Participatory Rural Appraisal techniques

Participatory Rural Appraisal techniques evolved as a set of informal techniques used by development practitioners to collect and analyze data in rural areas (World Bank, 2002:1). The techniques can also be used to analyze social phenomena in urban areas. However, the researcher, as an outside person, plays a role of a facilitator while local people do data gathering and analysis.

In the study, focus group discussions were supplemented by the PRA techniques. PRA techniques, according to Bhandari (2003:11) and Oksen (2002: 1), could be used in qualitative studies as a supplement to other methods of data collection in order cross check responses and compare one group' opinion with another. In short, this could be translated as triangulation of some sort as more than one source of data is used in the process of analyzing the social phenomenon. Fürnkranz and Hüllermeier (2003:8) cited PRA tools as research aids that seek diversity, triangulation and local ownership in the study. The tools strive to attain diversity and triangulation by asking five key questions, i.e., *what, where, why, when and how?* The facilitator guides the research process by asking open ended questions.

PRA is further said to be adaptive and could not as such be used as a standard methodology (Oksen, 2002:4). This implies that data gathered using PRA are

based purely on local knowledge and skills, as such cannot be considered to be universally applicable. Moreover, the techniques ensure maximum participation, rapid and progressive learning amongst participants, and between the participants and the researcher regardless of difference in levels of literacy. The tools are further said to give continuous and comprehensive feedback to participants on the social phenomenon that is being studied (Förnkrantz & Hüllermeier, 2003:6). In this study, two PRA techniques were used, namely: Venn diagram and Pairwise ranking.

a) Venn Diagram

Venn diagram is the PRA technique that has its origin in the mathematical branch. The technique is used to illustrate logical relationships between groups, institutions or sets through intersections or overlapping (Regent, 2006:1). The technique also derived its name from a great mathematician, John Venn (1834-1923). Intersections or overlapping areas depict interdependency between the sets or institutions. Venn diagrams also depict influence and the importance of institutions in a particular society in the form of the size of a Venn diagram that an institution is perceived by the community. This implies that the bigger the size of the Venn diagram, the greater the importance and influence has the particular institution, while the closer the distance that the Venn diagram is placed from the centre, the greater is the relationship that the institution is perceived to have established with the community. In short, the degree of overlap and the size of Venn diagrams say a lot about the relationship between the community and institutions operating in it.

The tool evolved with time and, as such, development practitioners became flexible in using the tool and no longer confined it to circles rather usage of shapes such as triangles and rectangles. The technique has been used in the study to analyze relationships between key role players in the development of Mapela village.

b) Pairwise ranking

Pairwise ranking is another technique that was deployed in the study. The technique is also referred to by development practitioners as Round Robin ranking, due to the fact that that one to one comparison is made between items, assuming that other items against which the preferred item is compared with are negative (Fürnkranz & Hüllermeier, 2003:3). Pairwise ranking deduces that the top ranked item is mostly preferred. The technique is commonly used to rank needs, wealth /well being and preferences (World Bank, 2002:2). It also helps in decision making in relation to prioritization of needs and helps to determine which project could be rolled out first based on its ranking or weighting since. Bernard (2008:1) further argues that in every society, there are overwhelming or endless needs while the budget is always limited. Thus, prioritization of needs becomes inevitable given limited financial resources.

Pairwise ranking can also be used to elicit people's perception of the most important social phenomenon or issue that affects them. In the study, Pairwise ranking was used to determine respondents' perceptions on the telecentre facility when compared to other social facilities in the study area.

3.7.5. Questionnaire

Questionnaire, as a method of data collection, was administered to telecentre users. De Vos (2003:172-175) identifies five types of questionnaires that could be utilized in data collection. The list includes mailed, telephonic, personal, hand-delivered and group-administered questionnaires. Each type of questionnaire should be designed with the respondents in mind. This means that some forms of questionnaires are biased in nature. For instance, the choice of telephonic type of questionnaire already reflects that potential respondents without telephone facilities will be left out of the study, whereas group administered questionnaires are likely to include the perspectives of the person who is completing the tool on behalf of the group, and the "not so talkative members" of the group could be left out. In this study, group- personal

questionnaire was used to collect data from the telecentre users. The motive behind choosing this type was that respondents would have time to complete the questionnaires individually, without being intimidated by other respondents. Personal administered questionnaires also allowed for the respondents to ask clarity-seeking questions to the researcher directly.

Telecentre users were selected through the "exit poll" approach as adapted from Etta and Parvyn-Wamahiu (2003). The approach entails that every n th user is chosen at the exit point in order that a questionnaire is administered. In this regard, every 2nd male and 3rd female telecentre user was selected at exit point for the study. The disparities between the selection of male respondents were influenced by the fact that the telecentre at Mapela has more female users than males.

3.8. Pilot Survey

According to De Vos (2003:177), piloting of research tools is essential prior to the actual survey being conducted. A pilot study assists in identifying weaknesses on tools, thereby enabling the researcher to make necessary amendments, modifications, and additions as per feedback received. For instance, pilot survey effected changes on tools as follows in the study:

- The questionnaire had no choices for Question no.18. Piloting the tool enabled the research to realize the omission;
- Secondly, on the questionnaire, there was no space left for the open-ended response on the actions that should be taken by telecentre management, i.e., item no. 27; and
- The interview guidelines had to be modified after the realization that the initial questions were not aligned to the research topic, especially the last five questions.

3.9. Data collection procedures

The researcher sought permission from authorities at Mapela MPCC to collect data. The authorities included Mogalakwena Municipality and Mapela Tribal Authority, so that they could in turn be able to inform their constituents about the study and its purpose. Permission was sought from time to time, whenever it was necessary, with relevant authorities.

There were several meetings that were arranged with the telecentre managers, telecentre board, tribal council and Mapela Development Trust, with the intention to interview them. Interviews were recorded on tape and transcribed later by the present researcher. On the other hand, questionnaires were distributed and collected on the same day. Respondents were encouraged to complete the questionnaires upon receipt or during the presence of the researcher, so that they could ask clarity-seeking questions on the spot. This minimized the level of non-response.

3.10. Ethical Considerations

There were ethical issues that were observed in the study. Babbie (2001:346) cautions that evaluation research could unearth ethical issues. This could take place in the form of a social intervention that is being evaluated, thus raising ethical issues that are ideological, political and cultural, just to mention a few. This could also culminate into the researcher being engaged in community battles unawares.. Due to such kind of unforeseen circumstances many authors caution that Social Science research should be anchored on ethical principles that guide the research on dealing with ethical issues (Neuman (2000:91-101). Major ethical issues catered in the study were, namely, confidentiality, avoidance of deception and apolitical composition of focus groups. Details on how the mentioned ethical issues were catered for appear below as follows:

a) Confidentiality

The principles of anonymity and confidentiality were observed throughout the study, especially in the case of data collection through interviews, focus group discussions and questionnaire administration. No name of the respondents was mentioned or written at any point in the study. Only titles of people, as per the positions and roles they play in the community, were used. Interviews were held privately and/or in closed doors. Whenever it was deemed necessary, interviews were re-scheduled for the time or location that was convenient to the respondent/s. A meeting with the Ward committee, for example, was held in their respective wards and at the venue of the Ward committee's choice.

b) Deception

The researcher clarified the goal of the study without any disguise. It was explained to the respondents that the study is solely for the partial fulfillment of the Senior Degree requirement and no material benefit would be derived through participation in the study. Thus, respondents in the study participated without expecting something in return.

c) Informed consent

No person was forced to participate in the study. The researcher explained the purpose of the study at the beginning of any engagement with the respondents so that respondents who might decide to participate, would do so knowingly. For instance, the initial target for a focus group discussion with the tribal authority was meant to include the headmen's forum, but changes had to be made based on the council's reluctance to hold a large meeting while it is the umbrella body of the induna forum. The tribal council's decision to participate in the study instead of an inclusive (headmen) forum was based on the understanding that the council is the mother body for the headmen forum and thus comprises representatives from the headmen forum.

d) Apolitical composition of focus groups

There was a potential for cultural, political and power relations issues that could have arisen between the tribal council and the Ward committees. This stemmed on the fact that there is persistent dispute over roles of traditional leaders versus local government structures such as Ward committees countrywide. Mixing the groups would have resulted in some participants not being free to share information and their experience on the telecentre. For instance, a female member of the Ward committee would have not felt free to share her opinion in a focus group discussion that was comprised of tribal councilors. Culturally, women are not supposed to voice their views in a gathering that has tribal councilors as participants. Women are, at such gatherings, expected to play observer roles. The above-mentioned ethical issues could have, in one way or another, compromised the study if not attended to.

3.11. Data analysis

Data collected were classified into themes and concepts of similar features before they were codified. Babbie (2001:365) notes coding as the key step in data processing. It is coding that enables the researcher to understand the social behaviour of the respondents in relation to the telecentre programme at Mapela. Coding, according to Neuman (2000:421), involves the mechanical reduction and analytic categorization of raw data. The codified data are presented in the form of descriptive statistics, tables and charts. This translates into a mixture of qualitative and quantitative styles of analyzing data.

Key variables used in the study include age, educational qualification, gender, income, distance traveled to the centre and occupation of users. Bar charts and frequency tables were used to analyze accessibility of telecentre services in relation to key variables. On the other hand, institutional arrangements and power relations within Mapela village were analyzed using Venn diagrams, whereas Pairwise ranking was used to analyze the respondents' perceptions on the key social facilities in the village.

3.12. Conclusion

In this chapter, an overview of the research methodology was presented. Since this is a qualitative study, specific data collection instruments and techniques were described in relation to relevancy of the sources of data. The chapter also focused briefly on the description of the research environment through highlighting the samples of respondents from whom data were collected.

CHAPTER 4

RESEARCH FINDINGS, INTERPRETATION AND ANALYSIS

4.1. Introduction

This chapter gives a presentation on the findings of the study. The experiences and perceptions of respondents are presented, discussed and analyzed. The study was aimed at assessing the effectiveness of the telecentre at Mapela MPCC in bridging the Digital Divide. The issues investigated in the study were the extent to which the telecentre bridge the Digital Divide, examination on the operation of the centre paying attention to users, services rendered, demand for such services as well as the rationale for demanding such services. The study also looked at community participation in the designing of the centre, ownership, as well as monitoring and evaluation mechanisms that have been put in place.

Key variables that were used to assess the effectiveness of the telecentre included an analysis on the age, educational qualification, income, occupation and distance that users travel from their respective place of residence to the centre. The chapter also covers findings on the usage of the telecentre as per record of trainers that was perused at the centre.

