



The role of intermediaries in information sharing between government and communities in Western Cape

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by

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DECLARATION

I declare that this study with the title “**The role of intermediaries in information sharing between government and communities in Western Cape**” is my own work, that it has not been submitted before for any degree or examination at any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

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ABSTRACT

The use of Information and Communication Technology (ICT) to share information is rapidly increasing worldwide. The South African government uses ICT to extend sharing of information and provide services to communities through websites, portals, forums and other online platforms. However, there are still digitally divided communities – without access to these ICTs due to, among others, a lack of necessary computer skills and financial resources. Consequently, these communities miss opportunities to use ICTs to share information with the government. To address the digitally divided communities, the government established an initiative to build community ICT access centres (e-centres).

These e-centres have become the intermediaries between government and communities as shared community facilities that provide access to ICTs and connect the digitally divided communities to government services with social and economic benefits. However, there seem to be disparities between the government's roles and the eventual roles played by intermediaries in information sharing between communities and the government. The disparity might lead to intermediaries not providing services expected by communities, which might affect how communities use intermediaries to communicate with the government.

This research sought to evaluate the role of intermediary in information sharing between the government and communities in Western Cape. Using a qualitative research approach, fifteen semi-structured interviews were conducted to collect data from participants drawn from different intermediaries in the Western Cape. The Institutional, and Structuration theories guided the study. The study found several challenges that affect the way intermediaries operate, thus affecting how communities share information with the government through intermediaries. These challenges include pricing, infrastructure, communication, managerial and management structure. The results suggest that intermediaries should ensure that intermediaries' staff should receive more training, operating times and days should be extended, more intermediaries should be built. The results further suggest that more ICTs should be provided; technologies should always be maintained and repaired on time, communication between intermediaries and the government needs to be improved. Finally, the results suggest that communities must be made aware of intermediaries, services offered by the intermediaries and benefits associated with the use of intermediaries,

including making use of intermediaries in enhancing information sharing between the government and communities.

KEYWORDS: Government, intermediary, Information sharing, communities, Role, ICT, Western Cape, Information, Community library, E-centre



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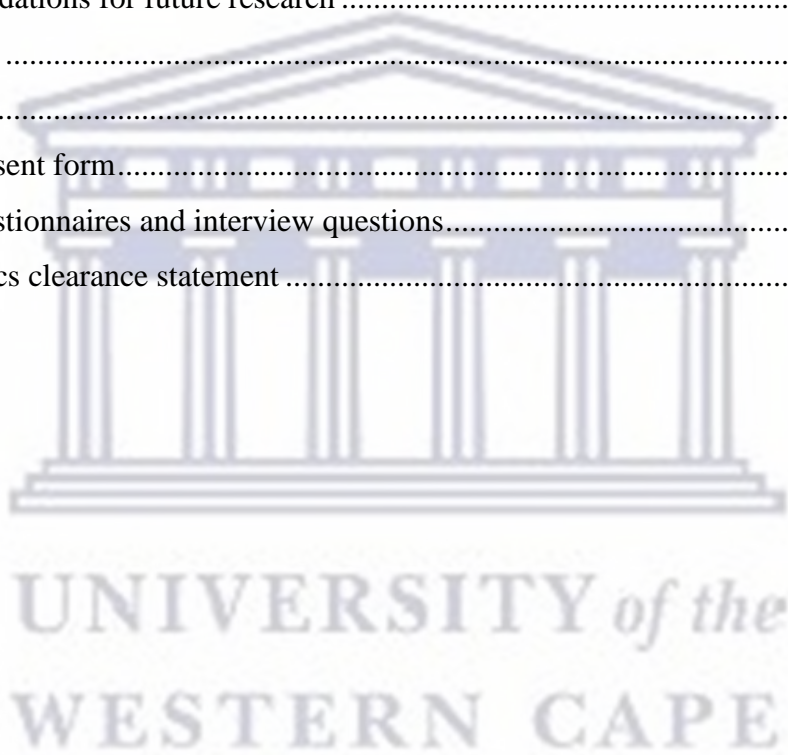
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LIST OF ABBREVIATIONS

CAP	Cape Access Project
CIECT	Centre for Innovative Educational and Communication Technologies
E-centre	Electronic-centre
E-Government	Electronic Government
E-learner	Electronic Learner
E-portal	Electronic Portal
E-skills	Electronic Skills
Email	Electronic Mail
ICDL	International Computer Driving Licence
ICT	Information and Communication Technology
ITS	Information Technology Specialist
LMS	Library Management System
M-Government	Mobile Government
RSA	Republic of South Africa
SCA	Smart Cape Access
SSA	Statistics South Africa
WC	Western Cape
WCG	Western Cape Government
WIFI	Wireless Fidelity

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction

The use of Information and Communication Technology (ICT) to share information is rapidly increasing worldwide (Bayram & Demirtel, 2014; Hashmi et al., 2019; Nwanekezie et al., 2016; Zolfani et al., 2012). Information sharing between communities and the government is crucial for any country socially, economically and politically (Wang & Lim, 2011). Many countries' governments, including South Africa, are using ICT to share information with the communities. However, it becomes a challenge for some communities to use ICT to share information with the government due to affordability, lack of knowledge and lack of access to that ICT (Furuholt & Sæbø, 2018). In response, the South African government started initiatives to resolve and reduce those challenges by building intermediaries with affordable ICT access for the communities (Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013; Western Cape Government, 2015; Zolfani et al., 2012). The intermediaries, built across the country, serve as an intermediate channel for information sharing between the government and the communities (Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013; Western Cape Government, 2015; Zolfani et al., 2012). The Western Cape Province is one of the provinces in South Africa that has been part of the initiative where intermediaries provide services and information to communities (Kapondera & Namusanya, 2017). This research seeks to evaluate the intermediaries' role in information sharing between the government and communities in Western Cape.

This chapter will provide an overview of the research to be conducted highlighting the background, research problem, research questions, aims and objectives, approach to the study, the significance of the study, assumptions and an outline of the rest of the chapters in this dissertation.

1.2 Defining key terms

This section provides definitions of key terms used in this study to provide a mutual understanding.

