

**ICT BASED MANAGEMENT INITIATIVES:  
A CASE OF RATLOU MUNICIPALITY**

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**Mini-dissertation submitted in partial fulfilment of the requirements for the Master's degree in Business Administration at the Graduate School of Business and Leadership of the North West University, Mafikeng Campus**

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**Date: October 2016**

## DECLARATION

I, Vuyo Mokitime, hereby declare that this dissertation entitled, **Management and the use of ICT based initiatives: results of a field study in some Ratlou Municipality's communities** is an original piece of work produced by myself, and all references and sources have been accurately reported and acknowledged, and that this document has not previously, in its entirety or in part, been submitted to any University in order to obtain an Academic qualification.

Vuyo Mokitime

Date: September 04 2015

## **ABSTRACT**

In the rural areas, the poor typically lack access to information vital to their livelihoods. As a consequence, urban people are benefiting from the economy based on Information Technology Communication (ICT). This research is aimed at investigating ICT practices in the rural areas of South Africa with emphasis to rural Ratlou Municipal area in North West. People in the rural areas usually lack access to information vital to their livelihoods. Technology is an “enabler” of useful data that is important towards changing the lives of collective groups of people. Empowering communities is vital not only to the community but helps in building the capability people’s drive. Mutula and Mostert (2008) documented that “installing of technology in underdeveloped societies is merely a small part of what is needed to use information and communications technology for socio-economic development”. “The existence of digital divides and digital exclusion has been described and debated” as said by Servon (2002). The conceptualisation of ICT in growth is also an argued issue, making it harder to correctly apply ICT to benefit the poor (Gxulwana, 2010). South Africa has progressed in moving into the electronic age despite boundaries in its policy and regulatory environment. “Mobile telecommunications networks have spread across the country; sophisticated ICT applications have been adopted by businesses and government; and the Internet provides a foundation for information flows and transactions in banking and financial services, universities and other scientific performing agencies, as well as in shopping and entertainment services” (Goldstuck & Abrahams, 2010).

## **ACKNOWLEDGEMENTS**

First and foremost, I'd like to thank my Heavenly Father, for giving me the ability and resources to do the course. I know that without you I am nothing. Thank you for all the blessings.

- I want to thank my parents and family, for their encouragement, patience and support throughout my studies for the MBA programme up until the final completion of this mini dissertation.
- I would also want to thank Chief Masibi in Disaneng Village and Kgosana Skweyane in Logageng Village for giving me permission to do the research in their villages.
- Support from my study group members, church members, family, friends and fellow colleagues are sincerely appreciated and acknowledged in the difficult times and the good times.
- To my supervisor, Professor Sam Lubbe, thank you, for guidance, advice, and support, that made it possible for me to complete this document.

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# Chapter One

## Overview of the Study

### 1.1 Introduction

The poor outskirts of the country are often branded as “information poor” and provision of information to these areas has always been a central component of rural improvement initiatives (Islam et al, 2009). Here, the poor typically lack access to information vital to their and livelihoods. As a result, the poor, disadvantaged and marginalised rural population are not able to utilise Information Communication Technology (ICT) for economic benefit in the same way in which urban people have had easy access to information (Islam et al, 2009). This research study is aimed at investigating ICT practices in the rural areas of South Africa with emphasis on the rural Ratlou Municipal area in North West.

The so called “digital divide” brings about a daunting challenge, especially in the developing world and particularly in the countries of Africa. The concept of the digital divide has been defined in a variety of ways by different authorities. Mutula and Mostert (2008), for example, view the digital divide in terms of inequitable access to ICT’s such as PC’s, internet, telephones, cable and other internet-related technologies by individuals or groups of people within a country or between countries.

Mutula and Mostert (2008) illustrated that “installing computers and connections in underdeveloped communities is only part of what is needed to provide information and communications technology for socio-economic development”. The existence of “digital divides and exclusion” have been defined and argued by Sikhakhane et al. (2005).

The term “digital divide” is used to describe “a situation where a discrete sector of the population suffers significant and possibly indefinite lags in its adoption of ICT through circumstances beyond its immediate control” (Oreskovic, 2013).

The world over resides in a knowledge-based culture where access to information and the ability to make economic and social transactions confers distinct advantage. As administrations, organisations, corporations and individuals rely heavily on electronic means

for the transmission and storage of information, there is an upsurge in the advantages of access to the Internet (Seroka, 1992).

ICT provides tools to alleviate poverty and uplift the social wellbeing principles of the people. Mutula & Mostert (2010) have suggested that “ICT, when properly used, has the potential to empower people to overcome development obstacles, address social problems and strengthen democratic institutions” Information can be found about treating health problems, finding careers for elderly relatives, checking education facilities in a particular area, finding new job opportunities, even checking the local authority’s approach to recycling.

Shirazi (2010) suggested that users may join an Internet community formed with the purpose of initiating change by placing pressure on representatives to favour education in management’s policy; they may influence the outcome of a local election by canvassing via e-mail; they may keep in touch with events in their area by checking the village website; or they may find entertainment through interactive games or just ‘surfing’ for interesting sites. As observed, the Ratlou Municipal area in the North West is required to make an effort in targeting the unemployed and unskilled. They should allocate funds within their budgets which will ensure that the unemployed and unskilled gain skills and are exposed to an ICT environment.

This chapter deals with the Problem Statement, Objectives and Research Design.

## **1.2 Background to the Study**

Goldstruck and Abrahams (2010) confirmed that “South Africa has progressed consistently into the electronic age despite boundaries in its policy and regulatory environment”. They describe the spread of mobile broadcastings networks across the country; refined ICT applications adopted by businesses and government; and the foundation for information provided in banking and financial services, universities and other scientific performing agencies, as well as in shopping and amusement services (Goldstuck & Abrahams, 2010). South Africa is a mixture of first world and third world standards where the gap between rich and poor is enormous. There are vast discrepancies in the quality of life for different sectors of the society, and vast differences between provinces (Mutula & Mostert, 2008).

However, this e-development excludes large numbers of the population and large parts of the country where there is limited or no access to advanced communications available for households or businesses. People living in rural local communities lack access to information because of poor infrastructure. Houses are scattered and it is difficult to have the centre for people to access information (Sikhakhane et al., 2005). Goldstuck and Abrahams (2010) describe “the digital divide of the early twenty-first century as a parallel to the racial and class divide of the previous three centuries.” This in a way is a problem they encounter.

Because of the current interest in these matters, both among governments and the public, the Organisation for Economic Co-operation (OECD) have begun efforts to measure the digital divide. In addition to communications structures, an important eagerness indicator appears to be computer availability of alternative Internet access through TVs or mobile phones. The digital divide among households appears to depend on two variables, namely income and education. Other variables, such as household size and type, age, gender, racial and linguistic backgrounds and location also play an important role (OECD, 2001).

Gaseleka is one of the best specimens out of more than 60 telecentres set up by the USA. Almost half of these are not operating well for a variety of reasons ranging from technical, managerial, competitive to financial reasons (OECD, 2001).

The purpose of this research is to comprehend the challenges and developments of ICT in rural communities in South Africa, specifically in the Ratlou Municipal communities. The conceptualisation of ICT in development is also a deliberated issue, making it more difficult to correctly apply ICT to benefit the poor (Oreskovic, 2013). The study needs to identify some features typical of rural communities and consider a number of consecutive ICT development approaches that have evolved over the past few decades.

### **1.3 Objectives of the Study**

Arising from the gap in rural development in terms of the role of ICT, this study is conducted based on the following objectives:

- a. To evaluate the ICT initiatives in rural development in terms of information sharing from Government institutions.

- b. To investigate the outcome base of these ICT initiatives and to critically analyse their success or failures.
- c. To recommend products that can be used by management of the Telecentre to benefit all users.

## **1.4 Research Design and Methodology**

Quantitative research and qualitative research are two approaches that can be adopted for a research project. Leedy and Ormrod (2005) defines quantitative approach to research as the use of questions about connections among measured variables with the aim of using the answers to clarify, predict and control the phenomena. In this study the quantitative relational approach is applied to analyse the relationship between the predictor variable (ICT) and the criterion variable (rural development). In contrast, qualitative research is used in response questions about the complex nature of occurrences often with the drive of describing and understanding the phenomena from the participants' point of view.

This research is a combination of both qualitative and quantitative approaches. The quantitative aspect of this research seeks to understand the phenomena of ICT and the role in rural development and the difference it is making on the daily lives of rural communities. It is undertaken as a case analysis of a rural community in the Ratlou district called Disaneng. From a qualitative perspective, sample households are interviewed and both in a structured and unstructured format in order to understand the influences of ICT to the path of rural development.

## **1.5 Plan of the Study**

Chapter one gives the background and highlights the problem statement, formulates the objectives and outlines the methodology.

Chapter 2 presents the literature review on concepts of technology and development indicators used in this study. This chapter will explore literature on the subject of using ICT as a tool to enable rural development and the various theories and criticisms of this view. The developments of ICT over the decades are reviewed, particularly with reference to the achievements in rural communities. The literature review gathered will further justify the topic of discussion and the need for the problem statement to be explored. The chapter is also used

to describe the basis for the study questions, the study method implemented for this research its report and analysis results which yield answers to this research questions.

Chapter 3 deliberates on the hypothesis of the research and dwells on the methodology and design accepted as well as the agreed feed work of data collection. It will also entail in-depth knowledge of the data collecting process and the analysis.

Chapter 4 provides analysis and interpretation of research findings. The researcher attempts to answer the research questions by deducing from the findings of the method described in chapter 3 in comparison to evidence of results described by literature in chapter 2. Chapter 5 summarises the critical issues that have been identified in the research problem for recommendations for further study and research.



## **1.6 Conclusion**

This research will be carried out systematically by addressing all aspects defined in this chapter to provide a sound framework. The drive behind this study will be stored followed it proactive value to society. A concise preliminary data analysis is to be talked about. Lastly, a break-down of the research's outline will be documented. The next chapter discusses literature review.

## **Chapter Two**

### **Literature Review**

#### **2.1 Introduction**

The keywords used for exploring the topic at hand were attained from search engines such as Google Scholar, Science Direct, UPeTD and the UNISA repository. In addition, textbooks from the libraries at the North West University and UNISA were used. Most electronic journals articles and dissertations were identified through cross-linking. Amongst other websites, STATSSA, and the South African government were predominantly used.

This chapter provides an account of literature on the management of ICT initiatives in rural development which can be attained from literature in social sciences and ICT. The contribution of different authors in articulating the benefits and shortfalls of ICT as an enabler of rural development is reviewed. Historically, research in ICT in rural development has focused on the positives, such as Tele-centres and has received less attention on the shortfalls (Hulbert & Snyman, 2007). This study has a biased approach that follows the trend of previous research and focuses more on the benefits.

#### **2.2 Definition of Tele-Centres**

Public sites, such as book depositories, civic organisations and teaching institutions, can provide regional communities with access to ICT facilities (Madden et al., 1997). Bailey and Ngwenyama (2011) described these community access points as tele-centres natural hosts of community-based companies predominantly used by the “local dwellers”.

Abbot and Yoong (2005) noted that the function of a tele-centre is to offer employees who live in unequal locations. Therefore, the users are provided with a chance to work within “a fully-equipped office-like” setting without having to venture into the CBD of a city. At present, a debate is rigging on about the possibilities of development of ways of working at a distance, based on excessive use of ICT on society and organisations in particular. This state is preferred to a special interest shown by Public Administration in taking full advantage of ICT as a device for development support through endowments for setting up of tele-centres or Tele-work Centres in underdeveloped cities (James & Housting, 2011)

ICT is pivotal to information access and its contribution in all aspects of life. These technologies facilitate the rapid accumulation and dissemination of information, group interaction, communication and collaboration. The usage of ICT for communication and association is viewed as a chance for otherwise disenfranchised people to take part in choices affecting their daily life (Shirazi et al., 2010).

Many provincial areas of trade are exposed to world-wide markets and consequently need admission to high quality communications grids to remain a competitive advantage. “The rural agriculture and mineral mining sectors have to acclimatise to advances in telecommunications and information services to enable efficiency gains”, Madden et al., 1997; it also becomes a breeding ground for potential establishment of information-based industries. Subsequently, this unlocks a wider range of employment opportunities to the regional inhabitants. James and Housting (2011) stated that ‘from a strategic point of view, one can consider teleworking to be a way of organising work that can offer companies competitive advantages, as well as meaning technological and administrative innovation, a way for companies to be flexible and reduce costs’.

Harbi et al. (2009) also emphasised that the development of a successful high-technology sector plays an important role in the creation of national economic welfare. The impact is described by Yi & Thomas (2007) in “virtualisation of products (e.g. CDs to mp3s); digitization of information (e.g. catalogues to websites); dematerialisation of transport (such as flights to teleconferencing); diminishing of warehouses/office spaces and shortening of supply chains.”