The presentation of findings is done chronologically as follows:

- Profile of respondents;
- Respondents' perceptions on community development;
- Telecentre ownership and usage;
- Benefits that the community derive from the telecentre;
- Monitoring and Evaluation Mechanisms of the telecentre;
- Challenges that the community and users are experienced; and
- Possible solutions to the challenges.

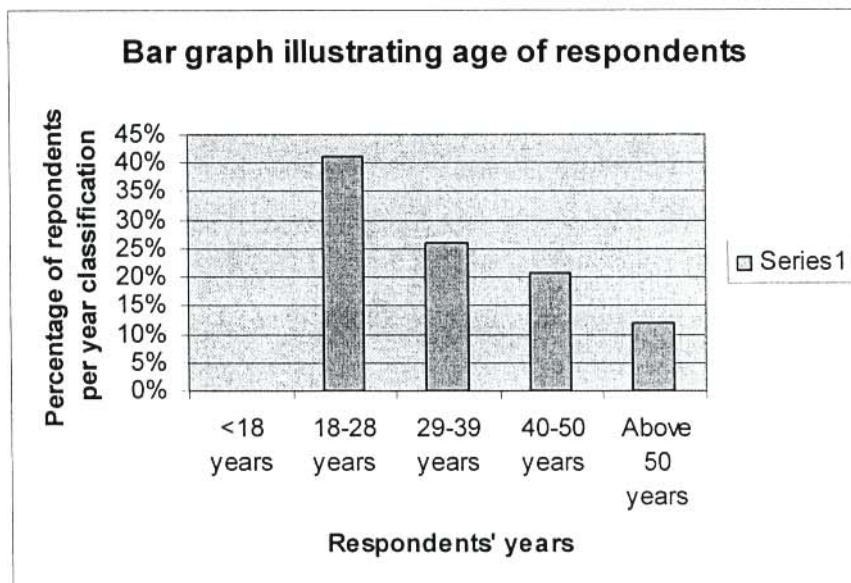
4.2. Profile of respondents

The profile of respondents that participated in the study appears below. This has been compiled across all research techniques or methods deployed in data collection. The profile confined itself to age, gender, marital status, educational qualification, occupation and income of respondents.

4.2.1. Age

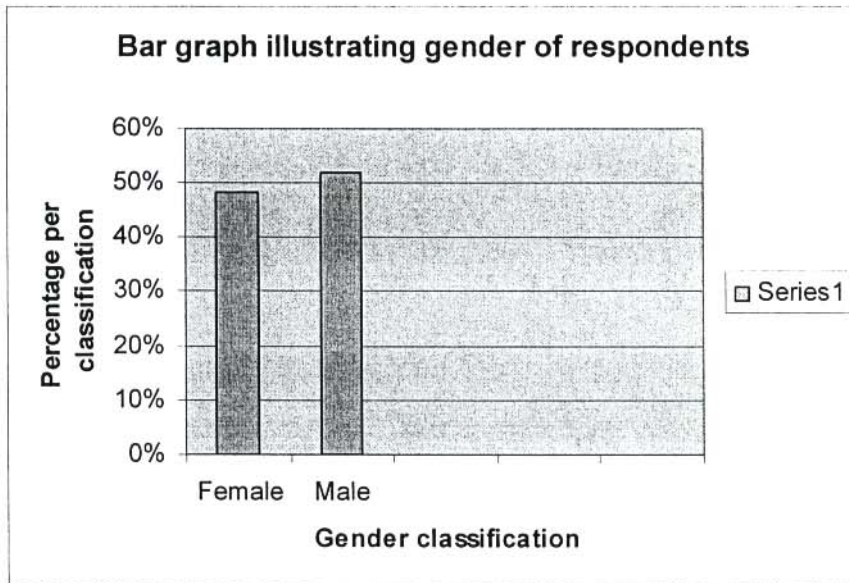
The age of respondents in the study ranged between 18 years and above 50 year olds. This implies that there was no respondent whose age was below 18 years. The age category for youth, i.e., between 18 to 28 years, makes 41.30% (24) of respondents while the elderly age category, i.e., above 50 years, makes only 12.07% (7) of respondents as depicted on chart 1 below. These figures illustrate that youth were the largest percentage of the respondents. The overall respondents' age groups were inclusive of youth, middle aged people and the elderly.

Chart 1: Age classification of respondents



4.2.2. Gender breakdown or composition of respondents

Chart 2: Gender breakdown of respondents



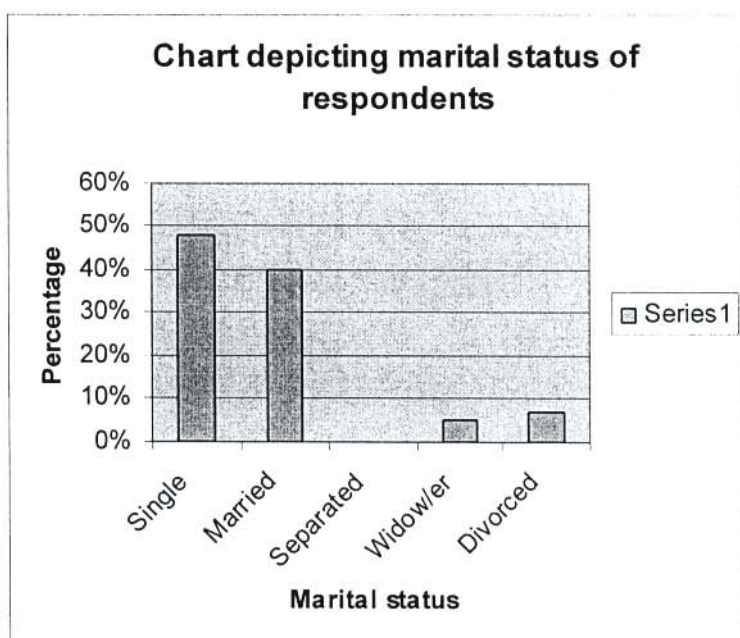
The respondents comprised of both female and male representatives. However, the overall gender break down percentage is reflected as 28 (48%) of female against 30 (52%) of male. Thus, male respondents constituted the majority of the participants. Different instruments of data collection also led to disparities in gender breakdown of respondents. For instance, for telecentre users, the gender breakdown came at 50% for each gender grouping. This is attributed to the fact that the selection of telecentre users was systematic, i.e., every 3rd female and male at exit point was chosen for participation. On the other hand, other tools such as the focus group discussions had different gender representations. The Tribal Council was constituted of male participants only, whereas the Tshwarelanang Poultry project had female participants only. The nature of the group has in a way determined gender representation. Tshwarelanang Poultry project, for instance, has only women members. Therefore, there was no way which one could get males as participants in the group. The same story applies to the tribal council. This could further be argued to be attributed to cultural beliefs that women cannot sit in council that makes decisions for the community. The Ward committee, on the other hand, was found to be a relatively gender

balanced focus group. The committee had 3 male participants (43%) and 4 female participants (57%).

4.2.3. Marital Status

The respondents' marital status ranged from single to widow/widowers. Single participants made 48% (28) of the study, which is the highest percentage, followed by 40% (23) of married people. There was no one amongst the respondents who separated from his/her spouse, while the divorced and widow/widower categories had a share of 7% (4) and 5% (3), respectively (see Chart 3 below).

Chart 3: Marital status of respondents

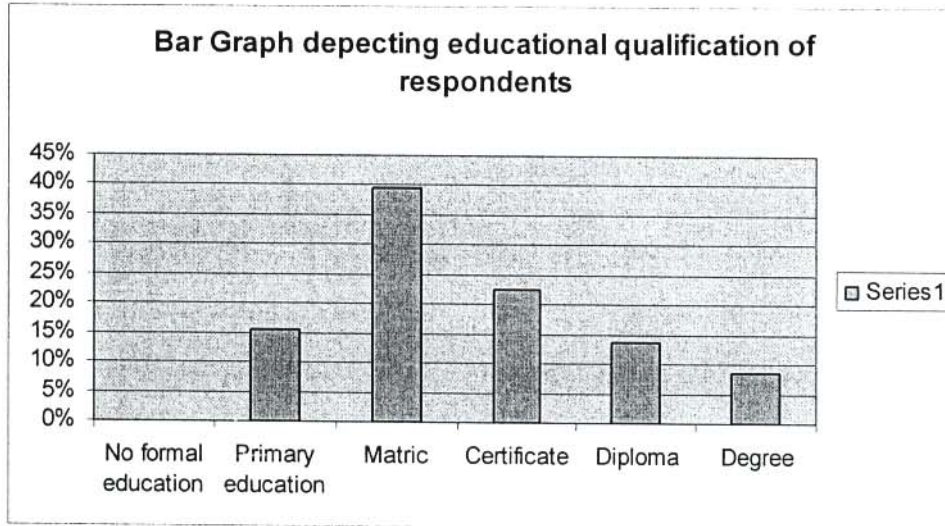


4.2.4. Educational qualification

The educational qualification for the people who participated in the study is based on the highest qualification that each of the respondents had attained. A total of 6/six categories were used to obtain information. The categories are, namely, no formal education, primary education, matric, certificate (post matric), diploma and a degree. Chart 4 below depicts that 39.66% (23) of respondents

had matric, 22.40% (13) had post matric certificates, while respondents with the lowest qualification, i.e., with primary education comprised 15.52% (9) of respondents. People with matric and post matric certificates constituted the majority of the respondents in the study.

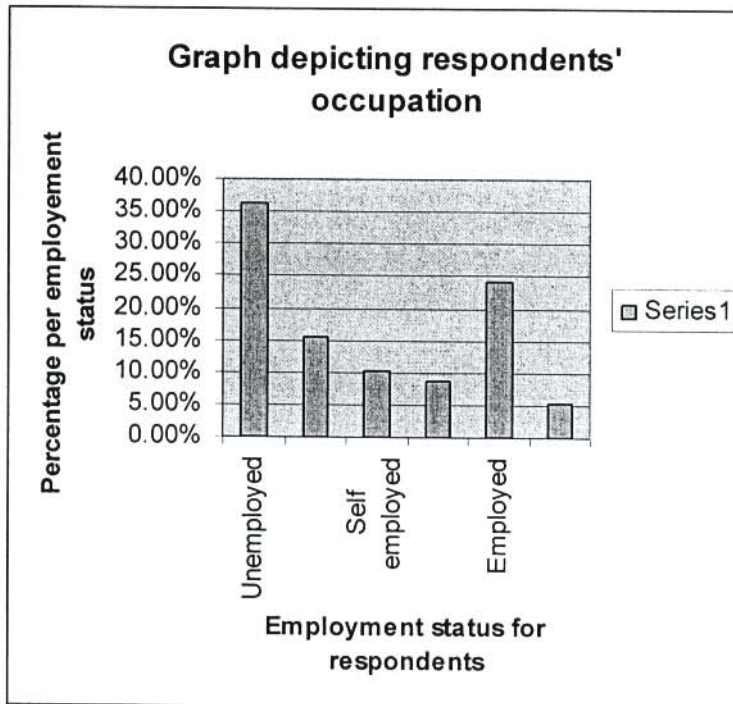
Chart 4: Education qualification of respondents



4.2.5. Occupation/ employment status

Chart 5 below depicts the occupation of respondents. The classification of respondents' occupation is inclusive of the employed 14 (24.14%), self-employed 6(10.34%), pensioners 3(5.17%), students 5 (8.60%), unemployed but actively seeking jobs 9 (15.52%), as well as completely unemployed people 21(36.20%). The unemployed people constituted the highest percentage of the respondents while the pensioners made the lowest percentage. If one combines the two categories of the unemployed, their percentage is still high at 30 (51.72%). Thus, one could deduce that the study was predominantly comprised of unemployed people as respondents. The employed respondents' actual occupation included educators, health workers, mine workers and security guards. The job seekers, on the other hand, were found to be graduates from universities, FETs and private colleges.