1.2.1 Information and Communication Technology

Information and Communication Technologies (ICT) are the technologies that provide access to information through telecommunications such as the internet, wireless networks, cell phones, and other communication mediums (Christensson, 2010; Nwanekezie et al., 2016). ICT includes laptops, desktop computers, software, peripherals, and connections to the Internet intended to fulfil information processing and communications functions (Ratheeswari, 2018). ICT is similar to Information Technology (IT) but focuses primarily on communication technologies. These communication technologies include the internet, cellphones, wireless networks and other communication mediums (Nwanekezie et al., 2016; Ratheeswari, 2018).

1.2.2 Community

A community is a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings (MacQueen et al., 2002). As such, a community shares the same opportunities and problems (Vasconcellos & Sobrinho, 2017). In this research, the term community means the people from different areas living in the Western Cape Province who will be sharing information with the government through the use of ICT-based intermediaries.

1.2.3 Information

Information is one or more statements or facts received by a human, which have some form of worth to the recipient (Madden, 2000). In practice, the term information is often used interchangeably with data and evidence (Remenyi, 2017). However, it has been notable that “information is the result of the processing of data. Information helps to reduce uncertainty about a situation, an object or a process.” (Remenyi, 2017). The dictionary meaning of the term information is “the attribute inherent in and communicated by one of two or more alternative sequences or arrangements of something” (Merriam-Webster, 2001).

1.2.4 Information sharing

Information sharing is providing information to others, either on request or on own volition; such information impacts another party's image of the world. It changes other party's image of the world and creates a shared or mutually compatible working, understanding of the world (Sonnenwald, 2006). Information sharing allows one party to access information collected or maintained by another party (Calo et al., 2012). For this research, the term information sharing will be used to mean an exchange of opinions, statements, facts and information between the government and communities.

1.2.5 Community library

The community library is an information distribution place for people living in a certain district (Xu et al., 2016). A community library is a place that provides free access to information, computers and internet to communities (Lawson, 2016). In this research, the term community library is used to mean a shared place that provides free access to ICT for those without access at home or at work to access government services and information.

1.2.6 E-centre

E-centres (also referred to as telecentres or TeleServices Centres, Community Information Centres, Community Access Points, Telecottages and Multipurpose Community Telecentres) are shared community facilities for those who do not have access to ICT and ICT services due to challenges such as access and affordability (Stoltenkamp et al., 2013; Zolfani et al., 2012). E-centres may simply be defined as various kinds of strategically located facilities providing public access to ICT-based services and applications (Breitenbach, 2013). E-centres are seen as developed “places” or “spaces” where community members could have access to ICT, and specifically to networked computers (Uys & Pather, 2016). The term e-centre will be used to mean “a shared community facility where ICT is provided to those who cannot acquire ICT and ICT services.”

1.2.7 Intermediary

An intermediary is a telecentre operator who could be an owner of the centre or the staff employed by the centre, who possesses ICT skills and understand the potential of ICT for social change (Rajalekshmi, 2007). An intermediary is an organization and staff that collects, organises, and distributes information to their clients (Womack, 2002). An intermediary acts as a bridge between the government and communities (Rajalekshmi, 2007). The term intermediary is used to mean e-centres, community libraries and staff working at e-centres and community libraries that serve as a location where communities can visit, access government information and services, and have free access to ICT where they can exchange information with the government.

1.2.8 Government

The South African government is a group of people or institutions that govern the country, constituted as national, provincial and local spheres of the independent, interrelated and distinctive (SAG, 2018). A government is “an institution that governs the country, control, make decisions for the country and administers public policy and exercises executive, political and sovereign power through customs, institutions, and laws within a state.”

1.3 Background of research

This section discusses the geographical location of the Western Cape Province and the background of the research problem.

1.3.1 Geographical location

Western Cape Province is home to 7 005 741 million residents served by 30 municipalities and residing within a geographic area of 129,462 km² (SSA, 2020; WCG, 2013). Although there are 11 official languages spoken in South Africa, there are three dominating languages in the Western Cape Province: Afrikaans, English and isiXhosa. The ethnic representation in the Western Cape is Africans (29%), Coloureds (52%), Whites (18%) and others (1%). The province faces challenges, health, safety and crime including gender-based violence and rape, social divide, corruption, unemployment, and substandard education quality for most African people (Anderson, 2011; Van

der Westhuizen & Swart, 2016; Western Cape Government, 2015). Unemployment, currently at 27.3% and lack of adequate education, is one of the biggest concerns the province is facing (SSA, 2020; Van der Westhuizen & Swart, 2016; WCG, 2020).

The general household survey for the 2018 to 2019 period shows that the Western Cape still has communities without access to the internet, cellphones, computers, electricity and telephone (SSA, 2020). While the national government is increasingly expanding its services and information online with ICT, it is prominent that most of the communities will be indirectly impacted given the number of communities without ICT access. To include most of the communities without or with restricted access to ICT, the WCG established e-centres and ICT access points in community libraries with free access to ICT.

1.3.2 Background of the research problem

The Republic of South Africa (RSA) is a constitutional democracy overseen by three government structures at Local, Provincial and National governments (Ntetha & Mostert, 2011). For the government to offer effective services and information, good communication between the government and communities is essential. Communication is a process of exchanging information and common understanding from one person to another (Lunenburg, 2010). Government communication is a planned and strategic process intended to ensure effective interchange of information between the government and communities (Alberts, 2011). Therefore, government communication is sending out credible messages, explaining working policies, creating the awareness of citizens' rights and enabling mechanisms that better communication between the communities and the government (Wang & Lim, 2011). Similarly, communities need to share information with the government in messages, opinions and thoughts (Wang & Lim, 2011). Communities need to share information with the government to improve the government's services and include matters that affect them (Anderson, 2011). The government can share information that ranges from explaining some of the operational policies and creating awareness of key initiatives of the government (Wang & Lim, 2011).

Government communication seeks to encourage communities to participate in public matters, encourage public dialogues, and build good governance (Aji et al., 2018). The use of ICT by the

communities and the government will enable public participation (Aji et al., 2018). Like other countries making use of ICT, the South African government started using ICT to expand services and information provided to communities (Ntetha & Mostert, 2011; Sandoval-Almazan & Gil-Garcia, 2012). Through the use of ICT, the government has introduced two initiatives namely: electronic-government (e-government) and mobile-government (m-government), where the government provides information and services online through the use of ICT (Abu Tair & Abu-Shanab, 2014; Pillay, 2012). Besides, the government services and information are provided through electronic-portals (e-portals), private sectors, government agencies, banks and the government (Sarrayih & Sriram, 2015).