James and Housting (2011) says “in general, to the viability of telecentres in terms of assessment of costs and profits that the organisation and employees will obtain from teleworking”. They further identified many lines of research related to teleworking, including the following aspects:

- 1) Technology: Analysis of the development and evolution of ICT .
- 2) Organisations: Identification of organisational restrictions on implementing teleworking, it's bearing on business management, the establishment of activities outside the workplace. Also the new organisational and economic models that arise with the implantation of teleworking



- 3) Individuals: identification and analysis of the advantages and disadvantages of teleworking.
- 4) Society: Analysis of the relationships between teleworking and transport, or social and economic development in both rural and urban deprived areas.
- 5) Public Administration: Research on existing initiatives to develop the information resources for society

In the advent of the fresh technologies, this has forced organisations to rethink globally, and reassess the way they do business. No longer limited by geographical location, teleworking can help organisations bring disparate resources together, including the workforce. These transformation is part of a practise that has seen the rise of the distributed of work environment that includes ‘telework’ (Abbot & Yoong, 2005). Additional changes, such as those of labour force demographics and social systems, have seen the workforce demanding new ways to structure what they do, requesting increased flexibility of work contexts and contents, and a balance of work and family life. Proper design and use of tele-centres can help overcome this difficulty to a large extent and effectively reach rural people. Naik (2011) recommends the e-governance embedded tele-centre as the ideal model in rural tele-centres so as to increase the range of services, provide core services required in the rural areas, and enable the government to reach the rural citizen effectively as well as bring stability of income to tele-centres. The role of government, therefore, is to improve the e-readiness with proper back end systems, process and manpower as well as provide appropriate locations to set up tele-centres which are accessible to all. Naik (2011) claimed that “government services are likely to have a major share in the services of tele-centres, so suggested that the government can facilitate such centres with proper infrastructure such as space, power and broadband access. Public financial backing in the form of subsidies can assist organisations which are setting up Tele-centres or Teleworking Centres in private or as public business initiatives to provide ICT related services”.

As a case study, the collective partnership between public and business organisations during the development of the Kapiti, Tele-centre is defined by Macome (2002). Through media coverage, the business organisations became aware of the research to setup a tele-centre initiative on the Kapiti coast.

At this stage of development there were four main people involved as business partners who formed the managerial or authoritative body of the Tele-centre, named the Kapiti tele-centre Trust. Abbot and Yoong (2005) stressed the significance of partner evaluation and selection. The academic, corporate and community disciplines are all indicated and worked in well together to provide a holistic view of the tele-centre concept from a proven research perspective, a social good perspective and a corporate gain perspective. Thus, this partnership offered opposite visions and solutions to issues faced during the different development stages, and was important in the organisational development process. Another business partner was Unisys. It provided a crucial role in the development of the initial organisation in terms of running a pilot project (Abbot & Yoong, 2005). This demonstrated the viability of the tele-centre business case and provided short-term financial security for the tele-centre. Thus, the commitment of Unisys to the Kapiti Tele-centre gave a practical example of the benefits of the Tele-centre, to be utilised for what they were setup for.

### **2.3 Use of ICT for development of Communities**

Morgan et al (2006) and Madden et al (1997) noted that ICT can be implemented to improve living standards in remote and rural areas by providing benefits commercially, socially and educationally. Abott and Yoong (2005) believe that there is a through link connecting community expansion and ICT and they generally defined community development as a “social learning process which empowers individual and social groups by involving them in collective activities aimed at socio-economic regeneration, development and change.” The study of adopting the use of ICT is complicated by the pervasiveness of ICT and the ever-increasing dependency on ICT in everyday life (Verdegem & De Marez, 2011).

Saltzman et al (2007) described the surroundings of the birth of ICT standards as “magical” in that core innovation, invention and creativeness represent the productive capabilities in the information age of today. Mobile telecommunications networks have spread across the country; sophisticated ICT applications have been used by businesses and governments; and the Internet provides a basis for information flows and transactions in banking and financial services, universities and other scientific performing agencies, as well as in shopping and entertainment services (Goldstuck and Abrahams, 2010).

Goldstuck and Abrahams (2010) stated that ‘South Africa has demonstrated consistent progress in moving into the electronic age, despite limitations in its policy and regulatory environment’. However, this e-development excludes large numbers of the population and large parts of the country, where there is limited or no access to advanced communications at the household or firm level. ‘Modern information and telecommunication can improve living standards in remote and rural areas by providing important commercial, social and educational benefits’ (Madden et al., 1997).

## **2.4 Digital divide and Tele-Centres**

The term digital divide denotes the gap between geographic areas, businesses, households and individuals at different socio-economic levels in respect to opportunities to accessibility to ICT and use of the Internet for a wide variety of activities. The digital divide replicates various differences countries have at their disposal. The ability of individuals and businesses to take advantage of the Internet varies significantly across borders (OECD, 2001).

The digital divide is not a novel wonder. To the contrary, it depicts and highlights the existing gap in technologies between the rich and poor nations (Piotti & Macome, 2007). This gap is also true of high-tech industrial sector, where the developing countries seem to dominate Harbi, S., Amamou, S. & Anderson, A.R. (2009). . Harbi et al. (2009) confirmed that in an age of rapid globalisation and of intensifying global exchanges, the distribution of most world resources is highly skewed. For many, the global digital divide still looks more like a digital abyss.

Most of the African black inhabitants still live under low-income bracket with limited access to world-wide communications infrastructure and services, while the minority population has differentiated but nevertheless disproportionate access of internet in relation to the country’s demographic profile (Goldstuck et al., 2010). The digital divide among family unit appears to depend chiefly on two variables, growth of education and income. Other variables, such as household size and type, age, gender, racial and linguistic backgrounds and location also play an important role (OECD, 2001).

Piotti and Macome (2007) stated that “this technology can help to redistribute wealth and balance the demand for employment for socially and economically deprived areas”. In 2001, at the G8 Summit in Genoa, Italy, rich run states and the donor communities considered the

distribution globally of ICT as an important factor towards the economic growth of poor and developing nations (Piotti & Macome, 2007).

Rao (2008) noted that “India is emerging as a testing ground for new technologies and business models that aim to narrow the digital divide. Limitations in electricity, telephony, internet connectivity and other kinds of basic infrastructure in India’s rural areas are key challenges. Although India has a strong and fast-growing Information Technology (IT) industry, access to ICTs remains limited, particularly in rural areas”.

With the introduction of ICT, it can play a major role in combating urban and rural poverty, fostering sustainable development by creating information-rich societies and supporting livelihoods. Successful ICTs intervention relies on an enabled environment, the participation of the private sector and non-government organizations (NGOs), free flow of information, and access for women and capacity building. The challenge for governments is to ensure the convergence of their initiatives and those taken up by various donors, address the digital divide (Rao, 2008).

James (2005) stated that “what is perhaps more surprising is that the blending of radio and the internet has not spread more widely across developing countries. After all, not only are there compelling social and economic advantages associated with this particular blend, but also a number of successful models that could serve as a basis for replication elsewhere. In fact, a case could readily be made that combining the radio and the internet is a promising a model for delivering the benefits of modern technology to rural areas, as has emerged from the original blending concept”.

After introspection of this innovation, the remarkable failures of many noticeable Tele-centre undertaking in Africa and elsewhere, it becomes all the more hard to explain the comparative neglect of what is certainly one of the most exciting drive for ‘technologies blending in the age of the Internet. Madden et al. (1997) further state that “public access sites such as tele-centres, libraries, community organisations and education institutions can lessen the information disadvantage faced by regional communities”. Tele-centres are civic owned and functioned facilities which house up-to-date information and communication technology which is made available for the community consumption. The services they provide ensure regional societies with access to information and education services and can initiate development. Tele-centres

that share access to ICT and IT enabled services are considered as potential instruments for addressing the problem of the “digital divide” as development enablers (Naik, 2011).

The social worth of a novel Information Technology is exploited if the maximal number of people can take advantage of it and the act of fully utilising the number of informed user’s also serves to lessen the degree to which allocation of wealth will stimulate the adoption of the technology. Verdengem and De Marez (2011) noted that “in depth knowledge on this is important with regard to formulating effective measures aiming to diminish the so-called digital divide. Given the rapid evolutions in ICT landscape, a one size fits all approach seems to be no longer sufficient”.

Bailey and Ngwenyama (2011) argued that “there is growing knowledge that if we are to achieve universal access in the digital city more research is needed to understand the needs of older persons and members of excluded groups for support in understanding and using ICTs”.

Bailey and Ngwenyama (2011) further argued that “research is needed on a range of issues, such as attitudes, e-literacy, user experience, interface design, and social support in the use of ICT in our emerging digital culture”.

Abbot and Yoong (2005) noted that “the business concept and overall scope of the project becomes defined through research and planning activities leading to the occurrence of some preliminary management tasks. When two parties with different backgrounds and skill sets join to work together on a business development project, a division of managerial tasks may emerge. It has also been noted that a large number of new tasks and the lack of business familiarity can act to increase the need to divide managerial tasks”.

## **2.5 Barriers and Tele-Centres**

Mutula and Mostert (2008) stated that “South Africa during 2008, experienced a deficit on electricity supply, which was necessary to power the ICT infrastructure for service delivery”. The resultant tight supply made the entire structure weak to any incident affecting the readiness of energy. This situation caused the expected realisation that the period of very abundant and cheap electricity was running out. Mutula and Mostert (2008) also pointed out that “South Africa lacks a comprehensive and easily accessible evidence base to support strategic policy decision-making and programme design to leverage ICT’s for South Africa’s information society development”.

Verdengem and De Marez (2011) stated that “in the contemporary and rapidly evolving ICT environment, a comprehensive framework for understanding determinants or conditions for technology acceptance is more than ever needed. This is crucial in order to obtain the necessary insights to face the challenges of ICT managers, policymakers as well as researches”.

Harbi et al. (2009) stated that “a shortage of managerial skill is also apparent, but necessary for the commercialisation of innovation. The evidence also shows the critical role played by international partners, both in terms of support and also the subordinate role played by Tunisian firms. It appears that Tunisian high-tech companies are the recipients of innovation, rather than being originators”.

Mutula and Mostert (2008) pointed out that “a study on the utilization of multipurpose community centres identified, among other constraints, the long distance travelled by users to the nearest centre, the shortage in the skills necessary to use the Internet, and the ability to read or understand the content. Such constraints, exacerbated by the growing theft of copper cables, have the effect of undermining the implementation of the local ICT, the policies in South Africa; and the country’s security and socio-economic development”.

Benjamin (2000) noted that the Gaseleka tele-centre is located in South Africa’s poorest province the Northern Province. Gaseleka, which is Setswana for *the place of the chief*, is an isolated countryside town about 80 kilometres from the nearest town of Ellisras and about 40 kilometres away from the border with Botswana. The area is predominately semi-arid and located in a well-known area called Phalala Tele-centre. It is worth noting that Gaseleka is in a remote and poor area. It has been documented that the Northern Province has the worst access to telecommunications among the nine provinces in South Africa. Benjamin (2000) stresses “that the key variables in the success of tele-centres are the energy and commitment of the local owners and managers. Technical skills can be taught; local trust and drive are not”.

A modest telephone shop can be set up outdoors. Nevertheless, a local centre with the soul purposes to provide a range of services and training depends vitally on local backing. Implementing the project in local organisations can be a tedious and trying process. But without the effort, any tele-centre venture is very likely to fail. Viljoen and Duvenage (2008) noted that while tele-centres contribute an exclusive role in enabling digital and social

presence in the information culture, they face many tests. Some of these challenges are locking for suitable mechanisms for information and knowledge sharing; social interaction; partnerships and e-governance or business linked tele-centre use by the local community.

Benjamin (2000) argued that ICTs can only offer convenient services if there is significant communication and information. Despite noble efforts, tele-centers have not really been able to serve as an information centre that the information or interest to locals is already well-known and is delivered through the orally.

The centres desires to set up more formal information systems such as the civic directory developed by the tele-centre in Mamelodi and even radio station based locally. Nevertheless, there is minimal support for organisation for this kind of work. It is here that a state driven activity could assist by dispensing information for centres to disseminate at the local level, offering unsolicited information on organising local information and offering training in information skills (Benjamin, 2000).



## **2.6 Potential and Tele-Centres**

Dlodlo (2009) says that in developing countries, it has shown that womanhood are vital role players in the up lifting economic growth. He goes on to say Education is perhaps a driver of women's capability to contribute in the growth and advancement of any country. Failure to render women access to these services not only robs them and their families of income but also decreases the skill levels of the country, at the same time reduces productivity and restricts a country from the follow of information and communication. From this it is evident that lack of rural development can be blamed for information poverty, the lack of access to information and knowledge that could improve the live hood of women (Akoojee, 2010).

ICT have proved to be increasingly fundamental to the socio-economic development of any nation. Mohammed (2012) agree that IT, along with education and development, have been recognized by the state as a significant segment for development of Serbian economy. For this purpose the following measures have been implemented; in 2004 the tariff rate is reduced to one percent of the computers and 2007 the VAT was reduced from eighteen to eight percent.

Cordella et al. (2012) also noted that the port sector, since the mid-1980s, has progressively endorsed ICT based items (intranet, extranet, RFID, communication platforms). However the investigation of the significance and the potential of a comprehensive-governance concept

with specific operational, technological implementation strategies and use options which aim towards the facilitation of port role players allowing new competitive pressures is a totally unexplored area.

Studies have dealt with wider issues concerning this area, like teleworking or teleshopping, where the potential transport savings are counteracted by several factors. The savings from internet shopping may also be questioned. Purchasing services through the internet may save private transport in relation to traditional shopping, but as many goods are distributed by hand using lorry or car, the savings in private transport energy consumption might be overshadowed by the excess energy consumption related to delivery (Viljoen & Duvenage, 2008).

New technologies like Wi-Fi, if given a chance, also have enormous potential to bridge gaps in the fixed line infrastructure. These technologies, which are much less costly and easier to install, are beginning to make rural internet services feasible (Shiraz, 2010).