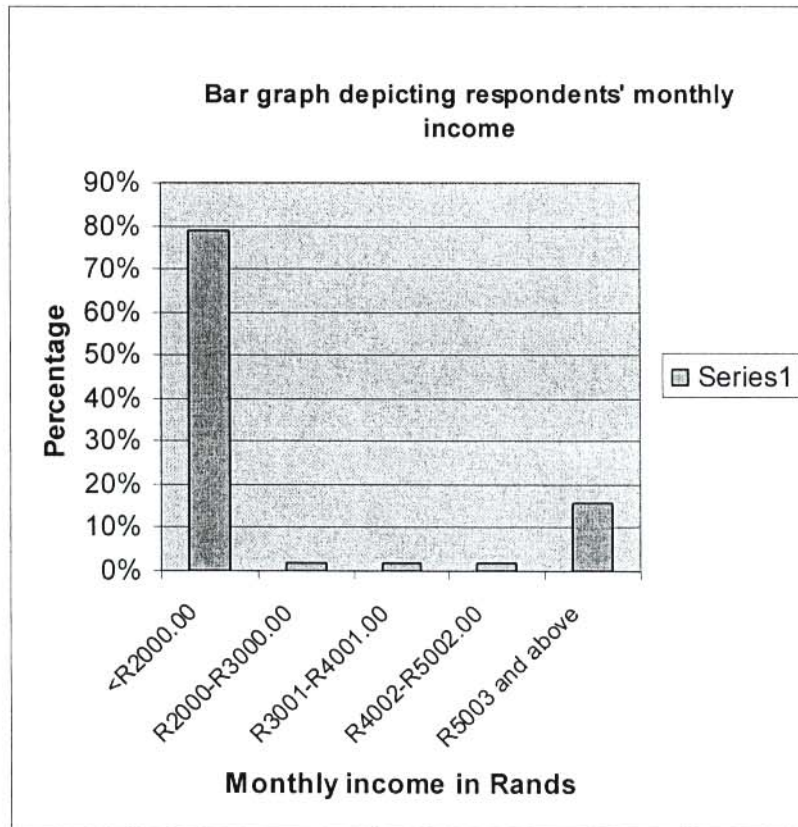
Chart 5: Occupational status of respondents



4.2.6. Income per month

Chart 6 below depicts that 46 (79.31%) of the respondents fall within the monthly income range of less than R2 000.00, while only 9 (15.152%) fall within the R5003 and above category. The other three categories had a total share of 1 (1.724%) respondent each.

Chart 6: Monthly income of respondents in Rands

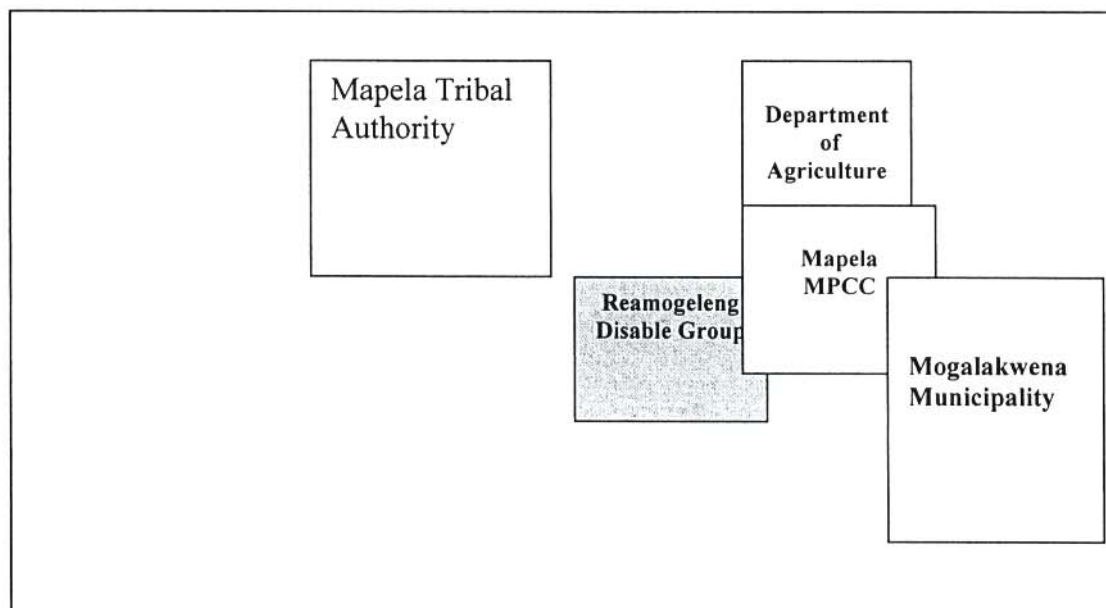


4.3. Perceptions on community development

4.3.1. Role players in community development

Different group of respondents had different perceptions on community development. This was depicted first by the key stakeholders identified by each focus group as role players in the development of Mapela. The different perceptions are captured in the diagrams below.

Diagram 1: Venn diagram on institutional relations to the Reamogeleng Disabled group



The committee of the people with disabilities identified four institutions as key development drivers, i.e., Department of Agriculture, Mogalakwena Municipality, the MPCC and Mapela Tribal Authority as per Diagram 1 above. The institutions were perceived as key role players in development, in direct relation to the advancement of Reamogeleng Disabled People's Association. In other words, the Association for People with Disabilities was placed at the centre and representing the community.

Mapela Tribal Council identified different institutions that they perceive as playing a key role in the development of the community as depicted by Diagram 2 below. The institutions identified were 8 in number and they include the Tribal Council itself. Unlike a committee of people with disabilities, the Tribal Council perceived itself as role player and a participant in development, rather than a recipient of services that other institutions introduce to the community.

Diagram 2: Venn Diagram on the institutional relations to the community as perceived by the tribal council

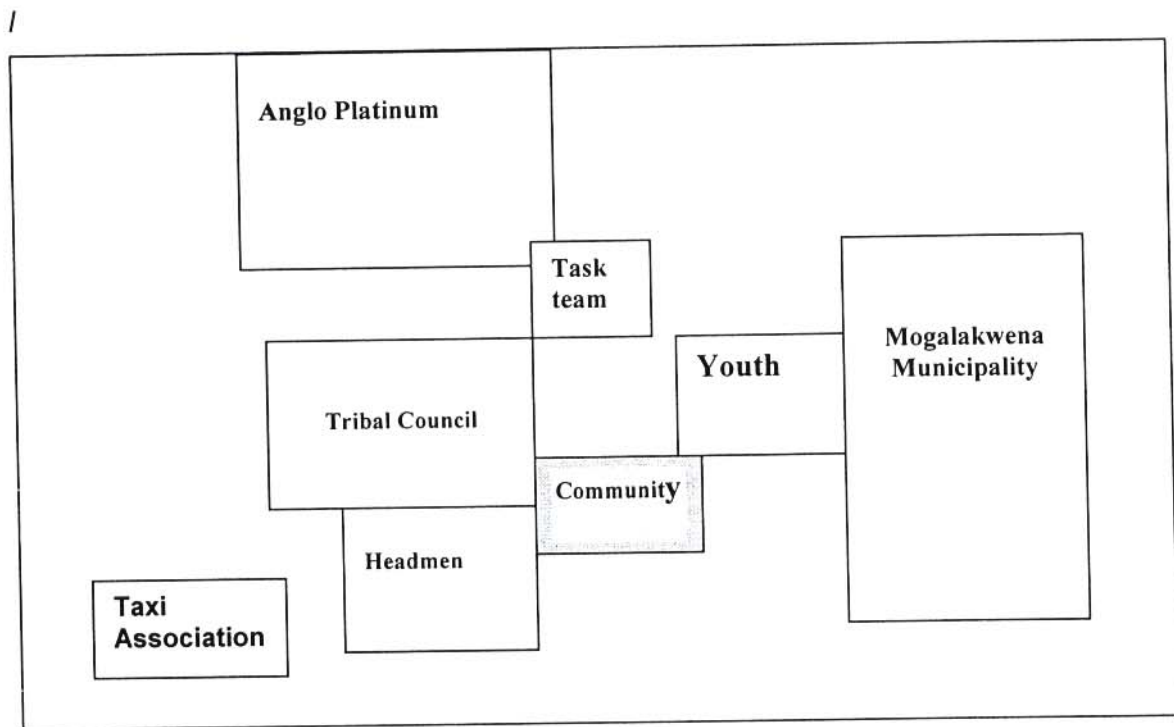
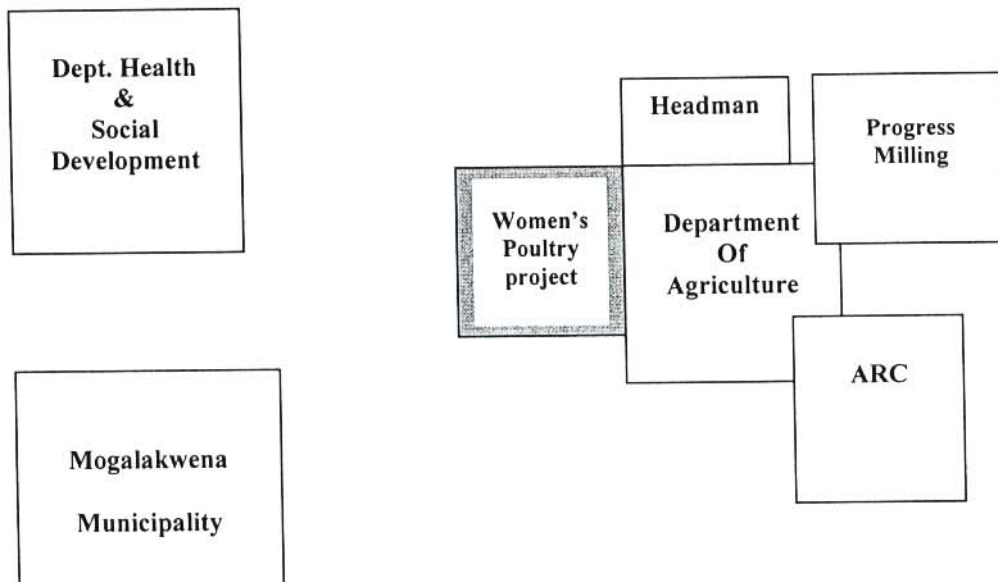
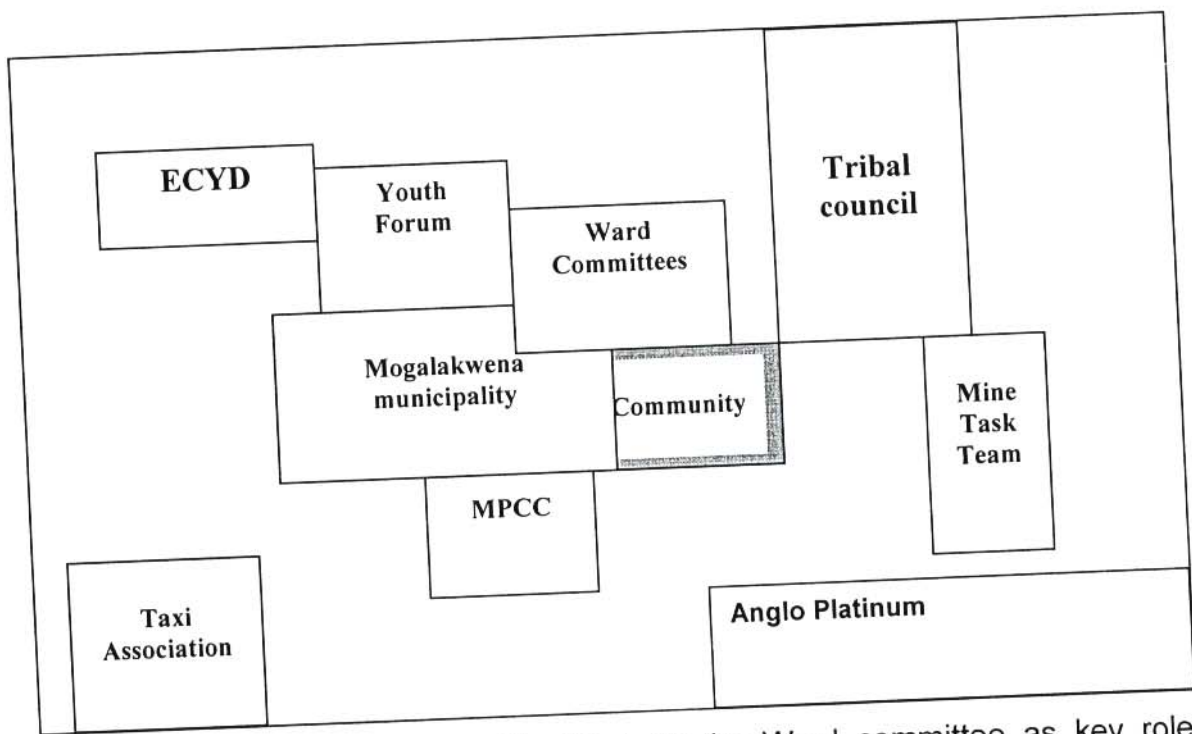