There could be better service delivery to communities through ICT and improved access to information (Alenezi et al., 2017; Baeuo et al., 2016). The idea of using ICT is to inform communities about the government policies and strategies through the internet to; increase transparency, improve interactions, and reduce costs (Alenezi et al., 2017; Baeuo et al., 2016; Sarrayih & Sriram, 2015). In South Africa, even though the use of ICT by the government is to provide services and information online seems to be successful (Bagui et al., 2011; Manda & Backhouse, 2016), there are still some communities that face challenges in using ICT to access and share information with the government. In 2001, the government established intermediaries with free access to ICT and the internet (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2016; Stoltenkamp et al., 2013). The primary reason to establish intermediaries was to provide communities with access to ICT for those that do not have access or cannot afford ICT (Kapondera & Hart, 2016; WCG, 2013).

1.4 Research problem

There seem to be disparities between the government's roles and the eventual roles played by intermediaries in the information sharing between communities and the government (Chigona et al., 2009; Lwoga & Chigona, 2019). These disparities are caused by among others the intermediaries' low level of computer literacy, lack of understanding of how to adapt to use new technology that might require more time than they could afford, inadequate infrastructure and a severe shortage of qualified staff (Coetzee, 2007; Stoltenkamp et al., 2013). These disparities can lead to some communities preferring physical visits to government offices (Pillay, 2012). Such communities often miss the opportunity to have access to timeous and accurate information, and

they could be excluded from contributing to the matters that affect them (Anderson, 2011). Similarly, the government might not exactly know what the communities want, which might lead to poor service delivery, resulting in the government not providing the services desired by communities (Mutula & Mostert, 2010).

To address the disparity between the roles set by government and roles performed by intermediaries, the government and other organizations have been offering training to intermediaries' staff (Pather & Gomez, 2010; Stoltenkamp et al., 2013). Infrastructure has been improved, and more facilities have been provided. However, limited research shows how the intermediaries are fulfilling their role in enhancing information sharing between government and communities. Therefore, this research seeks to evaluate intermediaries' role in enhancing information sharing between the government and communities. This research will seek to address the need and means for information sharing between communities and the government, challenges and benefits of using intermediaries. This research also sought to get an in-depth understanding of the roles of intermediaries. It is eminent from the literature that if the intermediaries do not perform their roles accordingly, that might affect information sharing. The findings will help intermediaries offer services that could help communities use ICT and implement working policies that can enhance information sharing between the government and communities in the Western Cape.

1.5 Research questions

The following research question addresses the research problem: “how can intermediary enhance information sharing between the government and communities?” To simplify the research question, it was broken down to further sub-questions:

- What are the needs and means for information sharing between the government and communities?
- What are the roles of intermediaries in South Africa?
- What are the benefits of having intermediaries in enhancing information sharing between the government and communities?
- What are the challenges faced by intermediaries in enhancing information sharing between the government and communities?

1.6 Research aim and objectives

This research aims to evaluate the role of intermediary in information sharing between the government and communities in Western Cape. To achieve this aim, the following objectives were identified:

- To explore the needs and means for information sharing between the government and communities.
- To identify the roles of intermediaries in South Africa.
- To explore the benefits of having intermediaries in enhancing information sharing between the government and communities.
- To explore challenges faced by intermediaries in enhancing information sharing between the government and communities.

1.7 Research methodology

The research design followed an eight steps approach. Firstly, the research problem was identified, followed by reviewing previously published literature related to the research problem. Then the research aim, objectives and research questions were established. Then qualitative data was collected from participants through questionnaires and semi-structured interviews. Subsequently, collected data was analyzed, presented, and the findings were discussed in the reviewed literature. Finally, recommendations were proposed on how intermediaries can enhance information sharing between the government and communities in Western Cape.

1.7.1 Selected methodology and application

This study used qualitative research approach to collect data from participants because it “can refer to research about persons’ lives, lived experiences, behaviours, emotions, and feelings as well as about organisational functioning” (Rahman, 2016). The qualitative research helped to get a better insight about intermediaries from the participants

Qualitative data was collected from e-centres and community libraries personnel through questionnaires and semi-structured, face-to-face interviews, respectively. Purposive sampling was

used to select this study participant from the community libraries and e-centres in the Western Cape Province. Purposive sampling is useful when the researcher has limited resources, time and workforce (Etikan, 2016). Purposive sampling is also useful when the research does not aim at generalization the research result about the entire population (Etikan, 2016).

1.8 Chapter outline

This thesis is made up of five chapters, including this introduction and background chapter. All the chapters illustrate how the study was conducted.

Chapter 1: Introduction and background: This chapter outlines the definition of terms, the background of research and research problem. It further outlines research questions, research aim and objectives and the research methodology used.

Chapter 2: Literature review. It provides a review of relevant literature on evaluating the role of intermediary in information sharing between the government and communities. It also includes an in-depth review of i) the need for information communities sharing between the government and communities, ii) means used for sharing information between communities and the government, iii) the roles played by intermediaries, iv) benefits of using intermediaries, v) challenges faced by intermediaries.

Chapter 3: Research design and methodology. It shows the research design and the methodology used in the study conducted in the Western Cape. Moreover, chapter 3 highlights how the sample was chosen from the targeted population of e-centres staff and community libraries staff.

Chapter 4: Findings and results. It shows findings and results from the study conducted in the community libraries and e-centres in the Western Cape. The findings are discussed in relation to chapter 2, which is a literature review as a means of attempting to answer the research questions.

Chapter 5: Discussions

Chapter 5 discusses the findings of the study. The findings were grouped according to themes that were identified in chapter 2.

Chapter 6: Conclusion. It concludes the whole dissertation and recommends possible solutions to the Western Cape government and intermediaries on how intermediaries can enhance information sharing between the government and communities in the Western Cape. Practical recommendations and recommendations for future research were also provided.

1.9 Chapter summary

This chapter has presented the definition of terms, the background of research and research problem. It further outlined research questions, research aim and objectives and the research methodology used.



CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

It is essential to understand why and how communities and government should share information, the role of intermediaries in sharing the information, and the challenges these intermediaries face. Consequently, this chapter achieves this by first discussing the need and means for information sharing between the government and communities. A discussion on intermediaries' roles follows this to investigate how intermediaries play a role in information sharing between communities and the government and intermediaries' benefits. Finally, the challenges faced by intermediaries are discussed to determine methods and ways to mitigate the challenges. The chapter concludes by providing a summary of related literature findings applicable to this study.

2.2 The need for information sharing between the government and communities

Information sharing between communities and the government is essential to encourage community participation in political life and decisions made by the state (Alberts, 2011; Nwanekezie et al., 2016; Wang & Lim, 2011) and to address communities' issues such as health, safety and crime, and education (Anderson, 2011; Van der Westhuizen & Swart, 2016). Throughout the world, communities have actively participated in local issues and decision making within their communities (GCPSE, 2016). Public participation is a crucial tool that has been used in effective governance that often results in efficient service delivery to the people (Madumo, 2014). Only when communities share the information, through any forms of participation, regarding their challenges, the government receives the information, which could improve the government's information and services, thus improving overall service delivery (GCPSE, 2016; Madumo, 2014). Therefore, public participation serves as an essential feature for democracy and in most cases, an enabler for efficient service delivery by the government (Madumo, 2014).

It is a government's role to communicate with the citizens about policies and create awareness of government's key initiatives (Aji et al., 2018; Wang & Lim, 2011). Consequently, a government should have a comprehensive communication system that allows all communities to access

information that effectively improves their lives and participates in public affairs (Sebola, 2017). However, the South African government undoubtedly faces challenges such as slow response rates to communities' requests, inconvenient hours offered by the government institutions, and long distances to reach government offices (Mawela et al., 2017; Nkosi & Mekuria, 2010). These challenges invariably affect how the government communicates with the communities (Mawela et al., 2017).

The way the government communicates with communities impacts the government's ability to deliver effective services to communities and good governance (Alberts, 2011; Sebola, 2017). Ineffective communication may result in inefficient service delivery in a means of; the government might receive the message late, sometimes the message is not easily understood by the government, thus not being able to meet communities' needs (Mawela et al., 2017; Nwanekezie et al., 2016; Sebola, 2017). To overcome this, the government must establish a communication channel that promotes communities' participation in public affairs (Sebola, 2017). An effective information sharing helps the government in, among others, improving broad support and legitimacy, knowing citizens' needs and for explaining stewardship and providing a mechanism to hold government accountable (Aji et al., 2018) for a nation's future success and also to improve public services (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2016; Sebola, 2017; Wang & Lim, 2011). Effective information sharing will help the government and communities exchange accurate and timeous information, improving public decision processes, projects, programs and services (Milakovich, 2010). On the other hand, non-effective communication between the government and communities can harm governance and services delivered to people (Sebola, 2017). It is therefore essential for the government to establish effective communication that will enhance public participation and that will assist the government with understanding what challenges and issues communities are facing so that the government can attend to those issues quickly, thus improving service deliveries.

2.3 Means used for sharing information between communities and the government

Many countries worldwide are using ICT as a strategy to enhance information sharing between the government and communities (Aji et al., 2018; Nwanekezie et al., 2016; Sandoval-Almazan & Gil-Garcia, 2012). There are several official or unofficial media and channels for sharing information between the government and communities through ICT. The official information

sharing channel includes using ICT to send suggestions, complaints, comments and requirements through discussion forums on government websites, telephone, electronic mail (email) while, the unofficial information channel requires communities to gather government information from commercial news websites, and social media websites (Abu Tair & Abu-Shanab, 2014; Nwanekezie et al., 2016; Wang & Lim, 2011). Sandoval-Almazan and Gil-Garcia (2012) observed that the problem with official information sharing is mainly lack of feedback from the government; government officials are seldomly aware of the results of online forums (Nwanekezie et al., 2016; Xu et al., 2016).

Unofficial information sharing channels are the channels under non-governmental entities' control (Nwanekezie et al., 2016; Wang & Lim, 2011). The unofficial information channels are not often reliable because the information provided often comes from an unverifiable source and may mislead the communities (Nwanekezie et al., 2016). The problem with unofficial information is that it could be from media such as word-of-mouth and social media platforms that are not associated with government or government agencies, thus spreading potentially false information (Xu et al., 2016). This false and misleading information has been shown to harm people (Xu et al., 2016).

As stated earlier, countries across the globe, including South Africa, have shifted from classic information sharing (face-to-face) to digital approaches using ICT (Nwanekezie et al., 2016). These digital approaches include expanding information sharing and providing services through the use of ICT. Through the use of ICT, electronic government (e-government) and mobile government (m-government) have been initiated by many countries as a means of enhancing information sharing between the government and communities (Abu Tair & Abu-Shanab, 2014; Bakunzibake et al., 2019; Butt et al., 2019; Kaisara & Pather, 2009; Memarzadeh & Jahany, 2014; Nwanekezie et al., 2016; Sandoval-Almazan & Gil-Garcia, 2012). Even though e-government and m-government initiatives may seem to enhance information sharing between the government and communities, it is still not efficient. The efficiency is hindered by lack of access to the Internet, high cost of ICT, high illiteracy rates, income level, availability of electricity, geographical location, lack of needed information, unawareness of e-government information, barriers of using new ICT especially in the rural areas (Al-Shboul et al., 2014; Komba, 2013).

Despite the availability of ICT to share information between government and communities, some communities still prefer face-to-face interaction by physically visiting government offices or government official visiting communities (Aji et al., 2018). However, face-to-face interaction between government and communities may be a challenge that affects service delivery (Aji et al., 2018; Mpinganjira, 2012). Some other challenges associated with this means of information sharing are lack of access to timeous and accurate information and exclusion of communities' contributions towards matters that affect them (Abu Tair & Abu-Shanab, 2014; Anderson, 2011; Kaisara & Pather, 2009; Memarzadeh & Jahany, 2014; Sandoval-Almazan & Gil-Garcia, 2012).

It is noticeable that even though face-to-face means still occurs, there are also negative impacts on communities, such as incurring costs to visit government offices physically. However, it is still not clear or justified why people still prefer a face-to-face means of sharing information.