## **2.7 Policies and Tele-Centres**

Policies' relating to ICT in education are determined by the Departments of; Science and Technology (DST), Communications and lastly Education. ICT is identified as one of the key technology missions by the DST through its National Research and Development (NR&D) strategy, the white paper on science and technology and the national system of innovation (Dlodlo, 2009).

The kind of schooling system South Africa has does not offer the right groundwork to inspire people into the world of ICT at initial stages. Majority of public schools do not learn the basic computer skills. Cost is an equipping factor with schools wanting ICT. Dlodlo (2009) recommends that the curriculum should be revised to meet the increasing demand for ICT practitioners in industry.

Kyobe (2011) noted that the significance of the economic, political social and other issues that impacting on ICT implementation need to be recognised in developing nations. Understanding the influence of these factors is mainly important for guiding policy and proper distribution of partial resources for developing nations like the Republic of South Africa.

Kyobe (2011) studied the impact of political regimes on IT adoption and claimed that technology adoption is connected to issues of political liberties in various ways. For instance,



knowledge-based technologies may foster liberties, democratisation, human rights and social empowerment.

Alternatively, the tendency to adapt to new technologies is dependent on existing liberties. Cordella et al. (2012) claimed that political and economic rights are less likely to repress the adoption of new technology promoting liberty. ICT has been applied to improve participation and fairness by opening new and advanced channels such as e-voting system, public deliberation on the internet and e-mailing. The implementation of ICT in the communal area can be considered as a tool to win public trust, to instil confidence and to support a proactive government citizen relationship, as well as a means for unbiased ICT policies (Cordella et al., 2012).

Kyobe (2011) stated that authoritarian regimes will seek to restrict usage of information technologies whose contents they cannot easily control (e.g. the internet), but will promote technologies they can control that is the TV. Madden et al. (1997) stated that another theme of recent policy documents focuses on the need for interim measures to promote regional access to new information services such as public access at strategically located sites. Both, the US and Canadian policy documents recognised that while it may not be feasible to provide individual access to many advanced services, mandating the establishment and maintenance of public access points.

Kyobe (2011) claims that adaption to technology depends on the attributes of technology in use and the adapting unit. They maintain that technology adaption is driven by three sets of variables: state policies, capacity to adapt and exposure

- Stages of technology adaption to specific state policies. For instance, it has been proven that nations with internet access adaption hinges on the degree to which states create positive conditions for private IT providers, financiers, beneficiaries and citizens collectively.
- Capacity to embrace and use ICT hinges on the level of income and other resources, a country may have to adapt to technology. GDP and physical capital are useful matrix that measure technology adoption.

- Exposure denotes the outside consecutiveness of the country. This connection provides countries with the knowledge of technology and an incentive for its rollout. Countries linked electronically among them, have an awareness in reducing the cost and expanding the speed of those connections.

Some innovative governments have already been adopting a progressive approach focused on inspiring investors and entrepreneurs Seroka (1992). Eventually this has yielded glimmers of a thriving ICT sector emerging in parts of the continent of Africa, particularly in the privately-run cybercafés. Nigeria specifically has seen an explosion in the number of internet cafes in major cities, notably, because providers have been able to cash in on a booming grey market for Voice Over IP (VoIP). Most internet run cafes are operated by SMMEs who combine online service provision with other activities. Margins are low, but the tide of enthusiasm for online resources means that their business case is gradually improving, according to Pyramid's Zibi.

The culture of innovation and entrepreneurship is highly supported by the policy for the growth and success of the ICT industry in Tanzania (Oreskovic, 2013) It is stated in this policy that: "The government shall encourage and support the development of the local ICT industry to facilitate the production, development and deployment of products and services nationally and internationally" (Oreskovic, 2013).

Despite this evolution in thinking around ICT many ICT policy makers struggle to translate these concepts which focus on the infrastructure and macro-economic development, rather than including the diverse mix of the underlying micro-level factors for development and improvement in the lives of the most disadvantaged (Diga et al. 2008). The relatively high cost of telecommunications in Africa for low-income households has resulted in calls for more policies promoting a society in which information is available to the lower income groups. At the same time, the resurgence of the development state in relation to various sectors, including ICT's and poverty reduction, means that public policy in this area is gaining significance. Regrettably, outside the potential discussions, it is not always clear what poor policies in the ICT sector is (Diga et al., 2008).

## **2.8 Services and Tele-Centres**

Mutula and Mostert (2008) stated that ICTs are crucial in alleviating poverty and uplifting the social economic conditions of the people. When properly utilised, ICT has the potential to empower people to overcome growth obstacles, address social ills and strengthen democratic establishments. Shirazi et al. (2010) write that ICT services and tools are broadly used as a source of information and the mobilisation into political life. For example, authorities in Thailand sent short hand messages (SMS) to over 25% mobile cell phone users encouraging them to partake in an election (Shirazi et al., 2010). In another instance, the US presidential election about 24% of the population learned about the presidential campaign via the Internet. Thing method was used as a means of mobilise people in political discourses at the same time to monitor the election results.

Mutula and Mostert (2008) stated that for a country to benefit from ICT, technology know how should be well utilised effectively. Most e-government websites have community portals to rapidly deploy electronic services, thus enabling governments to create a community nexus of information and online services that extend the government's outreach to its citizens.

Naik (2011) stated that the government can be helped by the private sector to run tele-centres through the public-private partnership and manpower management and effective service delivery. Considering the large number of services that can be effectively provided in such centres, they could be equipped with multiple computers as well as personnel. The private sector would run the tele-centre with the revenue that would be generated from the services provided to citizens, the government and business. There has to be perfect clarity on the roles of both the private and the government departments.

Bailey and Ngwenyama (2011) argue that an extensive study is needed to explore the use of community information as subsidiary for development of virtual communities. This can be helpful in both online and offline community improvement. Bailey et al. (2011) noted that it bring about knowledge sharing and strengthen relationships in respective communities.

Bailey and Ngwenyama (2011) argued that knowledge management in developing countries can be facilitated by virtual communities, and can be applied to the sharing of e-government services. They also highlighted the ease of using virtual communities, and their manageability based on various technologies.

Tele-centres that are used for public services role (agriculture extension, health care information, not offered efficiently by markets) seldom become financially sustainable and requires capital partly from external sources (Bailey & Ngwenyama, 2011). Tele-centres that operate privately for profit or cost-recovery and where users see a benefit in paying a fee for services rendered, are more likely to be economically maintainable. Hence, tele-centres requires a mixture of both public and private services.

## **2.9 Information Access and Tele-Centres**

A tele-centre can be designed for community and rural growth purposes if the public adequate access to information technology for social, personal and educational growth (Abottet & Yoong, 2005). In some isolated societies due to geographical isolation and distance to markets are impeding issues, a tele-centre may be the only solution for internet access and could possibly provide for the development of economic and social well-being of these communities (Abott et al., 2005). Tele-centres are primary access points to the internet in developing countries and in low income areas in developed countries (Bailey & Ngwenyama, 2011). ICT vast services have allowed citizens to not only partake in democratic process, but also mobilisation.

The extensive use of the internet in mobilising and organising people in the world over has helped groups of people to debate and influence topics pertinent to political life and increase civic and political population (Shirazi et al., 2010). Bailey and Ngwenyama (2011) noted that with the increase internet traffic over time, it has become easier for persons to partake in computer-generated communities. In this regard, tele-centres have contributed towards a significant role of facilitating increased access to use of the internet, mainly in a developing contexts. They have the potential to increase the social contact that may occur during face to face. This would provide a situation which would permit participants to witness and consider each other's actions as occurs in routine social interaction. Furthermore, contribution in these virtual communities may contribute to the enlargement of the geographic community.

Dlodlo (2009) stated that in community run tele-centres, the core driving factor to obtaining ICT skills is for employment purposes. Currently, majority of organisations as per-requisite require their employees to have an entry level of computing skills. Women entrepreneurs

locally have neither the ability to selling their products on-line nor the ability to access the internet to the world over hence this is motive enough for ICT training.

## **2.10 Benefits of ICT**

Google is investing hundreds of millions of dollars on nascent internet services in the US that may one day challenge the telecoms and cable companies designed to beam the Internet to remote regions (Oreskovic, 2013). For example, the Loon project which involves floating high-altitude balloons powered by the sun over a remote area of New Zealand to create an airborne wireless network.

Tele-centres are also providing support facilities for communities in a rural areas. For example, the tele-centre has re-established services not accessible in the town areas. With the banks closing, locals before close of the work day, have to go to the next town to do banking as well as shopping too. Local have taken the initiative and starting to use the tele-centre for printing and other services.

Tele-centres provide a straight incentive to regional services by embracing business development through awareness of a range of business opportunities. For instance, a tele-centre user has undertaken a business that provides educational learning services i.e. the tele-centre allowed the owners to start-up a computer training business in the town (Madden et al., 1997).

Some economists argued that IT is a transcendent technology that affects all other industries and drives overall economic growth. Viljoen & Duvenage (2008) compared ICT to “the railroads in the nineteenth century and motorcars in the twentieth century.” They regard the computer revolution as the third industrial revolution.

## **2.11 Inhibitors of Tele-centres**

The most common inhibitor is the funding organisations concerns that tele-centres are exploding everywhere when evident that those already operating can carry on under current arrangements (Madden et al., 1997).

Tele-centre users suggest that there is lack of awareness about the services and benefits offered by tele-centres Co-ordinators identified a lack of resources for promotional activities as the source of the problem, although all coordinators indicated that word of mouth is the

only form of communication by which centre awareness grows. Co-ordinators believe that once people have mastered they know how they will be more aware of the benefits it brings (Madden et al., 1997).

However, social aspects of habits, tastes, customs and values can present constraints to technological changes in organisations (Kyobe, 2011). Dlodlo (2009) stated that since ICT training and use in South Africa is usually presented in English, language proficiency might be a barrier. Also, achieving a women-friendly information society comprises developing content that speaks to women's concerns and reflects their knowledge, language and cultural contexts.

## **2.12 Research Questions**

Much of the problem statement can be resolved from the literature (Rossman & Rallis, 2002). However, there are still some aspects which need to be investigated. The following research questions can help with this.

1. Do people living in the Community have access to ICTs?
2. How are ICT centers set up?
3. How can ICT play a vital role in living?
4. How can ICTs be accessed by community members?
5. What further interventions is needed for any obstacles to be overcome?

## **2.13 Conclusion**

This chapter portrays the valuation of organisation and usage of ICT in Ratlou Municipality region in terms of the area's participation, creation and diffusion of technology in the current age of networking. From this it is evident that Ratlou Municipality has a deficiencies in ICT. The Government coupled with other institutions have established ICT initiatives, such as the one in Gaseleka Tele-centre that are aligned to the countries development programmes. The development perspective assumed in this thesis is not just economical, but broadens cover the social aspect as well as the well-being of the people. The next chapter introduces the research methodology applied in the research work.

## **Chapter Three**

### **Research Methodology**

#### **3.1 Introduction**

This chapter will focus on describing the details of the research method used to investigate the problem discussed in Chapter 1 and Chapter 2. This chapter outlines procedures followed in methodological sampling, construction and administering of the survey questionnaire. Motivation for the use of triangulation and the specific research methods employed is provided. Cooper and Schindler (2003) define methodology as a precise logical and ethical method to developing knowledge, a theory of how this study should or ought to progress given the nature of the issue it seeks to discuss. This chapter aims to partially serve as a justification for the way this mini-dissertation is designed. This section will entail details of the data collection process, the sources of data and analysis thereof, any limitations and bias, as well as ethical concerns that might affect the research work.



#### **3.2 Types of Research**

Nicholls (2009) argued that qualitative study follows a practise of inductive rational were a theory is developed and quantitative research is usually deductive i.e. theory is verified. Qualitative researchers use detailed exclusion and inclusion standards to sample often large numbers of participants with comparable traits. In quantitative research, one usually begins with questions that one wants answers to and the study is never permitted to stray from its unique purpose (Nicholls, 2009).

Others depict quantitative research as a predominately used synonym for any data collection technique like using a questionnaire or data analysis technique like a graphs or statistics figures that generates or uses numerical data Saunders et al. (2007).