Diagram .3: Venn diagram illustrating perception of the women's project on their relationship with key development role players



The committee identified 6 institutions that are crucial to the development of the poultry project. The list includes Agricultural Research Council, Department of Agriculture, Department of Health and Social Development, local headman, progress milling company and Mogalakwena Municipality. Some of the listed institutions do not play any significant role in the project at the moment, but their listing was based on their potential or the role they played in the past. Diagram 3 above depicts the relationship between the listed institutions and the project as well as their importance.

Diagram 4: Venn diagram illustrating perception of the ward committee on the relationship between with key development role players in Mapela



A Total of 9 institutions were identified by the Ward committee as key role players in community development. The institutions' roles as by the committee are depicted in Diagram 4 above. The diagram further illustrates the importance and/or value attached to the respective institutions.

- **Tribal Council:** This institution is the umbrella body for the headmen and the Mine Task Team. The tribal council administers land in the village. It allocates sites for residential, developmental and agricultural purposes. All entities acquire land for development purposes through the tribal council, municipality, government department and individuals included. It is also facilitating the land claim process for the land rights that the community lost during the apartheid era.
- **Mine task team:** This is a small entity that has ties with the tribal council as well as with the mining house. The institution is supposed to assist the community in unlocking the social investment blockages that could be hindering the mine to invest in the community. However, it is now playing the part of a “toothless dog” as not much has been achieved since its establishment.
- **Youth Forum:** This institution works closely with the municipality through the youth council. The structure is predominantly pushing the agenda of the African National Congress Youth League. There is no development programme that the institution is implementing. However, the institution is playing a significant role in organizing the local youth.
- **Establishment for Comprehensive Youth Development (ECYD):** This institution was identified as playing a crucial role of capacitating youth in Mapela on various skills such as business and organizing. The institution does as such work closely with youth structures other than the community at large.
- **Taxi Association:** The taxi association at Mapela works in isolation from both the community and other stakeholders. The entity makes decisions on taxi fares without consultation. As such, the entity is perceived as being only interested on its own advancement rather than that of the community at larger
- **Department of Agriculture:** The department has been singled out from other government departments for providing technical support for the

project like it does with the vegetable garden at the MPCC and o the poultry project. An officer from the department visits the projects on weekly basis and also assists with transport to meetings. The department further arranges training for project members. In some instances, other entities such as Agricultural Research Council and Progress Milling Company. This is the rationale for the intersection of the two entities in the diagram.

- **Department of Health and Social Department:** This institution founded the project as part of the poverty relief measure in 1998. The institution donated funds to the entity and did not put any system in place.

From the above-mentioned explanations, it is apparent that different stakeholders play a certain role in the development of Mapela. The role and relationships that the institutions play and have with the community is differs from one group to other. For instance, the Ward committee has identified the municipality as playing an important role in the development of the community while other groups such as the poultry project perceive the institution differently.

4.3.2: Key Stakeholders' Analysis

The institutions identified as key role players in community development are perceived differently by the community. Different community-based structures perceive the role players differently and the perception is often determined by the contribution of an individual institution in community development.

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Table 3 : Stakeholder analysis in relation to development of Mapela Village

Stakeholder	Current role played	Interest in community	Challenges
Anglo Platinum	-Economic powerhouse -Funding relocations for communities that reside areas of high mineral deposit	Mining of mineral deposits such as platinum -Profit making	-Insufficient social investment -Relocation of people to other areas (community disintegration)
Headmen	-Extension of Tribal Council at ward level -Implementation of Tribal Council decisions - Make recommendations to the Tribal Council for allocation of residential sites	Recognition as leadership structure	-No proper record keeping -Limited powers -Uncoordinated land allocations -Some residents undermine them as they are not democratically instituted
Mogalakwena Municipality	-Service delivery and Infrastructure provisioning -Ensure good governance through public participation and establishment of ward committees, ward steering and projects steering committees	-Coordinated and participatory development	Limited resources v/s endless or overwhelming community needs
Mapela Tribal Council	-Custodian of culture -Decision making body in term of land allocation	Public recognition as influential structure in community development	-Gate keeping role (some times frustrate development initiatives)
Mine Task Team	Linkage between the Tribal Council and Anglo Platinum	Tapping social investment from the mine	Lack of strategy to deal with mines
ECYD	-Capacity building for youth -Networking opportunities	Youth empowerment	No presence in the community
Youth Forum	Mobilization of youth	Organized youth	Dependency on external support to kick-start

Table 3 : Stakeholder analysis in relation to development of Mapela Village

Stakeholder	Current role played	Interest in community	Challenges
Taxi Association	Provision of public transport	Business/Profit making	programmes Increment of fares without consultation with community/users
Department of Agriculture	Provision of technical support to small scale farming and vegetable gardens	Enhancement of food security	Lack of sustainability of farming projects, especially where groups are involved
Department of Health and Social Development	-Provision of health and social work services -Processing of social grants applications and pay outs	Community's health and social welfare needs are catered for	Lack of mobile facilities to extent services areas far away from clinics and the MPCC
Other government departments and public entities	-Provision of social services and information at the MPCC	Community access public services at the shortest distance	Lack of mobile facilities to cater to areas that are far away from the MPCC
Other community based organizations	-Represent community views/ interests at development forums -Implementation of development programmes	-Community empowerment -Poverty alleviation	Dependency on external support/ funding

4.3. 3. Perceptions on important social facilities

The respondents' perceptions on important social facilities were captured through the use of pair-wise ranking. During the process of data collection, respondents, especially participants in focus group discussions were requested to list social facilities that they perceive as important in the community. For every listed facility, respondents were further asked to provide reasons for regarding the facilities as important. Thereafter, a ranking was done in the form of comparing each facility with others in order to arrive at the most preferred or important facilities. The ranking of the most preferred or important facilities was done in the form of majority rule instead of capturing individual preferences. Details on the rankings per focus group discussion appear below.

Table 4: Pairwise ranking on the most important facilities as perceived by Reamogeleng Disabled Committee

	Halls	Schools	MPCC	Showground	Clinic	Score
Halls		Halls	MPCC	Halls	Clinic	2=Halls
Schools			MPCC	Schools	Clinic	1=Schools
MPCC				MPCC	MPCC	4=MPCC
Showground					Clinic	0=Show grounds
Clinic						3=Clinics

The above-given table depicts that MPCC is the most important social facility to the Reamogeleng Disabled Committee. The facility attained the highest score point of 4 while clinics could be said to be the second preferred facility with the score of 3. The MPCC serves as the meeting place and project (vegetable garden) site for the Reamogeleng Disabled People's Organization. It is also ranked highly as it encompasses other services such as health care, general government services and agricultural/technical support for the group.

The least important facilities that are also least preferred are community halls, schools, and show grounds. Each of the three facilities attained the score ranging from 0 to 2. The schools in Mapela village are the least preferred as they do not cater for learners with disabilities. The learners with disabilities are sent to

other areas in order for them to acquire basic education. Community halls and show grounds, on the other hand, are said to benefit other groups in the community other than people with disabilities. The design of schools is also in such a way that it becomes impossible for people with disabilities to access them. The same story applies to the show grounds.