2.4 Intermediation between communities and government

The use of ICT is exponentially increasing in developing countries (Bahrini & Qaffas, 2019; Lediga & Fombad, 2018). However, some individuals can still not use ICT and are digitally divided (Aji et al., 2018). The digital divide is a gap that exists between those that have access to modern ICTs and those that do not (Nwanekezie et al., 2016; Stoltenkamp et al., 2013). Individuals without access to ICT may not be able to use ICT to share information with the government (Lediga & Fombad, 2018; Nwanekezie et al., 2016). Many developing countries including South Africa have introduced initiatives to reduce the digital divide by providing free or affordable ICT access to those that do not have or have limited access to ICT (Aji et al., 2018; Lediga & Fombad, 2018; Stoltenkamp et al., 2013).

The term intermediary denotes a middle party between two or more parties and serves as a bridge; an intermediary can be social and ICT intermediate (Gigler, 2015). However, both social and ICT intermediaries serve a similar purpose (Gigler, 2015), and may be used together. These social and ICT intermediate focus on, among others providing information and services to communities. These social and ICT intermediaries could either be Non-Profit-Organizations or private organizations, but this research is concerned with intermediaries organizations funded by the government. Furthermore, these intermediaries help communities access government information

and services (Furuholt & Sæbø, 2018; Nwanekezie et al., 2016). Consequently, these intermediaries are public access facilities that the communities can visit to have free or affordable ICT and internet access (Gigler, 2015). For this research, intermediaries include public libraries, community centres, and people who work in those public organizations.

Intermediaries can include telecentre or Tele-Services Centres, Community Information Centres, Community Access Points, Telecottages and Multipurpose Community Telecentres (Stoltenkamp et al., 2013; Zolfani et al., 2012). As these different terms are used to denote the same term, the term intermediary will be applied throughout this study. An intermediary is a shared community facility for those who cannot acquire ICT and ICT services due to challenges such as access and affordability (Stoltenkamp et al., 2013). The intermediaries often aim to address historical, economic and social factors that limit access to information and services within communities, as some communities have to travel long distances to access information and services (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2016). Intermediaries in South Africa assist communities with access to information and resources from the government and enabling them to participate in government programmes to improve their lives (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2016, 2019; WCG, 2013). Communities are also provided with the necessary skills to use those ICT through basic training; access to government services and information (Stoltenkamp et al., 2013; WCG, 2013).

Since e-centres and community libraries serve as shared locations where communities can visit and have access to ICTs and access government information, these serving-centres serve as a bridge between the government and communities. For this study, an intermediary is an organization that bridges the gap between the government and communities through ICT use. Individuals that work in those intermediaries cannot be separated from the intermediaries. Therefore the term intermediary will be applied throughout this research to denote e-centres, community libraries and other public places that offer communities with free access to ICT and the staff of those intermediaries.

2.5 Roles of intermediaries

The South African government is facing various challenges in delivering information and services to communities including slow response rates to citizens requests, lack of customer service orientation from some of the government's staff, limited and inconvenient working hours offered by government institutions and long distances to reach government offices (mostly in rural areas) (Mawela et al., 2017; Nkosi & Mekuria, 2010; Pillay, 2012). Intermediaries can assist in reducing some of those challenges. By doing so, intermediaries play roles such as providing communities with access to ICT, access to government information, being an intermediate between the government and communities (Kapondera & Hart, 2016; Kapondera & Namusanya, 2017; Majumder, 2016; Xu et al., 2016). Some of the roles that will be discussed below are: providing access to ICT and internet, intermediaries serving as intermediate between government and communities, and how intermediaries create opportunities for communities.

2.5.1 Provide access to ICT

Intermediaries are serving as a place where communities can visit and have access to ICT, printing, basic computer training, and other ICT services (Kapondera & Hart, 2016; Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013; Zolfani et al., 2012). Intermediaries also provide connectivity and access to information via various ICT, including phone and fax (Attwood & Braathen, 2010). Therefore, disadvantaged communities can have free access to ICT, especially those who had to travel long distances to access government offices' information and services. Communities can visit intermediaries and use computers connected to the internet and other ICT used for communication to communicate with the government, send, receive, and online access information from the government.

2.5.2 Intermediate between government and communities

Communities may choose to communicate with the government directly, and they may use intermediaries' facilities to communicate with the government. Figure 1 below shows a communication channel where communities can share information with the government by using intermediaries. Similarly, the government can also share information through intermediaries.

However, intermediaries' presence does not affect the direct information sharing between government and communities, but as places where communities can visit and make use of facilities to send a message or receiving a message from the government or to access government information.

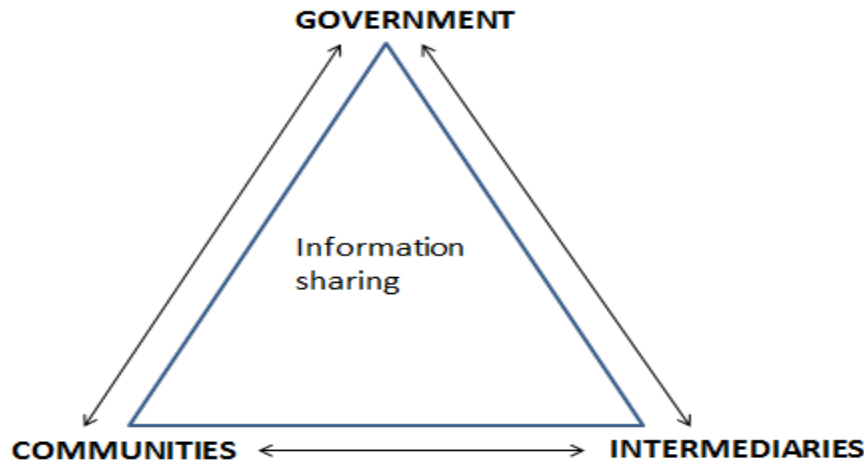


Figure 1: Communities sharing information with the government through intermediaries

The presence of the intermediaries might enhance information sharing between communities and the government. However, some communities might not be aware of intermediaries' existence (Kapondera & Hart, 2016; Komba, 2013; Lwoga & Chigona, 2019). Some communities might not be aware of the roles played and services provided by intermediaries. In support, Mtega and Malekane (2009) add that some communities in developing countries have limited information. Those communities that are aware of intermediaries' existence, their services, and their roles in communities can use their services and facilities to share information with the government.