**Table 3.1: Overview of the difference between quantitative and qualitative research  
(Nicholls, 2009)**

**Table 1 Overview of the difference be 1**

	<b>Quantitative</b>	<b>Qualitative</b>
Purpose	Test theories Establish facts Show casual relationships Predict outcomes Generalise results to specific populations	Develop concepts Explore meaning Describe multiple realities Critique multiple perspectives Produce generalisable theory
Design	Predetermined Structured Unchanging Prescriptive Reproducible	Evolve through the study Continually under review Rigorous application Un-reproducible Unstructured
Data	Numerical Quantifiable Statistical Measurable Pre-defined variables	Deals with qualities Extensive Wide ranging Texts emerge throughout Limited use of numerical information



Sampling	<p>Subjects</p> <p>Large numbers</p> <p>Structured selection</p> <p>Represent population</p> <p>Control groups and placebo</p>	<p>Participants</p> <p>Small numbers</p> <p>Purposive and theoretical sampling</p> <p>No effort to represent</p> <p>No control groups / placebo</p>
Participant relationships	<p>Detached</p> <p>Distant</p> <p>Objective , try to be free from bias</p> <p>No interaction or influence</p> <p>Research done on subjects</p>	<p>Participatory</p> <p>Trusting and close</p> <p>Subjective , biases incorporated</p> <p>Acknowledge influences</p> <p>Research done with people</p>
Methods	<p>Experiments</p> <p>Quasi-experiments</p> <p>Surveys</p> <p>Questionnaires</p> <p>Incidence studies</p>	<p>Interviews</p> <p>Observation</p> <p>Focus groups</p> <p>Document analysis</p> <p>Theoretical</p>
Instruments and tools	<p>Scales</p> <p>Tests</p> <p>Inventories</p> <p>Hardware, goniometers, dynamometers</p>	<p>Researcher</p> <p>Recording equipment</p> <p>Schedules</p>

Data analysis	Attempt to falsify experimental hypothesis At the end of data collection Deductive Statistical manipulation Computer packages	Theory builds throughout On-going Occurs throughout Repeated re-analysis Inductive
Outcome	Answer specific hypothesis Statistical analysis Compare findings to other studies Often results in guidelines to follow Test establish theory	Critique problems Narrative / linguistic analysis Words not numbers Thick description Development of new theory
Problems	Controlling variables Relevant to reality Reductionist Western	Non-standard procedures Large volume of words Intensity Doesn't give you a simple answer Time consuming

The outcome that the researcher is aiming at is to explore the possibility that ICT can be used as a driver for development. As a result, the study used to achieve this goal will make use of quantitative methodology. Leedy and Ormrod (2005) depict primary data as innovative information that is gathered by the researcher precisely for the study in hand, for example, data got through surveys and interviews.

Seroka (1992) further says that for group management the target population sample had to be got in a particular area by using consistent tests, attitudes scales and survey questionnaires that had to be run to all concurrently. The survey technique encompasses sources of information got from an empirical quantitative research that detects data gathered through a questionnaire.

### **3.3 Population and Sample Size**

Sampling approach designed and the size depend on the research paradigm. The quantitative method needs accidental and descriptive sampling characterized by larger samples (Leedy & Ormrod, 2005). This study will use modest accidental sampling for the purpose of this study. The population consists of two villages in the Ratlou local Municipality which are Logageng and Disaneng. The random sample will be 75 applicants from the two villages.

### **3.4 Data collection method**

To serve the objective of this study, which is to determine the role ICT plays in rural development, the researcher will use questionnaires to determine the role ICT plays. In this study, principal data will be collected by a survey through a questionnaire which will be distributed to people in the villages. This random sampling technique will be used for study purposes.

### **3.5 Validity and Reliability**

Newton and Burgess (2008) highlight that validity refers to the reasons we have for believing truth claims. Reliability means that scores are consistent from one time measuring to the next. There could be a reliable measure that may not be valid. A measure must be reliable to be valid. (Fraenkel et al. 1993)

### **3.6 Data analysis**

Fink (1995) declares that after retrieving the data, the researcher will compare and contrast the evidence given and then interpret it. The data will then be tabulated, put into diagrams, charts or figures. The reason for using any of these graphic forms is to take advantage of their ability to present large volumes of data on one page in a way it can be seen at a glance.

When graphics are mathematically, computationally, perceptually, cognitively appropriate, they can induce intuitive visual understanding that is simple, instantaneous and accurate. Seeing data refers to the process and to the result of visual search for meaning in our data (Akoojee, 2010)

### **3.7 Elimination of Bias**

In quantitative research, the problem of bias is documented by both a reliable attention to the separation between the investigator and the participants and complete attempt not to influence

the result of the research. This kind of research, subjective bias is accepted as an expected feature of humankind and one that is vital if we are to discover the feelings, meanings, and the experiences in personal context of participants' lives and reflections (Nicholls, 2009).

### **3.8 Conclusion**

This chapter has outlined procedures followed in methodological sampling, construction and administering of the survey questionnaire. The thorough account of both data collecting techniques and analysis has been obtainable. Issues of the legitimacy and consistency of the research have been documented, and the moral issues and limitations on the research have been made clear.

The following chapter will provide a demonstration of findings that will be used in disallowing or allowing the questions raised, a thorough discussion as well as statistical and interpretational analysis of the data collected from the research methodology described in this chapter. The chapter will also provide a presentation of findings, an elaborated discussion.

## **Chapter Four**

### **Data Presentation and Analysis**

#### **4.1 Introduction**

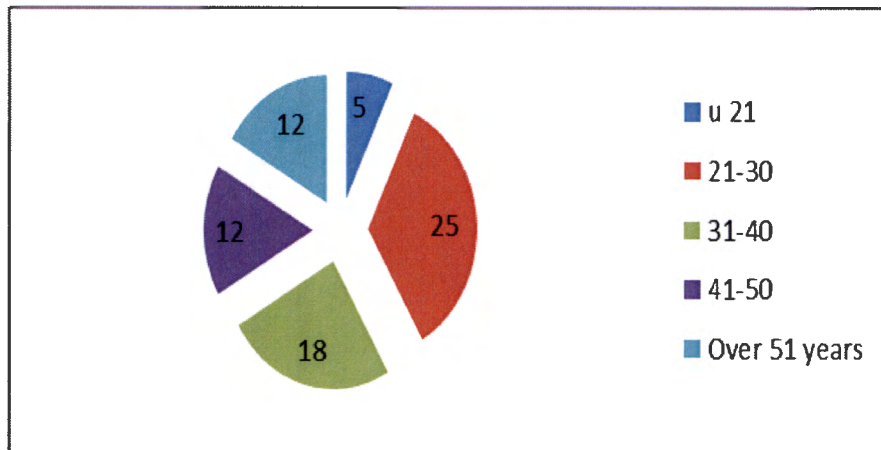
Metropolitan people are gaining from the fresh ICT based economy but the poor, underprivileged and marginalised rural populations do not have access to the information (Sikhakhane et al., 2005). Individuals living in rural local communities also lack access to information because of poor infrastructure. Houses are also scattered and it is difficult to have a centre for people to access information (Sikhakhane et al., 2005). These challenges will ultimately impact on the ICT-based economy in rural local communities in the North West Province. In this chapter the findings of urban people perceptions of the use of ICT-based economy in rural local communities in the Ratlou area are presented. The data collected is presented under ICT use and availability as guided by the research questions. The survey was conducted in the form of a questionnaire.

#### **4.2 Response Rate**

Among the 75 questionnaires distributed out, the researcher had a census rate of 72, a good response rate. The response rate from this study made it possible to make deductions. Respondents to the study were helpful in carrying out conclusion in Chapter Five. The data was represented on a spread sheet and calculation were deduced using Statistical Package for the Social Science (SPSS). It is also acknowledged that, should anyone want to use the results, they should first test the findings to confirm the results.

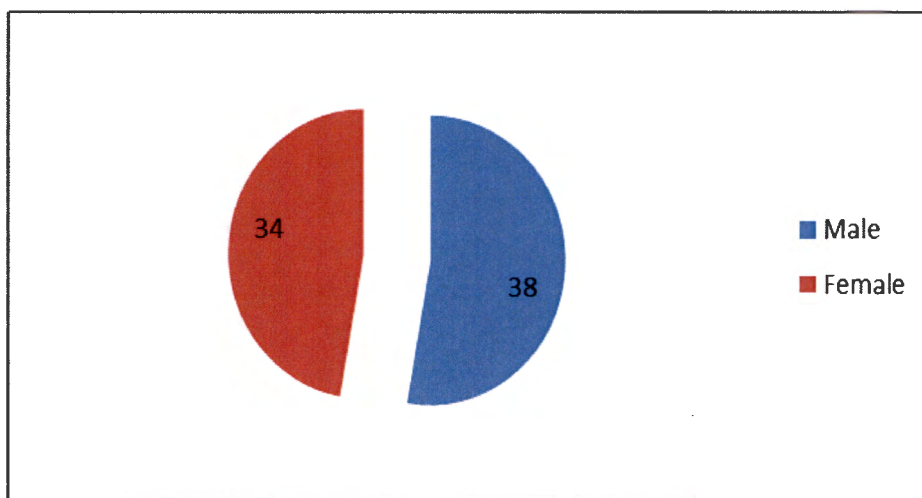
#### **4.3 Demographics**

In the study on ICT-based economy in rural local communities in the Ratlou Municipality in Mafikeng, show some kinds of characteristics such as gender, age, involvement and educational levels show differences compared to their responses. All respondents were from a rural village in the Mafikeng area and were split evenly between males and females. The educational level is also a predictor on the level of ICT based economy usage in the community.



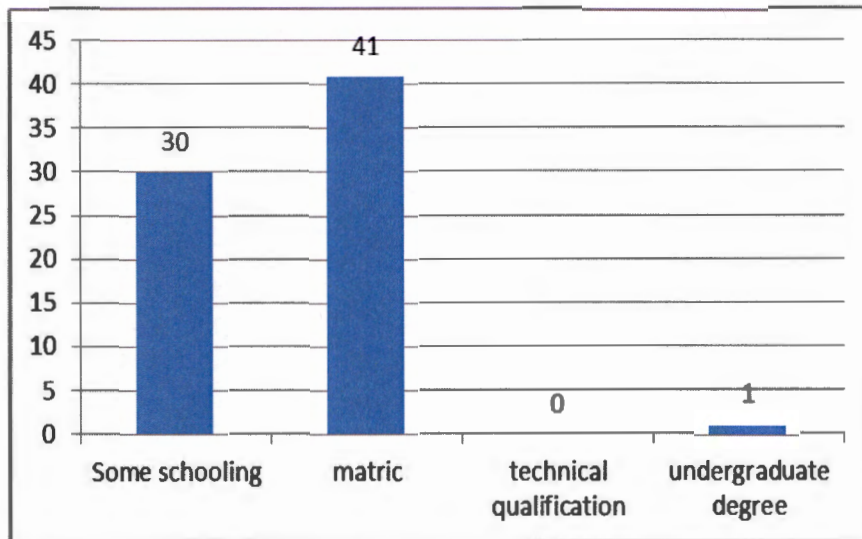
**Figure 1 Age of Respondents**

Figure 1 indicates that 5 respondents were below 21 years while 25 respondents were between 21 and 30 years; 18 respondents interviewed were between the ages of 31 and 40 years while other 12 respondents were between 41 and 50 years and 12 respondents were above 51 years. People that responded mostly were those between 21 and 30 years old. It is important that this group responded, as they are the ones to help older and younger people of the ICT usage in the community.



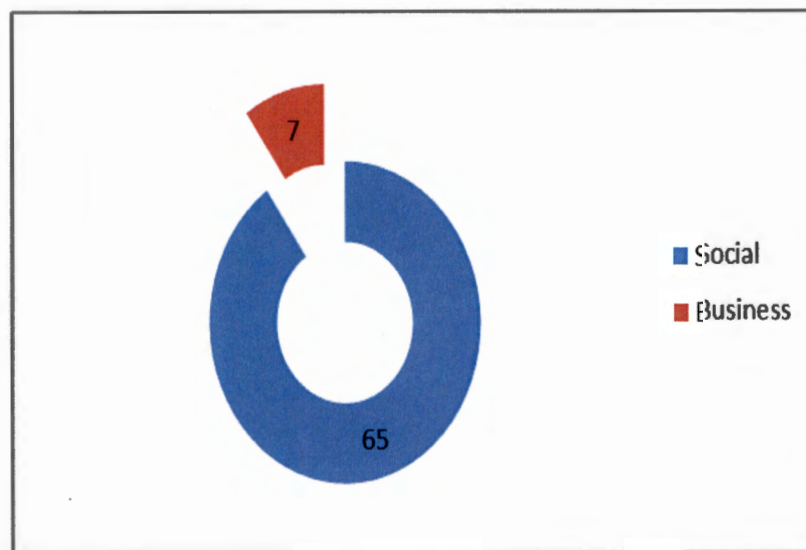
**Figure 2 Gender of Respondents**

Figure 2 shows that 38 respondents were male. The difference in the frequency of male and female respondents was not significant. It is evident from the figures above that the difference between male and female is not huge. Furthermore, the sex distribution of respondents in the sample studied may be seen to represent the sexual distribution of the community.



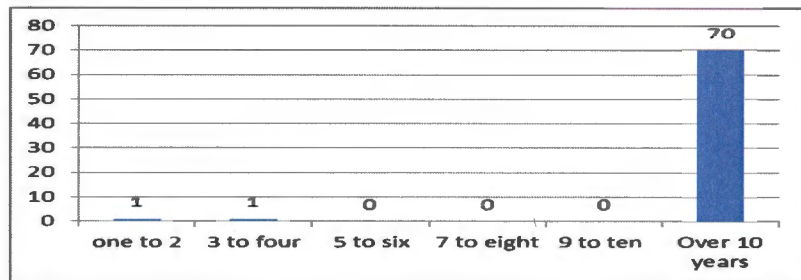
**Figure 3 Highest level of Education**

Respondents without matric were 30 respondents, 41 were with matric only. The distribution of respondents, according to their qualifications, show that the views of both qualified and unqualified people are presented qualified in what



**Figure 4 Was your involvement in Community Projects from a Social or a Business Perspective?**

Figure 4. Shows that most respondents were involved in community Projects from a social perspective (sixty five). It seems that the respondents who have been involvement in community projects with a community’s viewpoint of interact in activities frequently and are more likely to do all their work less than several times a week than most of the respondents.