Table 5: Pairwise ranking on the important social facilities as per the Tribal Council's perception

	MPCC	Halls	Clinics	Schools	Grounds	Score
MPCC		Halls	Clinics	Schools	MPCC	1=MPCC
Halls			Clinics	Schools	Halls	2=Halls
Clinics				Schools	Clinics	3=Clinics
Schools					Schools	4=Schools
Grounds						0=Grounds

The tribal council ranked schools as the most preferred social facilities in the community. The schools have as such obtained the highest score of 4 while the clinics followed with 3. Schools are perceived to serve as a base for community empowerment through literacy and enabling people to craft a bright future. Nonetheless, clinics provide essential services in the form of health care, immunizations and education on prevention of certain diseases. The clinics are also preferred for their out-reach programmes, such as mobile facilities and home-based care to people and/or areas in desperate need. Schools and clinics are beneficial to the community at large, irrespective of the socio-economic status of the individual.

Grounds are least preferred as they are utilized by certain groupings in the community other than the community at large. Youth, for instance, utilized the sports ground more than any other grouping in the community.

Table 6: Pairwise ranking on the important social facilities as perceived by the poultry project

	Clinics	Care groups	Schools	Score
Clinics		Clinics	Schools	1=Clinics
Care groups			Schools	0=Care groups
Schools				2=Schools

The rankings for the above matrix depicts that schools are the most preferred facilities as per the women of Tshwarelenang Poultry Project. The schools are perceived as benefiting the community in the form of improving the literacy levels and serving as a foundation for a better future. The women are of the opinion that education enhances one's chance for a better life. All professionals that they know of in the community had invested most of their time in education.

The clinics, on the other hand, are the second most valuable facilities in the community as they provide health care to the locals. The same clinics work hand-in-hand with the care groups. The care givers in the village are trained and supported by clinics in their work of caring for the sick people. This implies that the care groups are never seen in isolation from clinics. The fact that there is no score for the care groups does not necessarily imply that the groups are not important or valuable.

Table 7: Pairwise ranking on the most important social facilities as perceived by the ward committee

	Schools	Clinics	MPCC	Shops	Roads	Cemeteries	Churches	Scores
Schools		Schools	Schools	Schools	Schools	Schools	Schools	6=Schools
Clinics			Clinics	Clinics	Roads	Clinics	Churches	3=Clinics
MPCC				MPCC	Roads	MPCC	Churches	2=MPCC
Shops					Roads	Shops	Churches	1=Shops
Roads						Roads	Churches	4=Roads
Cemeteries							Churches	0=Cemeteries
Churches								5=Churches

According to the Ward committee, schools are the most important social facilities in Mapela. The schools are said to contribute to improving the literacy levels of the community, being a foundation for a better future, as well as taking children away from the streets. Thus, the schools are, as such, scored at 6 in terms of preference if the community was to choose the facilities that they prefer the most. This puts schools at a rating of 1. Churches are the second most preferred social facilities for their spiritual role, contribution to moral regeneration, as well as inculcating the Christian doctrine among the community members. Clinics have received an average score of 3. The score indicates that clinics are third most preferred facilities. The clinics were said to contribute to the welfare of people in the form of providing primary health care, immunization and information of protection and cure of communicable diseases. The facilities were also said to have led to a decline in infant mortality, although this could not be backed by statistical evidence.

From all the tables, i.e., Tables 4 to 7, there has not been any mention of the telecentre, cemeteries, MPCC and the shops, which fell among the least valued facilities in the community. This is depicted by the scores that range from 0 to 2. This is surprising given the fact that the MPCC is intended to bring government services close to the people. However, respondents in focus group discussions did not perceive this benefit. When asked why they did not include the telecentre as one of the important facilities, the participants in three focus groups, i.e., Tshwarelang, Tribal Council and Ward Committee, reasoned that the MPCC is viewed as a whole, without singling out one service or service provider. In spite of the telecentre bringing new technologies to the community, it is still not perceived as an important facility. On the other hand, cemeteries were reasoned to be less valuable since people cannot derive any socio-economic benefit from them other than rituals, whereas shops are said to benefit individuals who own them given that they generate income.

4.4. Telecentre Ownership

Most of the respondents perceived the telecentre as a community owned facility. The respondents had an understanding that the Community Based Organization that is running the facility is representing the community since the Board of Directors for the entity is comprised of representatives of various structures in the community. However, the focus groups, such as the Poultry Project Committee and the Committee for People with Disabilities, had a conviction that the facility is owned by the government in the form of the local municipality.

Telecentre users had varied perceptions on the ownership of the telecentre. The majority of users, i.e., 20 (63%), perceived the facility as community owned, 9 (28%) perceived the facility as owned by the local municipality, 2 (6%) viewed ownership of the centre to be in the hands of operators, while 1 (3%) thought the facility was in the hands of the provincial government.

4.5. Community participation in the designs and operations of the centre

The participants in focus groups acknowledged community involvement at the initial stage of the MPCC. The community participated in the form of election of the MPCC project Steering Committee while the tribal authority was involved in allocating the MPCC site. The tribal authority too was represented in the mentioned committee. However, nominations for the Steering Committee was limited to those structures that, on that very day, were represented at the meeting that was intended for the establishment of the committee.

Community involvement in the telecentre design was limited to site identification and membership of the project Steering Committee. Most of the work pertaining to the physical lay-out of the structure was done by the local municipality in consultation with government institutions that are involved in the MPCC programme. This was regardless of the fact that the community and/or its structures were at the receiving end. Moreover, the telecentre programme was introduced to the community as part of the MPCC package.

At the moment, community involvement in telecentre operations is through the Board of Directors. The establishment of the telecentre Board followed a similar approach to that of the Steering Committee formulation. This implies that the telecentre Board is made of representatives of structures that attended a meeting that was organized specifically for the formation of such a structure.

The Board provides oversight on the telecentre and also serves as the employer for the telecentre operators. The operators are also from the community of Mapela and were appointed through following normal recruitment processes, although the emphasis was on voluntarism.

4.6. Telecentre accessibility, affordability and usage

Telecentre accessibility has been measured using three variables, viz., affordability of services or prices, distance that an individuals travels to access services, as well as the mode of transport that one used from his or her place of residence to the telecentre.

Table 8: Frequency distribution illustrating perceptions on affordability of services

Code	Classification of responses	Absolute frequency (n)	Relative frequency (percentage)
1	Strongly agree	2	6%
2	Agree	22	69%
3	Do not agree	8	25%
4	Strongly disagree	0	0%
5	Do not know	0	0%
Total		32	100%

The above frequency table depicts that 75% (24) of telecentre users perceives the services as affordable, while only 25% (8) of users does not view the facility to be rendering affordable services. This translates into conviction that the telecentre services are relatively affordable to the users. Hence, they are able to visit the centre. This perception is also supported by Table 9 below as it illustrates frequency distribution on frequency at which users visit the telecentre.

The majority of the telecentre users uses the facilities on daily and weekly basis, i.e., 76% (24) out of 32, while only 9% (3) of the users, to whom questionnaires were administered, uses the telecentre less frequently. However, daily usage implies only weeks days other than week ends.

Table 9: Frequency distribution of frequency of telecentre usage

Code	Classification	Absolute frequency (n)	Relative frequency (percentage)
1	Daily	4	13
2	Weekly	20	63
3	Monthly	5	16
4	Quarterly	2	6
5	Annually	1	3
Total		32	100%

Table 10 below illustrates telecentre access in relation to the distance that users travel from their respective places of residence for purposes of accessing services. The distance that users travel was classified to range from less than 5 kilometres to above 22 kilometres. The findings were that about 91% (29) of the users resides within a 10 kilometre radius from the telecentre, whereas only 9% (3) was found to be residing above the 10 kilometre radius. Thus, the distance that a user stays from the centre determines the frequency of usage and accessibility relatively.

Table 10 : Frequency distribution on the distance traveled by users to the centre

Code	Classification on distance traveled	Absolute frequency (n)	Relative frequency (percentage)
1	< 5km	14	44%
2	5-10 km	15	47%
3	11-16km	1	3%
4	17-22km	1	3%
5	Above 22km	1	3%
Total		32	100%

Table 11: Frequency distribution on the mode of transport used by telecentre users

Code	Classification on mode of transport	Absolute frequency (n)	Relative frequency (percentage)
1	By foot	14	43%
2	By bus	6	19%

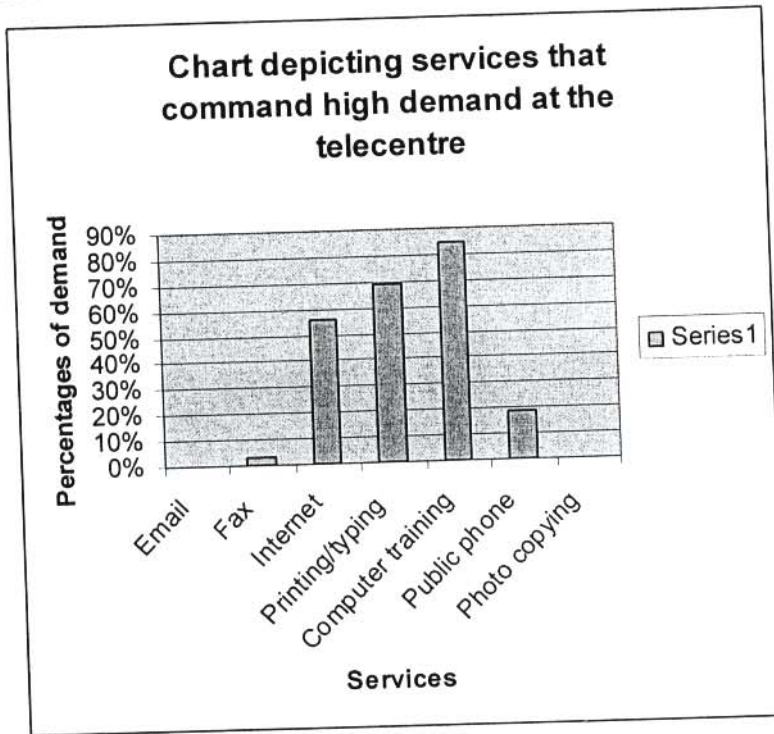
Code	Classification on mode of transport	Absolute frequency (n)	Relative frequency (percentage)
3	By taxi	6	19%
4	By car	6	19%
5	Other (specify)	0	0%
Total		32	100%

Most of the telecentre users walk to the centre for services, i.e., 14 (43%), whereas 18 (57%) use different modes of transports to reach the centre. This implies that some people do not allow distance to block them from utilizing the ICT facility in their local area. Access to the telecentre could, as such, be determined by the cost of services, distance that people travel to access the services, as well as the mode of transport that one uses to reach the telecentre. The costs of accessing services that the telecentre provides are not the same between a person who walked to the centre and the person who used a particular type of transport. The reason behind this is that accessibility and/or affordability of services cannot be looked at in isolation from traveling costs that individuals incur in order to access the telecentre services. For instance, a person who stays ± 22 kilometres away from the telecentre incurs traveling costs above the costs of accessing services. On the other hand, the service rates are not calculated in consideration of other factors.