2.5.3 Increase opportunities for communities

The other role of intermediaries in Western Cape is to increase disadvantaged communities' opportunities through basic training (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2019; Stoltenkamp et al., 2013). The training allows communities to access government information and resources and improve their lives by participating in government programmes (Gcora et al., 2015; Kapondera & Namusanya, 2017; Lwoga & Chigona, 2016; WCG, 2013). Communities are provided with basic pieces of training on how to use ICT. However, there is limited research

addressing if the training pieces are sufficient for enabling communities to share and access government information.

In Western Cape, Smart Cape Access (SCA) and Cape Access Project (CAP) are initiatives of the City of Cape Town and provincial government respectively, which are aimed at providing free access to computers and internet connectivity to disadvantaged communities within the Cape metropolitan areas (Chigona et al., 2009; WCG, 2013). The internet-enabled computers are situated in the e-centres, and public libraries can only be accessed by city council library members (Coetzee, 2007). These access points serve as an expansion to the community libraries as a source of information. However, it is not clear if the intermediaries are playing their roles as set by the government. Chigona et al. (2009) stated that there usually is a disparity between the roles performed by intermediaries and roles set by the government. However, limited research addresses whether the disparity might be influenced by infrastructure, availability of resources, the demographic background of intermediaries or any other factor related to the staff.

2.6 Benefits of using intermediaries

Intermediaries are expected to cater to communities by providing basic access to ICT and services to meet necessities, such as their communities' economic and communication needs (Sumbwanyambe et al., 2011). Indeed Breitenbach (2013) stated that intermediaries have been in existence for a long time and are a highly underestimated tool of integrated local economic development, rural development, economic empowerment and socio-economic development in general. Kapondera and Namusanya (2017) stated that the reason behind establishing intermediaries is to provide shared access to ICTs and develop communities by bringing the benefits of ICTs closer to them. Communities can realize many benefits from using intermediaries. These benefits are economic, social and communication (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2019).

2.6.1 Economic benefits

In terms of economic benefits, communities can benefit from free services and cost-saving (Coetzee, 2007; Lwoga & Chigona, 2016; Stoltenkamp et al., 2013). Some community members can save transport fares by visiting intermediaries (Coetzee, 2007; Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013). Using the facilities found in the intermediaries can lower costs incurred to interact with the government, especially in cases where the government offices are not close to the communities (Alenezi et al., 2017; Baeuo et al., 2016; Sarrayrih & Sriram, 2015). On the other hand, Mtega and Malekane (2009) stated that even though some communities might save travelling costs, some communities who are not close to the intermediaries might still have to incur travelling costs to reach the nearest intermediary.

Some communities save travelling costs because the intermediaries are located within their areas. In contrast, Mtega and Malekane (2009) stated that some communities might still have to incur travelling costs to reach the nearest intermediary. Even though intermediaries are offering services to communities, some of the services are not free (Sumbwanyambe et al., 2011). Those services include printing from computers and the use of the internet (WCG, 2013). Mtega and Malekani (2009) observed that intermediaries play an excellent role in helping communities save costs by providing telephone and fax services, email, internet, and other information-related services. However, it is not evident enough on how Western Cape communities are economically benefiting by visiting and using intermediaries' facilities.

2.6.2 Social benefits

Intermediaries were primarily established to provide communities with access to ICT for those that do not have access or cannot afford ICT (Kapondera & Hart, 2016). Social benefits derived from using intermediaries include basic ICT training and civic engagement (Alberts, 2011; Stoltenkamp et al., 2013). Communities can acquire computer skills through training provided by the intermediaries (Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013). Skills acquired through training pieces have helped communities find jobs and start businesses (Kapondera & Namusanya, 2017). However, there is limited research on whether the training offered helps communities enhance information sharing with the government. Communities benefit by having

free access to ICT and information (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2016; WCG, 2013).

2.7 Challenges faced by intermediaries

There are various challenges faced by intermediaries, such as lack of proper management structure, incorrectly priced services, and the poorly institutionalized nature of policy and regulatory processes (Sumbwanyambe et al., 2011) including management structure, shortage of skilled staff, lack of adequate resources, operating hours, managerial challenges and pricing.

2.7.1 Management structure challenges

In terms of proper management structure, each intermediary, specifically, e-centre is managed by a community member and volunteers from that community (Stoltenkamp et al., 2013). However, the literature does not indicate the requirements for becoming an e-centre manager; this could be factors such as age, level of education, communication skills, computer skills, internet skills, managerial skills and other factors one would like to consider when appointing an e-centre manager.

2.7.1.1 Shortage of skilled staff

Shortage of skilled staff in this study refers to the staff at the intermediaries who do not possess ICT skills such as using a computer. The literature shows that intermediaries' staff is provided ICT pieces of training by the government and other non-governmental organizations (Pather & Gomez, 2010; Stoltenkamp et al., 2013). The training aims to provide intermediaries staff with basic computer skills (Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013; Western Cape Government, 2015; Zolfani et al., 2012). However, the shortage of skilled staff is one of the challenges faced by intermediaries. This challenge is caused by a lack of ICT skills which also affects the user support and the management of the facilities (Kapondera & Hart, 2016). The lack of ICT skills by the intermediaries' staff may affect them in assisting communities to share information with the government since they may not assist those communities without ICT skills.

It is evident from the literature that most intermediaries' staff does not possess adequate ICT skills and that becomes a challenge when they have to assist communities with a task that requires them to possess more than just basic ICT skills. Skills training has been minimal and did not prepare the intermediaries staff to face challenging situations, promote the e-centres' services, and sustain the intermediaries (Pather & Gomez, 2010). Since communities are expected to learn ICT skills such as basic computer literacy (Mbatha, 2016), the intermediaries' employees need to possess such skills. The literature highlights that the intermediaries' staff should acquire more than just basic ICT skills for them to be able to assist and train communities.