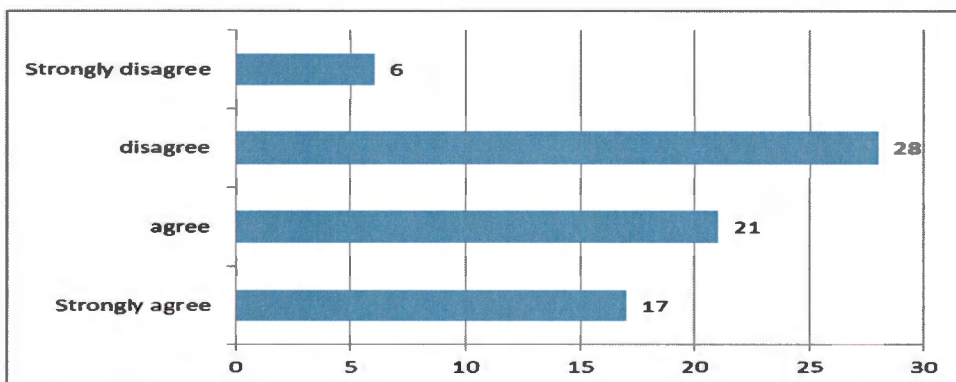
**Figure 5 How many times/years have you been living in this Community?**

Figure 5 shows that most of the respondents have a history of living there for over 10 years (70). This is not a good spread for the study. Figures 4 and 5 shows that males have been interacting in ICT based economy usage in the community more frequently than females, yet females are better skilled. In the past fifteen years prior to the 1976 Soweto uprising, the then Government was pushed into increasing activist positions through the De Lange Reports, three combined studies of training by the Human Sciences Research Council and the National Training Board and a series of reforms to legislation (McGrath & Badroodien, 2006).

The questionnaire indicates that all seventy two respondents are employed (72). This is a positive finding. Akoojee (2010) argues that the national reply to the recession provided little in terms of the conflict for equity in proposing its skills development initiative to ease urgent impacts of the crisis by saving jobs of those most in danger.

#### **4.4 Results of the investigation**

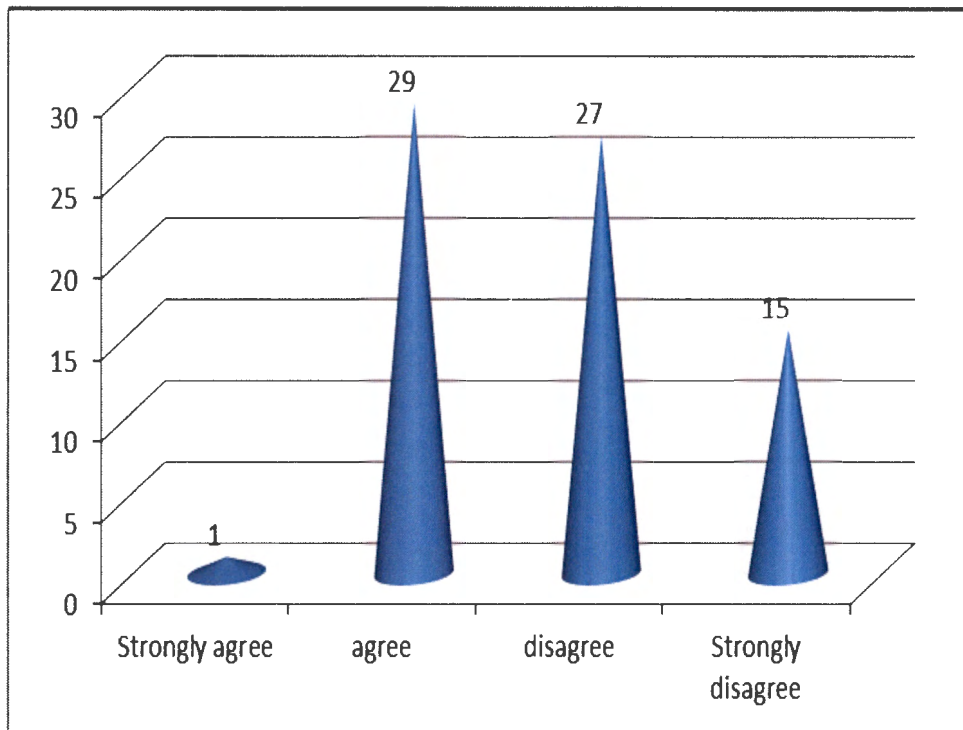
The discussion is in a form of elaborations using graphs. The questions are addressed with the support of Chapter 2 theory. The graphs are used as illustrations of the data collected.



**Figure 6 Your functional area of tele-centre was implemented within the timelines originally stipulated by the project plan.**

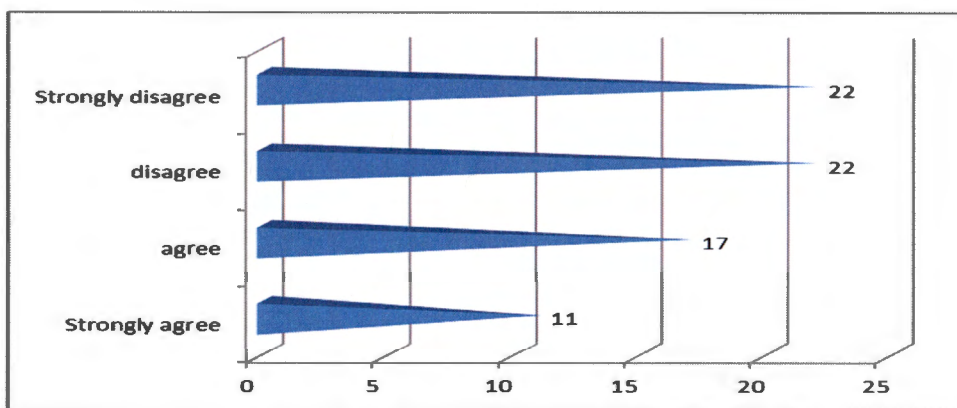


According to the questionnaires, 34 respondents strongly disagree that the tele-centre was implemented within the timelines originally stipulated by the project plan. The findings reveal that people in the NW area do use ICT for the relevance it was created for. People expected to use ICT to make the environment more flexible, engaging and challenging (Duvenage, 2008).



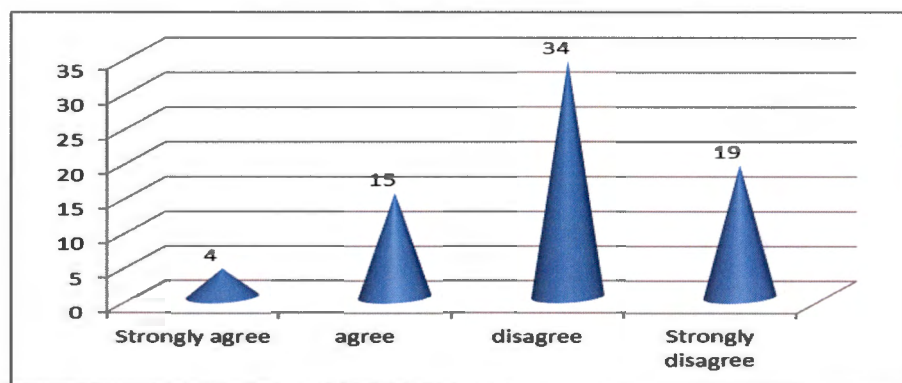
**Figure 7 The budget assigned to the functioning of the tele-centre was appropriate.**

Figure 7 depicts that 30 of the respondents indicated that the budget assigned to the functioning of the tele-centre was appropriate. Twenty percent of the respondents indicated that the budget assigned to the functioning of the tele-centre was not appropriate. This will motivate people to make use of more ICT based tools to be able to achieve subject specific objectives by using a variety of such tools. One must always know that ICT is just one component to the whole process, nevertheless it is predominantly important because of the unique features brought to learning and applications such as; range, capacity and speed of access to information, automatic processing of data, ease of amendment of work carried out, immediate feedback to the novice (Obra et al, 2002).



**Figure 8 The tele-Centre had enough people resource assigned to it in your functional area.**

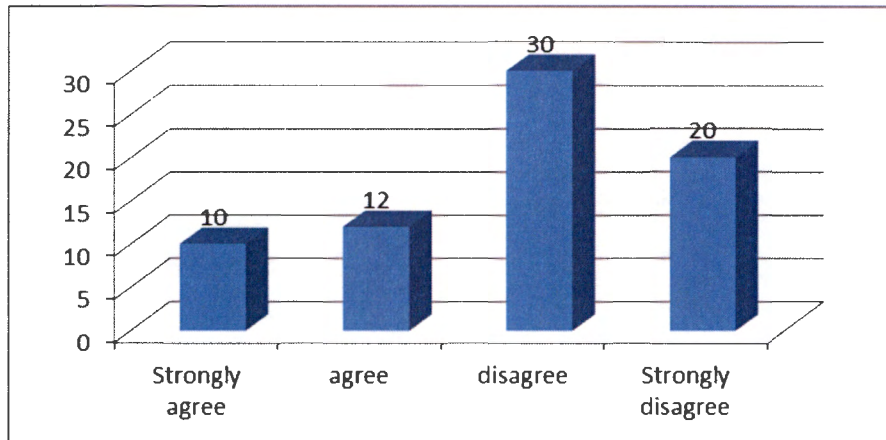
Figure 8 shows that 49 respondents at the tele-centre strongly disagree that they had enough people resources assigned to the tele-centre. This reaffirms that most of the participants using the tools are integrating. This is because of the versatility of ICT based economy were the people have sufficient resources to function well and an in-depth working knowledge of all these technologies is an expected outcome (Dlodlo, 2009).



**Figure 9 The personnel received sufficient and timeous training for the tele-Centre**

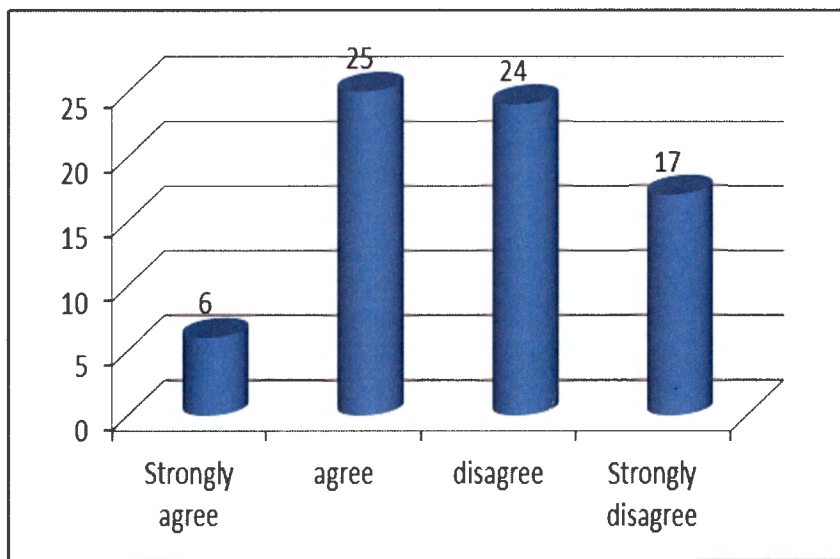
Figure 9 shows that 53 respondents disagree that Service personnel received sufficient and timeous training for the tele-centre. Dlodlo (2009) states that in these communities, the main driving factor to acquiring ICT skills is for employment purposes. Therefore, a requirement for employees to have a knowlegde of computer skills. The local women entrepreneurs have problems marketing products and the ability to access the internet would enable them to access the international market, hence the need for ICT training.

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**Figure 10** There is adequate management support and commitment throughout the operational of the tele-centre

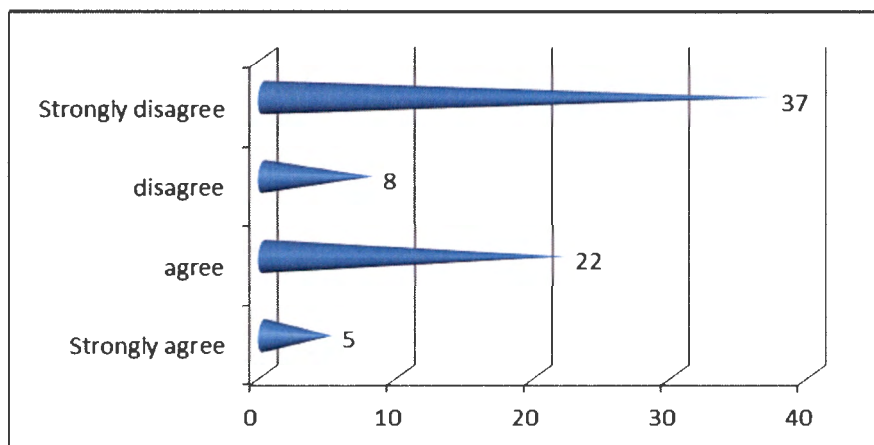
Figure 10 shows that 50 respondents disagree that there was adequate management support and commitment throughout the operation of the tele-centre. Akoojee (2010) argues that the identification of organisational restricting of teleworking has a bearing on business management, the instituting of activities outside the workplace and also new organisational models that arise with the establishment of teleworking, as well as the economical and organisational models of new organisation can be linked to teleworking, such as tele-centres.