4.7. Telecentre services

Telecentre services at Mapela MPCC were found to include email, computer training, the Internet and computer training services at the time of the study. However, not all services were available at the time of the study. The services available represented 50% of the expected telecentre service package (viz., facsimile, telephony and photo copying) as depicted by Table 12 below. By virtue of the basic communication-related-services not being available at the centre, other groups of people are being sidelined. Table 12 below illustrates the service status at the telecentre.

Chart 7: Service demand at the telecentre



4.8. Profile of telecentre users

Telecentre users at Mapela MPCC vary according to age, educational qualification, gender and occupation. The difference is confirmed by Tables 13 to 16 below: Table 13, for instance, illustrates that 56% (18) of telecentre users falls within the 18 -28 years old category, whereas 25% (8) of the users falls within the 29 -39 years old category. None of the users belonged to the less than 18 years and the above 50 years old categories.

Table 13: Frequency distribution on the age of telecentre users

Code	Age Classification	Absolute frequency (n)	Relative frequency (%)
1	< 18 years	0	0
2	18- 28 years	18	56
3	29 - 39 years	8	25
4	40 - 50 years	6	19
5	Above 50 years	0	0
Total		32	100

Educational qualification for telecentre users ranged from students to users who have already attained degrees. Table 14 below depicts the frequency distribution of telecentre users per educational classification. The majority of the telecentres users was found to have attained post matric qualifications, i.e., 62% (20), followed by users with matric at 37.5% (12). There was no telecentre user amongst participants who had no formal education or had attained primary education. Thus, one can conclude that the telecentre at Mapela is used by literate people, especially those with matric and above qualifications. The users are hopefully people who are seeking for job opportunities and use the centre to enhance their marketability as well as skills development.

Table 14: Frequency distribution on the educational qualification of telecentre users

Code	Educational achievement	Absolute frequency (n)	Relative frequency (%)
1	No formal education	0	0
2	Primary education	0	0
3	Matric	12	37.5
4	Certificate	11	34
5	Diploma	4	12.5
6	Degree	5	16
Total		32	100

Table 15 below illustrates the gender breakdown of telecentre trainees. Most of telecentre users were found to be of the female gender at 68% (136), whereas males comprised only 32 % (68) of computer trainees. The ratio of gender breakdown as per questionnaires administered was 50:50 for both male and female users. This could be attributed to the method used in selecting telecentre users for participation in the study. However, the gender breakdown depicted on table 15 is unique for the Mapela Telecentre and it could be translated into women beginning to move away from being dependent from their male counterparts. The telecentre could be said to be contributing to women empowerment such that it enables women to compete with men and ready to assume roles that were traditional known to be assumed by men.

Table 15: Frequency distribution on the gender breakdown of telecentre users

Code	Gender Classification	Absolute frequency (n)	Relative frequency (%)
1	Female	136	68
2	Male	65	32
TOTAL		201	100

Occupation of telecentre users was analyzed on the basis of the records of telecentre users, as well as administered questionnaires, i.e., Tables 16.1 and 16.2. Occupational analysis on the basis of questionnaires administered indicates that 84% (27) of telecentre users is distributed in equal portions of 28% (9) each in unemployed, employed and job seekers categories. The student users consisted of only 16% (5), whereas none of the users fell in the self-employed and pensioners categories. Analysis of users' occupation as per computer training record illustrates that teachers make the highest percentage of users at 34.3% (69), followed by users with matric at 24.4% (49). Mine workers and other occupations contributed under 4 percent each, i.e., 3.9% (8) and 3% (6), respectively.

Table 16.1: Frequency distribution on occupation of telecentre users as per questionnaires

Code	Occupation	Absolute frequency (n)	Relative frequency (%)
1	Student	5	16
2	Unemployed	9	28
3	Unemployed but seeking for a job	9	28
4	Self employed	0	0
5	Employed	9	28
6	Pensioners	0	0
Total		32	100

Table 16.2: Frequency distribution on the occupation of telecentre users as per training register

Code	Occupation	Absolute frequency (n)	Relative frequency (percentage)	Ranking
1	Below matric	36	18%	3
2	Matric	49	24.4%	2
3	Job seekers	33	16.4%	4

4	Mine workers	8	3.9%	5
5	Teachers	69	34.3%	1
6	Other	6	3%	6
Total		201	100	

From the above-given tables, i.e., Tables 13 to 16.2, it is apparent that the telecentre at Mapela MPCC is not used by all the socio-economic groups that are found in the community. The facility usage could be said to differ in terms of age groups, gender, educational qualifications and occupation. The common users of the telecentre are youth, middle aged people, job seekers, teachers and the people with matric. Thus, other social groups, such as people with no formal education, people who have attained only primary education, pensioners and self-employed people, tend to shy away from the telecentre.

From the above analysis of telecentre users, one can conclude that the Mapela Telecentre is predominantly used by people between 18 -28 years (56%) and 29-39 years (25%) as depicted on table 13. Moreover, people with matric (37.5%) and respondents with certificated contributed 34% as depicted on table 14. This implies that the aforementioned categories of respondents were supposed to have been consulted during the design stage of the telecentre. The categories would have contributed meaningfully to an extend that the facilities would be responding or catering for their needs.

4.9. Telecentre benefits and impact

The overall benefits of the telecentre at Mapela MPCC have been that the facility has introduced new technologies, physical infrastructure investment, as well as bringing services closer to the people. The facility was said to have reduced traveling costs for villagers to access the ICT services that in past could be accessed only from Mokopane town, i.e., approximately 37 kilometres away from the village.

For the some people who have used the telecentre, the facility is said to have impacted their lives positively. Few people who managed to secure better job opportunities have benefited through improved livelihood, better salaries, etc. To

Table 12 : Illustration on the telecentre service status at Mapela MPCC based telecentre, November 2006

Service	Status	Rationale	Mitigation
Computer training	Available	N/A	N/A
Facsimile	Suspended	Service suspension by TELKOM due to failure to pay account by the telecentre	
Email & Internet	Available	N/A	N/A
Printing	Available	N/A	N/A
Photo copying	Suspended	Machine has been due to service since 2005	USAASA was informed about the matter but no action has been taken yet
Public telephony	Suspended	Service suspension due to failure by the telecentre to re-load airtime	Telecentre management and board were advised to avoid cross subsidization of services

The mostly demanded service that telecentre users visit the facility for is computer training. The service leads the reign by 27 (84%), followed by printing services with a rating of 22 (69%). However, this rating can be a little confusing as users rated demand not in terms of numbers but rather through ticking the services that they normally visited the telecentre for. In all instances, respondents chose more than one service. This translates into people visiting the telecentre for more than one service. Demand for services at the centre is illustrated on chart 7 below.

some educators, especially those who have been attending computer training at the centre and whose schools have computers, the telecentre has enabled them to use ICT to facilitate e-learning, do school administration at ease as they are able to do electronic registers, capture mark schedules and develop assessment papers.

Student users of the telecentre have benefited through conducting electronic information that they access at the telecentre. The ICT facility enables them to access search engines and search for documents in their field of study, such that they need not visit the library or their respective institutions to access journals.

Telecentre benefits are summarized as follows:

- Skills development through computer training;
- Introduction of new technologies in rural areas;
- Enhancement of employment opportunities through skills training;
- Contribution to infrastructure investment; and
- Enhancement of broad communication.

4.10. Monitoring and Evaluation Mechanisms

A telecentre in Mapela was found to be monitored through support visits by the Provincial Coordinator of the USA (USAASA) on monthly basis, as well the compilation of monthly reports. There are two types of reports that the telecentre is obliged to compile on monthly basis, viz., detailed report for the donor agency and statistical report for the municipality. The recipients of the reports often do not respond to critical issues raised in the reports.

The telecentre is also expected to compile, on annual basis, audited financial statements and detailed report that should be tabled at the general meeting. Since its establishment in 2003 November, the telecentre has never compiled either an annual report or financial statement for tabling at the general meeting. The centre is, as such, not complying with the requirements of the Non Profit

Organisation (NPO) Directorate of the Department of Social Development. The failure by the centre to compile reports has been making it impossible for the community to get feedback on the operations as well as making an informed decision on whether there is a need to expand the telecentre or extend services to other areas. Thus, the lessons from the centre are not shared at any platform.

4.11. Challenges encountered in relation to the telecentre

The telecentre at Mapela is heading in the right direction although there are challenges encountered by the community and users. The challenges are an obstacle between the telecentre and its intended objectives. The common challenges appear as follows:

- Poor telecentre management prevails in the form of poor record keeping, poor maintenance of equipment, as well as poor customer care. The telecentre operators often do not keep record of all services rendered at the centre, except for computer training. When they are requested to provide statistical information on the users, they only produce at ease a report on computer training;
- The community has never been given feedback on the operations of the facility. Although both the management and the governing body were elected at a community meeting, there has not been any attempt to update the community on the happenings at the centre. Hence the community is in the dark pertaining to ownership of the facility, and hence it does not know who to approach to raise concerns;
- The gap between the residents of Mapela and nearby urban area on access to ICT can only be reached if the telecentre is open 7 days a week and more than 8 hours a day. The telecentre is, at the moment, operating like a normal public office. The confinement to normal office hours makes it a little difficult for some people to utilize the facility, especially people who knock off from their workplace at the same time as the MPCC or telecentre facility;

- Despite the centre not being open over the weekend and after hours, there are services that are not always available. Such services include fax, telephony, the Internet and photo copying. While the Internet and photo copying services' inconsistency could be attributed to lack of technical support, fax and telephony services' consistency depends on the management. In other instances, service interruption can be attributed to the management of the centre paying too much attention on training while other services are neglected. This was evidenced in the form of the non-payment of the telephone bill and the failure to load airtime on the public phones to an extent that the service providers suspended the service;
- The management of the centre is also challenged when it comes to business skills. There is no application of business principles in the telecentre's operations, such that there are times when the managers have to go without earnings. They have, in a way, adopted a "hand to mouth" approach to business. There is no savings for the income generated and cross subsidization of services is done on ad hoc basis. This, in turn, leads to lack of self-reliance of the facility as a whole, as many a time the centre expects the sponsor to bail it out from its debts through payment of bills and repairs of machinery;
- There is also a challenge of limited ICT equipment in the form of computers at the telecentre. Many a time, computer trainees have to share one computer in groups of five. The very same computers that are used for training are also meant for printing services. This implies that, when printing clients come, training is disturbed in the form of reallocating a computer for such;
- There are regular power failures in Mapela village. Power failure leads to service interruption at the MPCC and the telecentre mostly affected as service provision depend highly on the availability of electricity;
- Users also complain about delays in obtaining computer certificates. The telecentre does not have a direct accreditation, therefore accreditation has been arranged through another telecentre. If the accredited telecentre

does not have any trainee that is due for graduation, there is often no urge to process the certificates. Thus, the group that has completed its training programme has to wait for two to three months for certificates;

- There are no linkage programmes that computer training graduates are put on after completion of their courses. Often people go back home and in due course they have forgotten all they have learned;
- There is payment that users have to make in order to access services. Some users have been complaining that payment hinder other people to access services, especially those people who cannot afford to make ends meet; and
- There are neither programmes nor equipment for the people with special learning needs. Women and children are also not catered for when it comes to computer training. Therefore, such designated groups end up not bothering to visit the telecentre since there are programmes to cater for their needs.