2.2.1.1 Lack of adequate resources

Lack of resources is another challenge facing intermediaries. These resources constitute financial, human, facilities and infrastructure resources found within the intermediaries' premises (Attwood & Braathen, 2010; Breitenbach, 2013; Coetzee, 2007; Kapondera & Namusanya, 2017; Lwoga & Chigona, 2019; Mbatha, 2016; Stoltenkamp et al., 2013). The local and provincial government provides the intermediaries' infrastructure and facilities but the funding provided to maintain and service the facilities is not sufficient (Attwood & Braathen, 2010; Gcora et al., 2015; Kapondera & Hart, 2016; Lwoga & Chigona, 2019). The lack of adequate resources may reduce the number of community members served within those intermediaries or lead to long waiting time that could affect those that may require accessing government information or sharing information with the government.

Poor infrastructure and shortage of resources such as technologies is also another challenge faced by intermediaries (Breitenbach, 2013; Kapondera & Namusanya, 2017). In some intermediaries, technologies are outdated, and in some cases, they are not functional. Breitenbach (2013) and Gcora et al. (2016) state that non-functional technologies can affect how intermediaries provide their services and how communities use facilities in intermediaries. Mbatha (2016) adds that outdated technologies and software can affect how communities use the facilities at the intermediaries' premises. Obsolete technologies can negatively affect the way an intermediary renders the service. It takes a long time to fix, update, and maintain the broken and outdated technologies in some cases. Since it takes some time for computers and other equipment to be

fixed (Mbatha, 2016), communities have to wait longer than usual to use facilities (Gcora et al., 2015).

Shortage of facilities such as ICT is a common problem that intermediaries and communities face. ICT facilities include technologies such as computers. Some intermediaries do not have enough computers, and in developing countries, the internet connections are inadequate and slow (Gcora et al., 2015; Hassan et al., 2010; Kapondera & Namusanya, 2017). Mbatha (2016) supported this by stating that computers are usually not working in most intermediaries, and sometimes the internet is offline. Lack of resources might mean that the staff might not assist all communities seeking assistance simultaneously and within the allocated time of 45 minutes per community, member to use computers in a day (Stoltenkamp et al., 2013).

The human resources constitute staff working at the intermediaries. There is a shortage of staff in the intermediaries (Gcora et al., 2015). In some intermediaries, only one person runs and manages the intermediary while others have more than one person (Kapondera & Namusanya, 2017). Chigona et al. (2016) stated that most intermediaries face a staff shortage, meaning communities have to wait for a long time to be attended to by an intermediary staff. In some cases, communities might have to come back, especially during school holidays, when it is a hectic time. Notably, the challenge of staff shortage affects the way the intermediaries operate and might affect the communities that might want to use facilities to share information with the government urgently.

2.2.1.2 Operating hours challenges

Intermediaries have fixed operating hours. Operating hours of intermediaries is also a challenge that some communities face. While more intermediaries are being built to provide information and services to underserved communities, communities face varying degrees of intermediaries operations (Uys & Pather, 2016). The operating hours of intermediaries affect the accessibility and the use of facilities in the intermediaries (Gcora et al., 2015). In some cases, intermediaries operate from Monday to Saturday during government-set working hours (Hassan et al., 2010; Kapondera & Namusanya, 2017). Communities that are busy or working during the formal government working hours find it challenging to use intermediaries' facilities because of the operating hours.

The challenge of operating hours can be tied with the amount of time allocated for each community member to use computers and the internet in the intermediary. Each community member is allocated 45 minutes per day to use computers on the premises (Coetzee, 2007; Lwoga & Chigona, 2019; Stoltenkamp et al., 2013; Uys & Pather, 2016). It was eminent from the literature that the time is limited to 45 minutes per user because of limited resources, especially computers (Lwoga & Chigona, 2016; Stoltenkamp et al., 2013). However, due to lack of resources (Stoltenkamp et al., 2013), the staff might not be able to assist all communities seeking assistance simultaneously and within the allocated time of 45 minutes per community member to use computers in a day.

2.7.2 Managerial challenges

Other challenges faced by intermediaries in South Africa are how the intermediaries are managed; managers and facilitators, purpose and model of operations (Attwood & Braathen, 2010; Majumder, 2016). There is limited research addressing the requirements for one to become an intermediary's manager or a facilitator. Therefore, notably, lack of proper management structure could lead to a disparity of roles played by intermediaries and the government's roles. Poor management of intermediaries can lead to low services delivered by intermediaries (Gomez et al., 2012). It is still not evident enough if some of those challenges apply (Gomez et al., 2012) to intermediaries in the Western Cape.

2.7.3 Pricing

The initial establishment of intermediaries provided access to ICT facilities and other services to communities (Coetzee, 2007). Even though intermediaries were established to offer free services, it was found that not all services are offered for free. However, there are some services that communities are required to pay for. Those are services such as telephone, photocopying and fax services (Mtega & Malekani, 2009). In support of that, Gomez et al. (2012) stated that intermediaries provide cheapest and affordable faxing and copying services in Western Cape so that communities do not have to go out to other areas to use those services. Even though intermediaries charge affordable rates, some communities are affected, especially those in the low-income level who may not have sufficient funds to pay for those not free services. Therefore, this

could hamper the use of some intermediaries' services, which might also have a negative impact on enhancing information sharing between communities and the government.

2.7.4 Summarizing the challenges

The challenges are grouped into three categories, namely management structure, managerial challenges and pricing challenges. Management is the organizational process that involves strategic planning, setting objectives, managing resources, deploying the human and financial assets needed to achieve goals and objectives, and measuring the set goals and objectives (Majumder, 2016). Management is limited to managers, but each member within the organization has some responsibilities to ensure that they report to their managers (Kaehler & Grundei, 2019). In intermediaries, management will refer to all the people involved in planning, controlling, organizing and leading the intermediary. As part of the management in intermediaries, lack of proper management, poor governance and misinterpreting purpose and operation model might lead to poor service delivery. Gomez et al. (2012) supported that poor management can lead to inefficient service delivery. Poor management could also contribute to the disparity between the government's roles and services rendered by intermediaries.

The government also sets the intermediaries' purpose and model. However, it becomes a challenge if intermediaries do not adhere to the policy and regulations regarding how they should operate (Attwood & Braathen, 2010). Those two challenges are incorrect pricing for services and poor governance of managers and facilitators. A member can print up to 10 pages per day in the intermediaries per day (Western Cape Government, 2015). However, some intermediaries are charging communities for services while the policies could have stated that those services should be offered for free; there is limited research on which intermediaries are charging for services and which ones are not.