**Figure 11** Acceptable accountability was place on management for their functioning of the project.

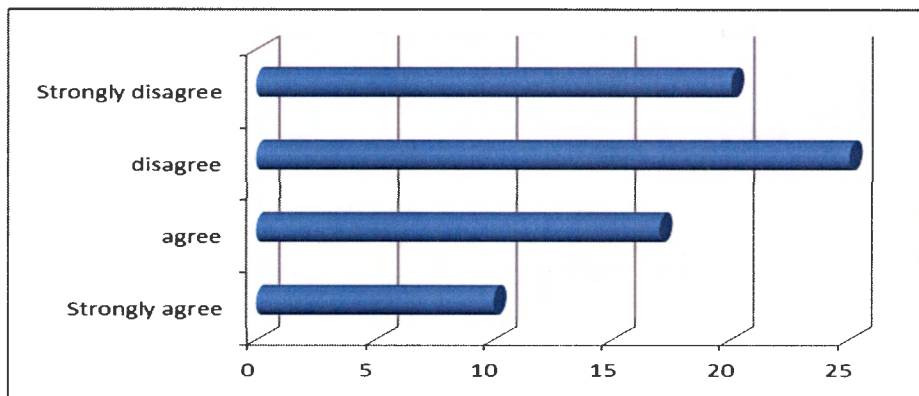
Figure.11 depicts 31 respondents come to an understanding that there was reasonable accountability placed on management for adequate running of the project. Through research and planning activities, the business model and scope of the task becomes defined, leading to

the existence of some initial management tasks (Abbot & Yoong, 2005). When two parties with unlike skill and backgrounds sets to work together on a business development project, a separation of managerial tasks may arise. Consequently, a number of new tasks and the lack of business knowledge can act to increase managerial tasks.



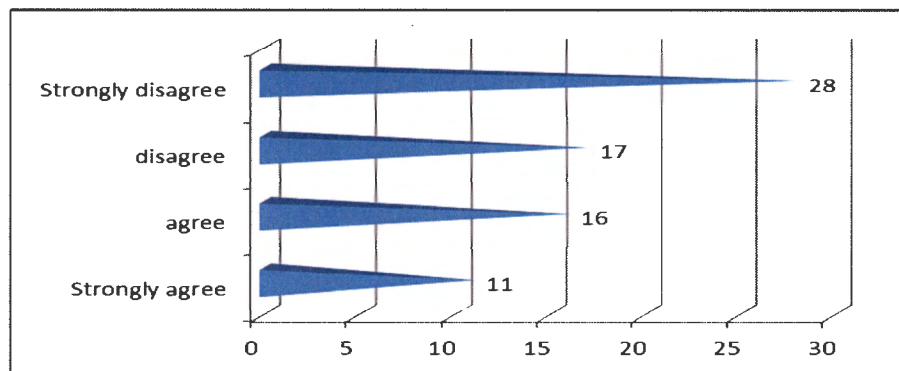
**Figure 12 Satisfactory accountability was place on the business for their function in the project.**

Figure 12 shows that 37 respondents agreed that there was acceptable accountability given to businesses for project. Benjamin (2000) suggests that city dwellers should be urged not only to make use of ICTs effectively for teaching and learning but to access its resources to support delivery, build capacity through teamwork, assistance, and to make management and administration more cost effective. Bailey and Ngwenyama (2011) notes that while tele-centres play an exclusive role in facilitating digital and social presence in the information society, they face many tests. Some of them include finding appropriate mechanisms for information and knowledge sharing, collaboration, social interaction and e-government or business-related tele-centre use by the local community.



**Figure 13 Project team leaders were sufficiently monitored to ensure that they were fulfilling their functions**

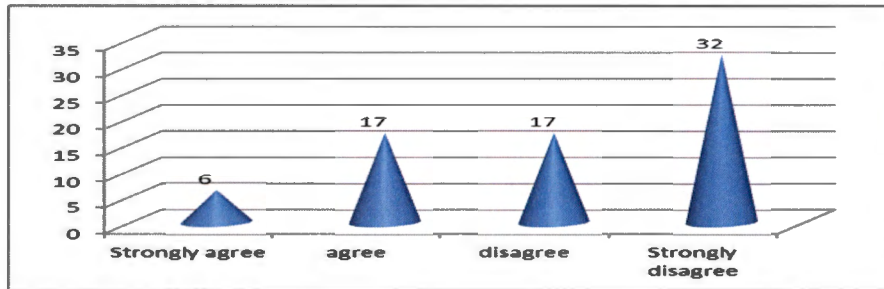
Figure 13 shows that 43 respondents disagree that their project team leaders were sufficiently monitored to ensure that they were fulfilling their functions. Shirazi et al. (2010) note that ICT tools and services are used as a source of information and mobilisation in political life. Telecentres offer a direct incentive to regional employment by aiding novel business development through an awareness for a range of business opportunities. For example, one tele-centre user has started a business with the sole purpose is to provide educational services and offer computer training business (Madden et al., 1997).



**Figure 14 The original business case to what a tele-centre can offer is being delivered**

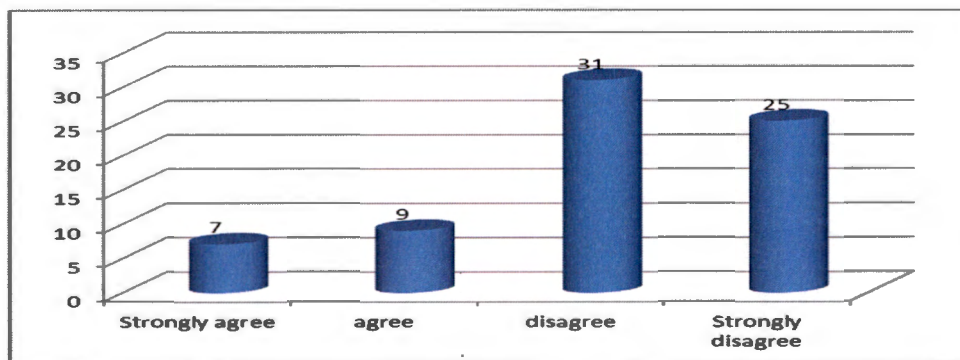
Figure 14 shows that 45 respondents disagree that the original business case to what a tele-centre can offer is being delivered. An option to that would be organising workshops about ICT based integration so that the bulk of individuals can see the rewards ICT tools bring. The academic disciplines, corporate and community are represented and work well together to form a holistic tele-centre concept from proven research, social and corporate gain perspectives (Shirazi., 2010). This shows the feasibility of the tele-centre business and provides short-term financial security for the tele-centre. Thus, the assurance of Unisys to the

Kapiti Tele-centre gave a hands-on example of the benefits of the Tele-centre, to be used as a marketing tool in attracting customers.



**Figure 15** Priorities of Communities are discussed during planning phase

Figure 15 shows that 49 respondents disagree that the priorities of communities are discussed during planning phase. Piotti et al. (2007) note that in 2001, at the G-8 Summit in Genoa, Italy, rich countries and the donor community considered the dissemination of ICT as a fundamental factor towards the economic growth third world nations. Rao (2008) states that India is developing as a testing ground for innovative technologies and business models that aim to narrow the digital gap in technology access and usage amongst urban and rural societies in developing economies. Lack of enough electricity, abundance of telephony and internet connectivity coupled with other basic infrastructure in India’s rural areas are a key problem.



**Figure 16** The IT strategy was aligned to the social needs for the current 2012/2013 financial year, and the IT strategy was appropriate for the social developments in the community

Figure 16 shows that 56 respondents disagree that the IT strategy was aligned to the social needs for the current 2012/2013 financial year and the IT strategy was aligned to the social needs for the current 2012/2013 financial year and the IT strategy was appropriate for the social developments in the community. Verðengem (2011) notes that in depth- information on



this is important with regard to forming effective measures aimed at diminishing the so-called digital divide. Given the rapid developments in ICT infrastructure, one for all approach seems to be no longer adequate. Bailey and Ngwenyama (2011) argue that there is an increased belief that if people granted access to the digital paradigm, more research will be required to study the needs of the elderly and excluded members in understanding and the use of ICTs. Mutula and Mostert (2008) also points out that South Africa lacks an accessible base to support strategic policy decision making and programme design to influence ICT's for South Africa's information society growth. New technologies like Wifi, also have potential to bridge the gaps amid the line infrastructure. These technologies, though less costly and easier to install than have copper wires, are beginning to make rural internet services feasible (Sarah, 2004).

#### **4.5 Measures of Association**

Correlation is a measure of the relationships between two or more variables. The measurement scales used should be at least interval scales, but other correlation coefficients are available to handle other types of data. The simplest question we could ask about two continuous variables is whether they vary in related way, is there a correlation between them.

Pearson's Correlation Coefficient was used for data interpretation. Correlation Coefficients can range from -1.00 to +1.00 representing a perfect negative correlation while a value of +1.00 represents perfect positive. A value of 0.00 represents a lack of correlation.

#### **4.6 Correlation**

The correlation between age and your functional area of Tele-centre was implemented within the timelines originally stipulated by the project plan shows +0.682. This means that if a person grows older there is a chance (correlation) of 0.682 that people will have a higher education. In other words, this impacts on the use of ICT. Educated people will be able to use ICT easier but the correlation should be improved. The correlation between your functional areas of Tele-centre was implemented within the timelines originally stipulated by the project plan and is there adequate management backing and obligation throughout the operational of the Tele-centre shows + 0.531- a positive correlation. This means that elderly are generally unhappy with the future development of ICT usage with their timelines and there is adequate management support in the tele-centre.

The correlation between satisfactory accountability was placed on Management for their functioning of the project and your functional area of Tele-centre was implemented within the timelines originally stipulated by the project plan shows +0.626- a positive association. This means that people between the ages of 31-40 years are experienced or able to use ICT tools in their functional areas. It seems that people are willing to apply ICT tools in their projects plans. The correlation between the budgets assigned to the functioning of the Tele-centre was appropriate and satisfactory accountability was placed on the business for their function in the project shows + 0.538 - a positive correlation. What this mean is that people seem less likely to reduce their administration burdens due to their experience in administering ICT integration in their planning and budgeting functions.

The correlation between ICT usage and your functional area of Tele-centre was implemented within the timelines originally stipulated by the project plan and the IT strategy was aligned to the social needs for the 2012/2013 financial year and the IT strategy was appropriate for the social developments in the community shows + 0.774 - a positive association. Urban people seem to use the Internet often for new ideas and for gathering better information for their projects. The correlation between the workers who receive sufficient and timeous training for the Tele-centre and new team leaders was adequately monitored to ensure that they have fulfilling their functions shows -0.558 – a negative correlation. This means that people are not benefiting when using the ICT tools in their functional areas and there is a lack in project team leaders who should monitor projects to ensure that others are fulfilling their functions. The correlation between the concurrent restructuring and centralisation process of a Tele-centre depicts the scale for the community and the personnel should receive sufficient and timeous training for the Tele-centre as it shows - 0.570 - a positive association. This reads that not all teachers have been on a course or been trained to use the ICT tools and there seems to be challenges involved in integrating ICT in the community.

#### **4.7 Conclusion**

Chapter four provided presentation and analysis of data gathered using a questionnaire as a method of collecting data, a number of statistics methods were used to guide the analysis. Correlation was used precisely to find the meaning of the analysis of data collected. In some instances the use of charts and tables were used during the presentation of the analysis.



The study of the primary data collected showed that all respondents understand what is all about ICT integration. This is an encouraging result as it is consistent with individuals who are mindful about the integration of ICT tools in learning and teaching activities. In final chapter the researcher will give conclusions at the same time recommendations for the findings of the study and state limitations of the research study.

## **Chapter Five**

### **Recommendations and Conclusion**

#### **5.1 Introduction**

South Africa in the African continent is closest to the developing world. However, the gap between rich and poor is big. There are discrepancies in the quality of life for different sectors of the society at the same time differences in quality of living with in the provinces (Darch et al., 1999). The so called digital divide poses as a challenge, especially in the third world countries. The concept of the digital divide has been defined exhausted by different authors.

This chapter comprises a summary of the study, tables the findings per research question, and provides managerial rules for opportunities and pin points future research opportunity in this field of study. Conclusion of the study will be drawn and recommendations listed.

#### **5.2 Brief Summary of the Study**

The study serves as an evaluative paper of the relationship between ICT and communities. The purpose of the study was to understand the challenges and developments of ICT in rural communities in South Africa, specifically in the Ratlou Municipality. The conceptualisation of ICT in growth is also a debated issue, making it difficult to apply ICT to benefit the poor (Oreskovic, 2013). Identifying features typical of rural communities and considering a number of consecutive ICT development approaches have evolved over the past few decades. Findings from the study can help advance organisational performance, value of education and development of communities.

#### **5.3 Response to Research Questions**

This chapter replicates on findings of the research arrived through analysis and interpretation of data as discussed in the previous chapter.

##### **5.3.1 Do people in living in rural areas have access to ICTs in this community?**

The population of the Municipality of eighty five percent have access to water and its source in the Municipal area is unreliable. Also the number of households using electricity is under pressure and has increased from 3.4%, 1996 to over 70% in 2007. Therefore, the Municipality still faces service backlogs related to the provision of water, sanitation, roads and refuse removal services and with ICT provision is not on the list of priorities.

Abott & Yoong (2005) argues that there is a direct link between community development and ICT. Therefore, the defined community development is a social learning method which empowers individuals and social groups by involving them in collective activities aimed at socio-economic regeneration, development and change. The prevalence of supply of ICT and the ever increasing dependency on ICT in everyday life makes the study of the adoption and use of ICT a challenge (Verdegem & De Marez, 2011). Bailey & Ngwenyama (2011) note that tele-centres exist in different forms, such as, community access points but this community cannot afford access to ICT.