4.12. Possible solutions to the problems encountered by the community

- The respondents emphasized the need to cater for people with disabilities, especially the deaf and visually impaired people in the telecentre. This, according to the respondents, could be done in the form of providing computer programmes that are suitable for such disabilities.
- Telecentre authorities are called upon to embark on a series of information dissemination sessions that will enlighten the people on the programme's objectives and institutional arrangements, as well as engaging the community on the changes that they would want to see happening at the centre.
- It is recommended by the committee that people who are unable to access services due to payment could be assisted through subsidies or sponsorships. There could also be payment in kind wherein users could volunteer themselves at the centre while they will use the telecentre return of their labour.

- The participants also proposed that other mechanisms should be deployed by the telecentre to ensure universal service to ICTs. Such mechanisms could include mobile telephony, mobile photo copying and printing services, as well as arranging Open-days wherein Community Based Organizations and businesses are invited to explore the potentials for doing business through ICTs.
- Appoint two more operators for the telecentre in order to address the issue of service suspension when one operator is not in.
- Introduce volunteerism with the intention to relieve operators and create a platform for graduates at the centre to put into practice their knowledge of ICTs.
- Put operators on a training course that will equip them with business management skills.
- Conduct a governance workshop that will enable the Board to execute its duties.
- Scout for donation of additional ICT equipment, especially those that could enable disabled people to access the centre, from sector departments and other institutions.
- Award bursaries or vouchers towards the subsidization of the needy or poor people for them to access the centre.
- Intervene in the form of placement for computer trainees for them to acquire practical experience.
- Pay stipend for the telecentre management (local municipality).

4.13. Conclusion

Different stakeholders and individuals at Mapela perceive the telecentre differently. The individual views also affect the usage of the centre. The elderly people and traditionalists, who are in the form of women's group and the Tribal Council, perceive the centre as being meant for youth and educated people. The development organizations such as the Ward committee and the disabled committee also hold the same view, even though theirs was not articulated

clearly. Individuals who have not used the centre blame the design as well as payment of services at the centre as excuses for not utilizing the facility as a development tool. Even those groups and individuals in the community that have started utilizing the centre, they have not utilized it in an integrative manner. Therefore, the telecentre at Mapela could be said to be minimally utilized. The utilization of the centre differs in accordance to age, education, occupation, etc. Moreover, community members who utilize the facility hope to improve themselves rather than the community at large.

CHAPTER 5

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the deficiencies, conclusions and recommendations of the study. Deficiencies would relate to the ethical issues and limitations in the study, whereas conclusion would give a summary on the major findings of the study as well as conclusions in line with research questions. The last part of the chapter presents the recommendations of the study.

5.2. Limitations of the study

As the study was focusing on the assessment of the telecentre at Mapela MPCC, the findings thereof cannot be considered to be applicable to all telecentres, either in Limpopo Province or South Africa as a whole. The findings could, as such, not be generalized. The findings were used only to draw conclusions on the telecentre at Mapela MPCC.

The participants in the study, especially focus groups and telecentre users, related themselves as the community. Thus, the benefits that the community derives from the telecentre have been cited in accordance with the views of the participants in the study.

In addition, the participants were aware that they were being interviewed and they may have given responses in order to impress the researcher instead of giving an honest perception or their real experiences of the telecentre.

5.4. Conclusion

Based on the research objectives, research questions and the findings, the following conclusions are drawn about the Mapela MPCC based telecentre:

a) Relevance of the centre

Mapela MPCC based telecentre was rolled out without any feasibility study being conducted. There is no baseline information that informed the services that are rendered. Services at Mapela MPCC based telecentre are, as such, in accordance to the generic package that USAASA provides to any standard ICT centre.

b) Community needs versus telecentre facility

The centre is neither aligned to the priorities of the community nor the local municipality. This has been confirmed by the utilization rate of services. There are services that are optimally utilized while others are least utilized. Had the facility been aligned to the planning processes of the municipality, the utilization rate would be different. The telecentre was rolled out as part of the MPCC programme package as per the agreement entered into between USA and GCIS, namely, that the latter will put a telecentre in every MPCC countrywide. The programmes that are rolled out following this approach usually do not take into cognizance the needs of the people on the ground. Sometimes, such facilities risk being turned into white elephants due to non-utilization by the intended beneficiaries and vandalism in worst scenarios. This has been the case with the community phones container that has not been functioning for more than two months.

c) Ownership challenges

There is confusion over the ownership of the telecentre at Mapela. Some stakeholders perceive the facility as being owned by the operators and the governing body, while others perceive it as being owned by the government. The confusion is also escalating to the local municipality. The municipal officer, MPCC manager, does not know the relevant party to communicate with regarding the telecentre operation. Many a time she talks to the Provincial Coordinator of USAASA who would also refer her to the Board. The Board, on

the other hand, seems not to understand its role as it blames the operators for all the mishaps, without itself taking any action.

d) Telecentre and broad-based development

The telecentre at Mapela could be said to have led to further marginalization of certain groups of people on the basis of affordability, age, gender, literacy and physical ability. The facility could, as such, be said to have brought a new form of socio-economic divide. This emanates from the finding that the facility is mostly utilized by youth, teachers and job seekers, while other groupings are not utilizing the facility at all. People with disabilities, for instance, have not been utilizing the facility at the time of the study. The motive behind non-utilization by people with disabilities, especially the visually impaired people, could be linked to the non-provisioning of computers with Braille package.

e) Telecentre : Bridging the digital divide?

Given the above practices, Mapela MPCC based telecentre could be said to be contributing little to the bridging of the Digital Divide. The telecentre has been found to have created a new form of socio-economic divided based on age, education status and physical ability. There is also no direct impact that the telecentre has had on the lives of people in Mapela, except for a few individuals who got employment after undertaking the computer training course at the centre. The local economic initiatives, such as the poultry project, do not, in any way, see the telecentre as an opportunity to use new technologies to do business.

5.5. Recommendations

Given the above conclusions, it is apparent that the telecentre has a potential to bridge the digital divide. However, a lot of work still needs to be done by development agencies and all stakeholders to ensure that telecentres succeed in bridging the Digital Divide.

The researcher has come up with the following recommendation to guide the roll out of social programmes such as the telecentre in order that facilities attain the objectives that they were intended:

- Social interventions should, at all times, be guided by the aspirations and needs of people to whom it is intended for, including the needs of the people across all age groups, education qualifications and physical abilities. This could be attained through community participation throughout the planning, implementation and commissioning phases of the project. Community participation will, in a way, ensure that different groups benefit from social programmes other than a few “elite”;
- There should be baseline studies that are conducted prior to the actual roll out of social facilities such as a telecentre in order that it could be easy for people to assess whether the facility has brought a difference or not;
- The type of equipment or technology rolled out should be informed by the situation on the ground. If the situation dictates that only telephones and computers are essential, local facility should be equipped accordingly to ensure optimal utilization. This implies that telecentre packages should not be “one size fits all”, but rather have different packages that are rolled out as guided by local circumstances;
- Social interventions such as the telecentre should strive for integration at all times. The roll out programme should be aligned with the IDP process to ensure smooth coordination of the programme by local authorities;
- Formal hand-over of the facility should occur immediately after sign off of the project to the local municipality. The sponsor organization should not prescribe the institutional arrangements for the facility, but rather provide guidelines on the way the facility should operate through a Memorandum of Understanding entered into by parties involved, i.e., the local municipality and the donor organization. The donor organization should leave matters in the hands of the local municipality/ authority to decide as to the entity that would operate the facility;

- There should be multiple reporting and accounting for the telcentre. Firstly, reporting should be done with sponsors to justify the investment and motivate for continuous support as public funds are spend to roll out telecentres. Governing bodies should also be accountable to the community as to what they have achieved after having been trusted with the office;
- There should be constant evaluation on the telecentre programme to ensure relevancy and reshaping of the models since people's needs change with time;
- There should be an introduction of new programmes that will cater for the marginalized and historically disadvantaged individuals at the centre. The programmes should be structured in such a way that targeted individuals are attracted and motivated to use the telecentre in order to do away with the stigma that the facility has brought a new form of divide in the community. The telecentre should be seen as the meeting place for people across all walks of life. For instance, there could be the integration of literacy programmes in the telecentre meant to cater for people who have never attended any formal schooling;
- There should be an exemption on payment of services for individuals and groups that is aligned with municipal indigent policy. In other instances, programmes such as "work- for-access" could be adopted as alternative to cash payment for accessing services. This approach of payment could lead to people volunteering to market the centre, assisting in administration while they will get access in return of their labour;
- To improve utilization of the centre, the facility should be publicized intensively through electronic, print media and by word of mouth at community gatherings. Publicity could also be intensified through structured out-reach programmes wherein the surrounding communities are visited and workshopped on the progarmme. The facility needs also to be branded in such a way that it becomes easy for potential users to see from a distance that there is such a facility at the MPCC; and

- Local business, Community Based Organizations and development structures should be encouraged to use the telecentre as a convenient tool to do business. That could be spearheaded by the telecentre Board through encouraging the local business to advertise on the community website at the centre.

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APPENDIXES

Annexure A: Questionnaire for Telecentre users

This questionnaire aims to gather information towards a Master's Degree in Development. The questionnaire is completed anonymously and will take approximately 20 minutes of your time. Please mark the appropriate response with an **X**.

A. Profile of respondent		
1.	Gender	<input type="checkbox"/> 1. Female <input type="checkbox"/> 2. Male
2.	Age	<input type="checkbox"/> 1. < 18 years <input type="checkbox"/> 2. 18 -28 years <input type="checkbox"/> 3. 29-39 years <input type="checkbox"/> 4. 40-50 years <input type="checkbox"/> 5. Above 50 years
3.	Marital status	<input type="checkbox"/> 1. Single Man <input type="checkbox"/> 2. Married <input type="checkbox"/> 3. Separated <input type="checkbox"/> 4. Widow/widower <input type="checkbox"/> 5. Divorced
4.	Highest level of education	<input type="checkbox"/> 1. No formal education <input type="checkbox"/> 2. Primary level <input type="checkbox"/> 3. Matric <input type="checkbox"/> 4. Certificate <input type="checkbox"/> 5. Diploma <input type="checkbox"/> 6. Degree <input type="checkbox"/> 7. Other (specify)-----
5.	Occupation	<input type="checkbox"/> 1. Student <input type="checkbox"/> 2. Unemployed <input type="checkbox"/> 3. Unemployed, actively seeking for a job <input type="checkbox"/> 4. Self employed <input type="checkbox"/> 5. Employed <input type="checkbox"/> 6. Pensioner
6.	If employed, describe your work and the position you hold.	
	<hr/> <hr/>	
7.	If self employed, describe the nature of your business.	
	<hr/> <hr/>	

8.	Income per month	<input type="checkbox"/> 1. < R 2000.00 <input type="checkbox"/> 2. R2 0000.00 - R 3000.00 <input type="checkbox"/> 3. R3 001.00 – R 4 001.00 <input type="checkbox"/> 4. R4 002.00 - R 5 002.00 <input type="checkbox"/> 5. R 5 003.00 and above
B. Usage of the Telecentre		
9.	Have you ever used the telecentre?	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
10.	If yes, how often do you use the telecentre?	<input type="checkbox"/> 1. Daily <input type="checkbox"/> 2. Weekly <input type="checkbox"/> 3. Monthly <input type="checkbox"/> 4. Quarterly <input type="checkbox"/> 5. Annually
11.	What services do you come to the centre for?	<input type="checkbox"/> 1. Fax <input type="checkbox"/> 2. Email <input type="checkbox"/> 3. Internet <input type="checkbox"/> 4. Printing/Typing <input type="checkbox"/> 5. Computer training <input type="checkbox"/> 6. Public phones
12.	Do you pay for the services at the centre?	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
13.	If yes, state how much you pay for different services.	

14.	The services at the centre are affordable when compared to similar facilities in the area.	<input type="checkbox"/> 1. Strongly agree <input type="checkbox"/> 2. Agree <input type="checkbox"/> 3. Do not agree <input type="checkbox"/> 4. Strongly disagree <input type="checkbox"/> 5. Do not know
15.	How far do you stay from the centre?	<input type="checkbox"/> 1. <5 km <input type="checkbox"/> 2. 5km-10 km <input type="checkbox"/> 3. 11km-16km <input type="checkbox"/> 4. 17km- 22km <input type="checkbox"/> 5. Above 22 km
16.	How do you travel between the telecentre and your place of stay?	<input type="checkbox"/> 1. By foot <input type="checkbox"/> 2. By bus <input type="checkbox"/> 3. By taxi <input type="checkbox"/> 4. By car <input type="checkbox"/> Other (specify)-----

17.	How long have you known about the telecentre?	<input type="checkbox"/> 1. < 1 year <input type="checkbox"/> 2. 2-3 years <input type="checkbox"/> 3. Above 3 years
18.	How did you know about the facility?	<input type="checkbox"/> 1. By a family <input type="checkbox"/> 2. By a friend <input type="checkbox"/> 3. Community meeting <input type="checkbox"/> 4. TVFemale <input type="checkbox"/> 5. Promotional material <input type="checkbox"/> 6. Launch <input type="checkbox"/> 7. Other (specify).....
19.	Who do you think owns the telecentre?	<input type="checkbox"/> 1. Community <input type="checkbox"/> 2. Tribal Authority <input type="checkbox"/> 3. Municipality <input type="checkbox"/> 4. Provincial Government <input type="checkbox"/> 5. Telecentre operators <input type="checkbox"/> 6. Other (specify)-----
20.	What would you think is the rationale for the drivers of the telecentre initiative to establish the facility in your area? <hr/> <hr/> <hr/>	
C. Benefits derived from the telecentre		
21.	Does the telecentre bring any benefit to the local people?	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
22.1	How have you benefited as an individual from the telecentre? <hr/> <hr/> <hr/>	
22.2	How has your family benefited from the telecentre? <hr/> <hr/> <hr/>	
22.3	How has the local community benefited from the telecentre? <hr/> <hr/> <hr/>	
D. Challenges faced by the telecentre users		
23.	Are there any challenges which telecentre	<input type="checkbox"/> 1. Yes

	users face?	<input type="checkbox"/> 2. No
24.	If yes, describe in detail the nature of the challenges. <hr/> <hr/> <hr/>	
25.	What challenges are faced by the general community with regard to the telecentre? Describe. <hr/> <hr/> <hr/>	
E. Strategic Approaches to Improve Access to the Telecentre		
26.	What action has the community taken to deal with the challenges described above? <hr/> <hr/> <hr/>	
27.	Discuss in detail, what strategies should be pursued in order to deal with the challenges, especially at: a) Telecentre management (specify actions which the management should take) <hr/> <hr/> b) Community level (specify actions which the community should take) <hr/> <hr/> <hr/> c) Local government level (specify actions which local government should take) <hr/> <hr/> <hr/> d) Other institutions (e.g., Community Based Organizations, parastatals, etc) <hr/> <hr/> <hr/>	

Thank you for your time

Annexure B: Interview Guide for Telecentre operators

1. Name of the respondent
2. Gender of the respondent
3. Age of the respondent
4. Highest qualification
5. Position held at the centre
6. Duration/ term of tenure, time spent occupying the position
7. How was the person put into office?
8. Was there any special or preparatory course that the telecentre operator underwent before assuming the responsibility?
9. Who organized the course/training?
10. What the course beneficial to them?
11. What does the person understand as the role of the telecentre manager?
12. What does a telecentre operator do on daily basis?
13. What community groupings constitute the telecentre beneficiaries?
14. What services are highly demanded by the community?
15. What would be the motive behind the demand for such a service?
16. What kind of support do they get from the sponsor organization, local government, provincial government and/or community leaders?
17. What are the typical challenges that telecentre operators are faced with?
18. How do they deal with the challenges?
19. Who (institutions) else should assist in addressing the challenges?
20. How should they deal with the challenges?
21. Do the telecentre users/customers ever complain about the services?
22. What are the common complaints that are raised by the telecentre users?
23. How do they handle the complaints?
24. Is the telecentre making any difference in the community?
25. What difference does it make?
26. How does the community get informed about the telecentre services?

Thank you for your time

Annexure C: Interview Guide for the MPCC manager

1. Name
2. Gender
3. Age
4. Occupation
5. Period occupying the position
6. What role did you play in the design of the telecentre/ MPCC?
7. How were you involved in the process?
8. Which institutions have been involved in the telecentre design (internal and external)?
9. What roles are the institutions playing in the telecentre?
10. What role are you currently playing in the telecentre operations?
11. What was the motive behind choosing Mapela for the MPCC/telecentre other than other areas within the municipality?
12. What were you informed would be the benefit of having a telecentre in your MPCC?
13. Do you the benefits materialising?
14. Give reasons for the above response.
15. How would you rate the telecentre facility at the MPCC, if you were to choose from 1-5?
 1. Struggling
 2. Doing fine but need support
 3. Doing fine
 4. Very good
 5. Exceptionally well, can work independently
16. Elaborate on the above response.
17. What do you see as the gaps in the telecentre operations?
18. How could those gaps be addressed?
19. Who should address them?
20. What are the challenges that the telecentre is faced with at the moment?
21. How could the challenges be dealt with?
22. What challenges do you encounter as the MPCC manager/corporate when dealing with the telecentre?
23. How often do you visit the telecentre?
24. What would be the reasons for the visit/s?
25. Do you often get what you visited the telecentre for?
26. How would you rate the telecentre staff? You have to choose from the provided responses. Highly competent, Competent or less competent.

Thank you for your time.

Annexure D: Focus Group Discussions Guide

A. Profile of the Group

1. Number of group respondents/participants -----
2. Gender composition
 1. Female -----
 2. Male -----
3. Age composition
 1. Below 20 years -----
 2. 21- 30 years -----
 3. 31- 40 years -----
 4. 41- 50 years -----
 5. Above 50 years -----
4. Employment status
 1. Employed -----
 2. Unemployed -----
 3. Self employed -----
 4. Pensioner/s -----
5. Educational qualification
 1. Primary education -----
 2. Grade 8 or below -----
 3. Grade 9-10 -----
 4. Grade 11-12 -----
 5. Tertiary education -----
6. Period of service in the structure
 1. Less than a year -----
 2. 1-3 years -----
 - 3- 4-5 years -----
 4. Above 5 years -----

B. Questions to facilitate discussions

1. List institutions that drive development in your community.
2. Indicate which organizations/institutions played and/or still play influential roles in the MPCC and telecentre programme.
3. Rank the institutions/organizations in order of importance to the MPCC/telecentre development.
4. Cut the card box into Big and small rectangles.
5. Put the name of the organizations on the rectangles, a name on the big rectangle implies that the entity is more important in MPCC/telecentre development programme while the smaller the rectangle will imply that the entity has less importance.
6. Arrange the rectangles in order of the working relations with the community. The community can be symbolized by a small circle at the centre and rectangles should be put against the circumference of the circle, i.e., the community. The closer the rectangle is to the centre, the closer is the working relationship is implied.
7. Always asks the rationale for placing cards where the participants are putting them.
8. What are the important social facilities that are found in your area? List

9. Rank the facilities in order of importance/priority.
10. Give reasons for your rankings,

C. Telecentre benefits, design and usage

1. What benefits do the participants think the community derives from the telecentre?
2. Who do the participants think is/are the target group for the telecentre?
3. Among the participants has anyone ever visited the telecentre since it was established?
4. From the community, who are the most frequent users of the telecentre?
5. In what kind of activities are the frequent users involved?
6. Why did they visit the facility?
7. Among the participants, how many people have seen, used or known a computer?

1	Seen a computer	
2	Used a computer	
3	Know a computer	
4	Other	

8. Why is the telecentre located where it is?
9. Who decided on the locations?
10. How was the community involved in the initiative?
11. Who or which grouping in the community participated in the establishment of the centre?
12. Who do the participants think owns the centre?
13. Is there any problem that the community is encountering in relation to the telecentre?
14. What is the nature of the problem?
15. How do they think the problem could be solved/ handled?
16. Who or which institutions should be responsible for addressing the problem?

Closing Remarks

Thank the participants for their contribution.