### **5.3.2 What is the nature of these ICTs?**

Tele-centres are organisations which are set up in private or public business initiatives and provide ICT related services which usually have from the beginning, public financial backing, in the form of subsidies. The development of this type of initiative, in Spain, requires studies which imply, from an economic and Business Management perspective, an analysis of the creation and development models which are being produced. This underlines the current organisational or running models and future economic viability models. These tele-centres can be considered in a wider context as is pointed out by the French Agency - CATRAL, they can be considered an instrument to change the nature of commuting and the way in which distances are managed (Obra et al., 2002).

Positives and social constructionists and interpretivists hold different views on the nature of reality as positivists hold reality to be singular and objective and interpretive hold reality to be multiple and subjective. Therefore the nature of the ICT presented as tele-centres should have a positive effect on the community. The data has confirmed the potential impact of the tele-centre if they ever get one.

### **5.3.3 What is the relevance of ICTs in their lives?**

While strides in telecommunications and information services enable gains in mining and agriculture, it also provides the platform for the establishment of growth in information based industries. Increased opportunities for telecommuting opens up a wider range of employment opportunities to regional residents (Madden et al., 1997).

Obra et al. (2002) state that from a strategic point of view, people should consider Teleworking to be a way of organising work that can offer companies competitive advantages.

Tele-centres could be a way to help technological and administrative innovation, and a way for companies to be flexible and reduce costs.

The increasing dependency on ICT in everyday life makes the study of the adoption and use of ICT a challenge in communities (Verdegem & De Marez, 2011). The ability of individuals and businesses to take advantage of the Internet varies across all the levels of the communities (OECD, 2001). The digital divide of the 21st century parallels the racial and class divide of the previous three centuries and Tele-centres can help people.

The African population still lives in low-income households with limited access to global communications infrastructure and services, while the minority of population; defined as Whites, Coloureds and Indians, has separated but nevertheless unequal access in relation to the country's demographic profile (Goldstuck et al., 2010).

Tele-centres can play a vital role in combating poverty, fostering sustainable development by creating information-rich societies and supporting livelihoods as discussed in Chapter 4. Successful ICTs intervention relies on an empowered environment, the participation of the private sector and non-government organisations (NGOs), and allows for free flow of information, and access for women and capacity building. The challenge for governments is to ensure the union of their initiatives and those taken up by various governing bodies address the digital divide (Rao, 2008).

#### **5.3.4 What interventions need to be put in place for these impediments to be overcome?**

Mutula and Mostert (2008) argue that Tele-centres are helping to fight poverty and uplift the socioeconomic living standards of the people. When correctly used, ICT has the potential to empower people to overcome obstacles, address social ills and strengthen self-governing societies. Shirazi et al. (2010) note that ICT tools and services are widely used as a source of information and mobilisation. These same tools and services are used as a means of mobilising people in political discourses or monitoring the election outcomes.

Tele-centre have the ability to increase the social interaction that may occur in cases of face to face. This would provide a setting which would enable participants to observe and consider each other's actions as it occurs in routine social setting (Dlodlo, 2009). Additional, participation in these virtual communities may contribute to development of the community. Dlodlo (2009) states that in communities, the main driving force behind acquiring ICT skills is

for employment purposes. Also, organisations need their employees to have a minimum requirement of computing skills. The local women entrepreneurs have problems marketing products and the ability to access the internet would enable them to access the international market hence the need for ICT teaching. (Shirazi et al., 2010).

## **5.4 Managerial Guidelines**

The following guidelines are given to all communities as it is known that one of the Key Performance Areas is to provide quality teaching and learning in ICT. The following strategies were gathered (Shirazi et al., 2010):

1. Inspire life time commitment;
2. Know of expertise and experience;
3. Support people in communities for resourcing;
4. Inspire open, mature and honest communication between people to mitigate perceptions of isolation;
5. Incentivise further development of people and contract them to the communities;
6. Programme to highlight value attached as they lay the foundation for success of the communities;
7. Reward opportunities for advancement; and
8. Special dispensation in rural areas or urban communities focusing on development and training opportunities, facilities and consider a possibility of a rural allowance.

The District Induction Programme needs to be reviewed, restructured, and funded to provide continuing training and meaningful information to all communities. People must be patient at the same time motivate and understand the community's needs while accepting differences. People are empowering for growth and success. When communities empowered areas important to them, they at the same time build the capacity of people. Hence, people require IT skills. The mission of ICT should be to promote the teaching, emphasize retention, provide support for people, and reward people who demonstrate leadership skills with other communities as shown in Chapter 4.

## **5.5 Future Research**

This study contributes to various opportunities for further research, particularly:

- 5.5.1 Sound effects on self-efficacy and people satisfaction;

- 5.5.2 ICT proficiency and community satisfaction;
- 5.5.3 Investigating ICT of metropolitan communities;
- 5.5.4 Urban people preservation and recruitment practices; and
- 5.5.4 The impact of ICT displeasure in communities.

## **5.6 Conclusion**

This study suggested that the application of the Tele-centres should be to promote the teaching of people in developing a healthy culture within the community to achieve their goals. The conclusions can advance performance, quality of ICT and development of human resources. Government need to take a holistic view of Tele-centres when implementing them in rural areas. Government would need to put the needs of the community first before implementing the Tele-centres.

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## Appendix A: Questionnaire Development Matrix

Questionnaire Section	Types of Research Question	Question Nr.	Development Matrix				
			Survey Question/ Statements	Response Options	Data Type	Appropriate Data Measure	Appropriate Statistical Test
Section 1	Demographic Questions	1.1	Please tick your age group in the appropriate block:	21-30, 31-40, 41-50, 51-60, 60+	Discrete	Ordinal	Basic descriptive statistics, single group t test, the z proportions test the X <sup>2</sup> test.  (Use demographic data to characterise your respondents)
		1.2			Dichotomous	Nominal	
		1.3	What is your gender?	Male - Female	Discrete	Ordinal	
		1.4	How long have you been living in this community?	1-2, 3-4, 5-6, 7-8, 9-10, 10+	Dichotomous	Nominal	
		1.5	Was your involvement in community projects from a social or a Business perspective?	social - Business	Discrete	Ordinal	
		1.6		1, 2, 3, 4, 5+	Dichotomous	Nominal	
			How many community development projects implementations have you been involved in including this one?	Employed - Unemployed			
	Are you						

			employed or not?				
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Is there an operational problem/issue in the management of the Tele-centre in the development of community members?	2.1	Your functional area of Tele-centre was implemented within the timelines originally stipulated by the project plan.	Strongly Agree - Agree-Disagree-Strongly Disagree <sup>1</sup>	Continuum (= Cline)	Scalar (Likert Scale)	Any member of the X <sup>2</sup> family or correlation tests, e.g., Phi coefficient, the contingency coefficient and Cramer's V, the lambda coefficient or the uncertainty coefficient (U) or the Pearson significance test.  (Continuous data reveal attributes of whatever one studies, allow one to determine general trends and
	2.2			Continuum	Scalar (Likert Scale)	
	2.3	The budget assigned to the functioning of the Tele-centre was appropriate.	Strongly Agree - Agree-Disagree-Strongly Disagree	Continuum	Scalar (Likert Scale)	
	2.4			Continuum	Scalar (Likert Scale)	
	2.5	The Tele-centre had enough people resources assigned to it in your functional area.	Strongly Agree - Agree-Disagree-Strongly Disagree	Continuum	Scalar (Likert Scale)	
	2.6	Your functional area received sufficient and timeous training for the Tele-centre.	Strongly Agree - Agree-Disagree-Strongly Disagree	Continuum	Scalar (Likert Scale)	
	2.7			Continuum	Scalar (Likert Scale)	
	2.8	There adequate management support and commitment throughout the operational of the Tele-centre.	Strongly Agree - Agree-Disagree-Strongly Disagree	Continuum	Scalar (Likert Scale)	
	2.9			Continuum	Scalar (Likert Scale)	
	2.10	Satisfactory accountability was placed on Management for their functioning of the project.	Strongly Agree - Agree-Disagree-Strongly Disagree	Continuum	Scalar (Likert Scale)	
	Satisfactory accountability was placed on the business for their function in the project.	Strongly Agree - Agree-Disagree-Strongly Disagree	Continuum	Scalar (Likert Scale)		

<b>Section 3</b>	What are the operational planning process and are they sufficient in the running of the Tele-centre.	3.1	Sufficient operational planning was performed throughout the phases of the Tele-centre.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	Any member of the $X^2$ family or correlation tests ...
		3.2			Dichotomous	Nominal	Basic descriptive statistics, single group t test, the z proportions test the $X^2$ test.
		3.3	Did you participate in any operational planning event?	Yes - No <sup>2</sup>	Dichotomous	Nominal	
			Were you part of the operational team?	Yes - No			

Section 4	What are the capabilities of the Tele-centre and the cause and effect on social needs?	4.1	Do you know what the capabilities of the Tele-centre are and how the operational planning impacts you?	Yes - No	Dichotomous	Ordinal	Any member of the $X^2$ Any member of the $X^2$ family or correlation tests, e.g., Phi coefficient, the contingency coefficient and Cramer's V, the lambda coefficient or the uncertainty coefficient (U) or the Pearson significance test.  (Continuous data reveal attributes of whatever one studies, allow one to determine general trends and establish significant correlations = correlation trends between two attributes)
		4.2	The IT strategy was aligned to the social needs for the 2012/2013 financial year and the IT strategy was appropriate for the social developments in the community.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
		4.3	The concurrent restructuring and centralisation process of a Tele-centre offers	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
		4.4	economics of scale for the community.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
		4.4	I use the Tele-centre and make use of the internet?	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	

# Appendix B: Questionnaire

FOR OFFICE USE ONLY: **Respondent Code:** \_\_\_\_\_

“Management and the use of ICT based initiatives: results of a field study in some Ratlou Municipality’s communities”

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**Researcher: Vuyo Mokitime**

**Supervisor: Prof S Lubbe**

### Note to the respondent:

- We need your help to understand the factors affecting the use of ICT based initiatives: results of a field study in some Ratlou Municipality’s communities and management role.
- In responding to this questionnaire be assured that your identity will remain anonymous. None of the questions is aimed at identifying you as a person. In addition, all information supplied by you will be treated as confidential at all times. Information provided by you will be reported in collated format (summary format) only. Your participation in this survey is of utmost importance to this study. Please answer the questions honestly.

The questionnaire as three parts:

Part 1 asks permission to use your responses for academic research.

Part 2 asks general personal particulars like your age, gender etc.

Part 3 to 5 asks questions relating to the use of Tele-centres in rural communities.

### How to complete the questionnaire:

1. Please answer the questions as truthfully as you can. Also, please be sure to read and follow the directions for each part. If you do not follow the directions, it will make it harder for us to do our project.
2. We are only asking you about things that you and your fellow colleagues should feel comfortable telling us about. If you don’t feel comfortable answering a question, you can indicate that you do not want to answer it. For those questions that you do answer, your responses will be kept confidential.
3. You can mark each response by making a tick or a cross, or encircling each appropriate response with a PEN (not a pencil), or by filling in the required words or numbers

### Part 1: Permission to use my responses for academic research

I hereby give permission that my responses may be used for research purposes provided that my identity is not revealed in the published records of the research.

Initials and surname \_\_\_\_\_

Postal address: \_\_\_\_\_ Postal code: \_\_\_\_\_

Contact numbers: Home: \_\_\_\_\_ Cell: \_\_\_\_\_



No	PART 2: GENERAL PERSONAL PARTICULARS		8.	The budget assigned to the functioning of the Tele-centre was appropriate?
	<i>Please tell us a little about yourself</i>			
	<i>Please mark only ONE option per question below.</i>			
1.	How old are you?	<input type="checkbox"/> 31-40 years <input type="checkbox"/> 40-50 years <input type="checkbox"/> Over 50 years		<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree
2.	What is your gender?	<input type="checkbox"/> Female <input type="checkbox"/> Male	9.	The Tele-centre had enough people resources assigned to it in your functional area?
				<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree
3.	What is your highest level of education?	<input type="checkbox"/> Some schooling or less (low or high) <input type="checkbox"/> Matric <input type="checkbox"/> Technical qualification <input type="checkbox"/> Undergraduate degree	10.	The personnel received sufficient and timely training for the Tele-centre?
				<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree
4.	How long have you been living in this rural community?	<input type="checkbox"/> 3-4 years <input type="checkbox"/> 5-6 years <input type="checkbox"/> 7-8 years <input type="checkbox"/> Over 9 years	11.	There adequate management support and commitment throughout the operational of the Tele-centre?
	<input type="checkbox"/> under 2 years <input type="checkbox"/> 2- 3years			<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree
5.	Was your involvement in community projects from a social or a Business perspective?	<input type="checkbox"/> Social <input type="checkbox"/> Business	12.	Satisfactory accountability was placed on Management for their functioning of the project?
				<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree
6.	How long have you been living in this community	<input type="checkbox"/> 5-6 <input type="checkbox"/> 7-8 <input type="checkbox"/> Over 9	13.	Satisfactory accountability was placed on the business for their function in the project?
	<input type="checkbox"/> under 2 <input type="checkbox"/> 2- 3 <input type="checkbox"/> 3-4			<input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree

6.	<p>Are you employed or not?</p> <p><input type="checkbox"/> Employed</p> <p><input type="checkbox"/> Unemployed</p>	14.	<p>Project team leaders were sufficiently monitored to ensure that they were fulfilling their functions?</p> <p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree.</p>
	<p><b>PART 3: Issues in management of the Tele-centre in the development of community members?</b></p> <p><i>Please mark only ONE option per question Below</i></p>	14.	<p>The original business case to what a tele-centre can offer is being delivered?</p> <p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree.</p>
7.	<p>Your functional area of Tele-centre was implemented within the timelines originally stipulated by the project plan.</p> <p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree</p>		
No.	<p><i>Please mark only ONE option per question below.</i></p>		
15.	<p>Sufficient operational planning was performed throughout the phases of the Tele-centre?</p> <p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree.</p>	16.	<p>The IT strategy was aligned to the social needs for the 2012/2013 financial year and the IT strategy was appropriate for the social developments in the community?</p> <p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree</p>
No.	<p><b>PART 4: capabilities of the Tele-centre and the cause and effect on social needs?</b></p> <p><i>Please mark only ONE option per question below.</i></p>	17.	<p>The concurrent restructuring and centralisation process of a Tele-centre offers economics of scale for the community?</p> <p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree</p>
		18.	<p>I use the Tele-centre and make use of the internet?</p> <p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p>

			<input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree.
			<b>THANK YOU FOR YOUR TIME</b>  <b>THE END</b>

## Appendix C: Nonparametric Correlations

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			Age	Gender	Qualification	Involvement	Years	Status	Qu1	Qu2
Spearman's rho	Age	Correlation Coefficient	1.000	-.380**	-.156	-.279*	.287*	.	.682**	-.178
		Sig. (2-tailed)	.	.001	.195	.019	.015	.	.000	.139
		N	71	71	71	71	71	71	71	71
Gender		Correlation Coefficient	-.380**	1.000	.078	.128	-.163	.	-.235*	.226
		Sig. (2-tailed)	.001	.	.516	.288	.174	.	.049	.058
		N	71	71	71	71	71	71	71	71
Qualification		Correlation Coefficient	-.156	.078	1.000	-.206	-.135	.	-.115	-.317**
		Sig. (2-tailed)	.195	.516	.	.084	.261	.	.338	.007
		N	71	71	71	71	71	71	71	71
Involvement		Correlation Coefficient	-.279*	.128	-.206	1.000	.056	.	-.372**	.034
		Sig. (2-tailed)	.019	.288	.084	.	.641	.	.001	.777
		N	71	71	71	71	71	71	71	71
Years		Correlation Coefficient	.287*	-.163	-.135	.056	1.000	.	.238*	-.216
		Sig. (2-tailed)	.015	.174	.261	.641	.	.	.046	.070
		N	71	71	71	71	71	71	71	71
Status		Correlation Coefficient	.	.	.	.	.	.	.	.
		Sig. (2-tailed)	.	.	.	.	.	.	.	.
		N	71	71	71	71	71	71	71	71
Qu1		Correlation Coefficient	.682**	-.235*	-.115	-.372**	.238*	.	1.000	-.288*
		Sig. (2-tailed)	.	.	.	.	.	.	.	.
		N	71	71	71	71	71	71	71	71

	Sig. (2-tailed)	.000	.049	.338	.001	.046	.	.	.015
	N	71	71	71	71	71	71	71	71
Qu2	Correlation Coefficient	-.178	.226	-.317**	.034	-.216	.	-.288*	1.000
	Sig. (2-tailed)	.139	.058	.007	.777	.070	.	.015	.
	N	71	71	71	71	71	71	71	71
Qu3	Correlation Coefficient	.264*	-.227	-.118	-.110	-.041	.	.014	.000
	Sig. (2-tailed)	.026	.057	.326	.361	.736	.	.908	.997
	N	71	71	71	71	71	71	71	71
Qu4	Correlation Coefficient	.137	.337**	-.517**	.210	.299*	.	-.052	.266*
	Sig. (2-tailed)	.255	.004	.000	.079	.011	.	.667	.025
	N	71	71	71	71	71	71	71	71
Qu5	Correlation Coefficient	.093	.121	-.313**	.213	.268*	.	.310**	-.056
	Sig. (2-tailed)	.440	.313	.008	.074	.024	.	.009	.644
	N	71	71	71	71	71	71	71	71
Qu6	Correlation Coefficient	.256*	-.204	-.006	-.476**	.148	.	.626**	-.218
	Sig. (2-tailed)	.031	.088	.962	.000	.217	.	.000	.068
	N	71	71	71	71	71	71	71	71
Qu7	Correlation Coefficient	.369**	-.783**	-.102	-.157	.177	.	.131	-.074
	Sig. (2-tailed)	.002	.000	.399	.190	.140	.	.275	.538
	N	71	71	71	71	71	71	71	71
Qu8	Correlation Coefficient	.045	-.389**	.174	-.149	.147	.	.297*	-.551**
	Sig. (2-tailed)	.711	.001	.146	.216	.221	.	.012	.000

	N	71	71	71	71	71	71	71	71
Qu9	Correlation Coefficient	-.102	-.179	-.238*	.084	-.211	.	-.260*	.544**
	Sig. (2-tailed)	.396	.135	.046	.487	.077	.	.029	.000
	N	71	71	71	71	71	71	71	71
Qu10	Correlation Coefficient	.377**	-.567**	-.052	-.168	.190	.	.406**	-.345**
	Sig. (2-tailed)	.001	.000	.669	.161	.112	.	.000	.003
	N	71	71	71	71	71	71	71	71
Qu11	Correlation Coefficient	.872**	-.407**	.016	-.286*	.284*	.	.774**	-.291*
	Sig. (2-tailed)	.000	.000	.893	.016	.016	.	.000	.014
	N	71	71	71	71	71	71	71	71
Qu12	Correlation Coefficient	.137	-.338**	-.024	-.054	-.127	.	.186	-.139
	Sig. (2-tailed)	.256	.004	.843	.657	.290	.	.120	.247
	N	71	71	71	71	71	71	71	71
Qu13	Correlation Coefficient	.179	-.082	-.116	.034	-.216	.	-.023	.368**
	Sig. (2-tailed)	.134	.498	.335	.781	.070	.	.851	.002
	N	71	71	71	71	71	71	71	71

**Correlations**

	Qu3	Qu4	Qu5	Qu6	Qu7	Qu8	Qu9	Qu10	Qu11	
Spearman's Age rho	Correlation Coefficient	.264*	.137	.093	.256*	.369**	.045	-.102	.377**	.872**
	Sig. (2-tailed)	.026	.255	.440	.031	.002	.711	.396	.001	.000
	N	71	71	71	71	71	71	71	71	71

Gender	Correlation Coefficient	-.227	.337**	.121	-.204	-.783**	-.389**	-.179	-.567**	-.407**
	Sig. (2-tailed)	.057	.004	.313	.088	.000	.001	.135	.000	.000
	N	71	71	71	71	71	71	71	71	71
Qualifica tion	Correlation Coefficient	-.118	-.517**	-.313**	-.006	-.102	.174	-.238*	-.052	.016
	Sig. (2-tailed)	.326	.000	.008	.962	.399	.146	.046	.669	.893
	N	71	71	71	71	71	71	71	71	71
Involvem ent	Correlation Coefficient	-.110	.210	.213	-.476**	-.157	-.149	.084	-.168	-.286*
	Sig. (2-tailed)	.361	.079	.074	.000	.190	.216	.487	.161	.016
	N	71	71	71	71	71	71	71	71	71
Years	Correlation Coefficient	-.041	.299*	.268*	.148	.177	.147	-.211	.190	.284*
	Sig. (2-tailed)	.736	.011	.024	.217	.140	.221	.077	.112	.016
	N	71	71	71	71	71	71	71	71	71
Status	Correlation Coefficient	.	.	.	.	.	.	.	.	.
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.
	N	71	71	71	71	71	71	71	71	71
Qu1	Correlation Coefficient	.014	-.052	.310**	.626**	.131	.297*	-.260*	.406**	.774**
	Sig. (2-tailed)	.908	.667	.009	.000	.275	.012	.029	.000	.000
	N	71	71	71	71	71	71	71	71	71
Qu2	Correlation Coefficient	.000	.266*	-.056	-.218	-.074	-.551**	.544**	-.345**	-.291*
	Sig. (2-tailed)	.997	.025	.644	.068	.538	.000	.000	.003	.014
	N	71	71	71	71	71	71	71	71	71



Qu3	Correlation Coefficient	1.000	-.028	-.546**	-.224	.318**	.028	.194	.264*	.100
	Sig. (2-tailed)	.	.816	.000	.061	.007	.816	.105	.026	.408
	N	71	71	71	71	71	71	71	71	71
Qu4	Correlation Coefficient	-.028	1.000	.103	-.280*	-.101	-.558**	.088	-.438**	-.112
	Sig. (2-tailed)	.816	.	.391	.018	.400	.000	.467	.000	.351
	N	71	71	71	71	71	71	71	71	71
Qu5	Correlation Coefficient	-.546**	.103	1.000	.400**	-.258*	.168	-.266*	-.001	.210
	Sig. (2-tailed)	.000	.391	.	.001	.030	.162	.025	.996	.078
	N	71	71	71	71	71	71	71	71	71
Qu6	Correlation Coefficient	-.224	-.280*	.400**	1.000	.037	.419**	-.163	.330**	.472**
	Sig. (2-tailed)	.061	.018	.001	.	.757	.000	.175	.005	.000
	N	71	71	71	71	71	71	71	71	71
Qu7	Correlation Coefficient	.318**	-.101	-.258*	.037	1.000	.160	.175	.340**	.277*
	Sig. (2-tailed)	.007	.400	.030	.757	.	.183	.145	.004	.019
	N	71	71	71	71	71	71	71	71	71
Qu8	Correlation Coefficient	.028	-.558**	.168	.419**	.160	1.000	-.420**	.662**	.236*
	Sig. (2-tailed)	.816	.000	.162	.000	.183	.	.000	.000	.047
	N	71	71	71	71	71	71	71	71	71
Qu9	Correlation Coefficient	.194	.088	-.266*	-.163	.175	-.420**	1.000	-.085	-.171
	Sig. (2-tailed)	.105	.467	.025	.175	.145	.000	.	.483	.154
	N	71	71	71	71	71	71	71	71	71

Qu10	Correlation Coefficient	.264*	-.438**	-.001	.330**	.340**	.662**	-.085	1.000	.446**
	Sig. (2-tailed)	.026	.000	.996	.005	.004	.000	.483	.	.000
	N	71	71	71	71	71	71	71	71	71
Qu11	Correlation Coefficient	.100	-.112	.210	.472**	.277*	.236*	-.171	.446**	1.000
	Sig. (2-tailed)	.408	.351	.078	.000	.019	.047	.154	.000	.
	N	71	71	71	71	71	71	71	71	71
Qu12	Correlation Coefficient	-.059	-.254*	.141	.074	.128	.095	.070	-.159	.195
	Sig. (2-tailed)	.628	.033	.241	.539	.287	.432	.562	.186	.103
	N	71	71	71	71	71	71	71	71	71
Qu13	Correlation Coefficient	.197	.056	-.289*	-.172	.134	-.448**	.570**	-.068	.174
	Sig. (2-tailed)	.099	.644	.014	.151	.264	.000	.000	.571	.146
	N	71	71	71	71	71	71	71	71	71

#### Correlations

			Qu12	Qu13
Spearman's rho	Age	Correlation Coefficient	.137	.179
		Sig. (2-tailed)	.256	.134
		N	71	71
	Gender	Correlation Coefficient	-.338**	-.082
		Sig. (2-tailed)	.004	.498
		N	71	71
	Qualification	Correlation Coefficient	-.024	-.116
		Sig. (2-tailed)	.843	.335
		N	71	71

Involvement	Correlation Coefficient	-.054	.034
	Sig. (2-tailed)	.657	.781
	N	71	71
Years	Correlation Coefficient	-.127	-.216
	Sig. (2-tailed)	.290	.070
	N	71	71
Status	Correlation Coefficient	.	.
	Sig. (2-tailed)	.	.
	N	71	71
Qu1	Correlation Coefficient	.186	-.023
	Sig. (2-tailed)	.120	.851
	N	71	71
Qu2	Correlation Coefficient	-.139	.368**
	Sig. (2-tailed)	.247	.002
	N	71	71
Qu3	Correlation Coefficient	-.059	.197
	Sig. (2-tailed)	.628	.099
	N	71	71
Qu4	Correlation Coefficient	-.254*	.056
	Sig. (2-tailed)	.033	.644
	N	71	71
Qu5	Correlation Coefficient	.141	-.289*
	Sig. (2-tailed)	.241	.014
	N	71	71
Qu6	Correlation Coefficient	.074	-.172
	Sig. (2-tailed)	.539	.151
	N	71	71

Qu7	Correlation Coefficient	.128	.134
	Sig. (2-tailed)	.287	.264
	N	71	71
Qu8	Correlation Coefficient	.095	-.448**
	Sig. (2-tailed)	.432	.000
	N	71	71
Qu9	Correlation Coefficient	.070	.570**
	Sig. (2-tailed)	.562	.000
	N	71	71
Qu10	Correlation Coefficient	.159	-.068
	Sig. (2-tailed)	.186	.571
	N	71	71
Qu11	Correlation Coefficient	.195	.174
	Sig. (2-tailed)	.103	.146
	N	71	71
Qu12	Correlation Coefficient	1.000	.075
	Sig. (2-tailed)	.	.533
	N	71	71
Qu13	Correlation Coefficient	.075	1.000
	Sig. (2-tailed)	.533	.
	N	71	71