Another challenge is poor governance of managers and facilitators; rules govern managers and facilitators, guidelines and the government in policy documents determines their roles. Though there is limited research describing their roles and investigating if they are performing their roles as set by the government. This could lead to poor service delivery if the policies and regulations are not adhered to (Attwood & Braathen, 2010; Majumder, 2016). Therefore, if all the challenges mentioned above are not addressed or handled accordingly, there could be a disparity between

roles set by government and services delivered, thus impacting information sharing between government and communities. Some communities might still not use intermediaries but prefer face-to-face means of information sharing with the government.

2.8 Theoretical Framework

A theory is a systematic and integrated set of statements that describe, explain and predict behavior. Choose one use it consistently (Adom et al., 2018). A theory can also be seen as a formulation concerning the cause and effect relationships between two or more variables, which may have or not been tested (Pathirage et al., 2008). A theory is about connections between phenomena and a story behind why events and thoughts occur (Adom et al., 2018; Pathirage et al., 2008). Theories highlight the nature of casual relationships, identifying the timing of what comes first and theories examine and understanding systematics reasons for a particular occurrence or a non-occurrence (Saunders et al., 2019). Theories are influenced by their times' cultural values and belief systems (Adom et al., 2018). Therefore a theoretical framework can be viewed as a logically structured representation of concepts, variables and the relationships between those variables within a scientific study to identify what will be examined, explored, described or measured.

In social sciences and interpretive research, theories are used as a framework to better view, better understand and analyze complicated research problems (Dammak, 2015; Saunders et al., 2019). Post-positivists and interpretivists agreed that understanding of reality is constructed, and the values of researchers and frameworks they use also influence the research being undertaken (Dammak, 2015; Garrido et al., 2012; Saunders et al., 2019). Therefore, this research will use two theories that will be used as a guide and a framework for this study. Those two theories are Institutionalization theory and Structuration theory.

2.8.1 Institutional theory

Institutionalization is used for examining organizations, organizational structure, operations and efficacy (Garrido et al., 2012). The institutional theory's perception has been used to examine the institution`s readiness to adapt to new environments (Madon et al., 2009). The institutional theory can examine how organizations function, their roles and the processes followed in achieving those roles. A primary concept of the institutional theory is the “institution”.

The institution is a stand-alone organization with resources, qualities, and artefacts established or established in terms of new or changing organizations (Garrido et al., 2012). Another concept of the institutional theory is an “actor”. Based on the institutional theory, the actors are institutionally constructed, and it is essential to affirm their potential for constructing norms, rules and beliefs that guide their actions (Scott, 2009). Actors are individual persons, national states and the organizations created by the state and the persons (Meyer, 2008). Actors and their interest are constructed and constituted by the environment that they are in (Garrido et al., 2012; Scott, 2009). Therefore within organizations, some policies guide the organisation's functionality and the actors' roles in achieving organizational goals and objectives. The way institutions operate directly bear on the long-term value, scalability and sustainability of those institutions (Madon et al., 2009). Using an institutional theory can be an effective way of evaluating the dynamic relationships between the organization, its members, its clients, its environment, its successes and its failures (Garrido et al., 2012). Section 2.8.3 discusses the relevance of institutional theory to this study.

2.8.2 Structuration theory

Giddens` theory of structuration has been mostly used in the social sciences research (Garrido et al., 2012; Ma, 2010) to explain the interdependency between the human actions and the organizational structure and it can be sufficient to explain institutional dynamics (Garrido et al., 2012). The structuration theory can be a better way to discuss the relationship that human “agency” has with institutions or “structure” (Lamsal, 2012). The structuration theory has also been effectively used to analyse the relationship between the social structure and human agents with a focus on power, identities, context and social systems (Ma, 2010). This analysis is a bottom-up approach to civic engagement and in this case; the relationships of intermediaries and communities is co-created among the individual, communities and technology (Garrido et al., 2012).

The primary concept of structuration theory is that of a “structure”. Giddens conceptualize the structure as rules and resources used by actors in interaction (Laura, 2010). Schmitz et al. (2016) define structures as the norms and work processes that create an expectation of how social interactions should occur. Therefore, structuration is a process in which actors select, adapt and alter available structures (Schmitz et al., 2016). In this case, structuration theory can be used as a meta-theory that considers the interactions that occur in public service contexts, i.e. through the

intermediaries (Garrido et al., 2012). Another structuration theory concept is the relationship between individuals and society (Jones & Karsten, 2008). In this case, structuration theory can be used as a theory that considers the relationship between intermediaries and the government. Moreover, the theory takes into account the relationship between intermediaries and communities. The applicability of the structuration theory to the study will be discussed in section 2.8.3.

2.8.3 Applicability of structuration theory and Institutionalization theory to the study

This study aims at evaluating the role of intermediaries in information sharing between the government and communities in Western Cape. The intermediaries are seen as public institutions or public agencies. Public agencies as organizations are seen as institutional actors that promote values and interests embedded in the local communities they operate in (Garrido et al., 2012; Lamsal, 2012). Therefore, both theories together can guide the research in achieving the research aim and objectives.

2.8.3.1 Applicability of structuration theory to the study

The structuration theory guided the study in terms of how the intermediaries communicate with the government and how the intermediaries communicate with communities. The theory helped explore the roles served to communities by the intermediaries' staff members and how they assist in coordinating information sharing between communities and the government. Intermediaries should address the needs of those communities who use the services (McCallum & Papandrea, 2009). Finally, the structuration theory will help understand those intermediaries' governance in terms of human actors selections and appointments.

The structuration theory will assist in addressing the structure of the intermediaries. Furthermore, the structuration theory guided the research in exploring how intermediaries' staff report, whom they report to, and who stands in for the staff when they are not available due to unforeseen circumstances. The structuration theory will also explore how the staff impacts information sharing between the government and communities. Structuration theory will explore how the intermediaries assist communities in facilitating sharing information about communities and the government.

The structuration theory guided the study in an attempt to address the research problem. The theory's primary concept is the “structure”, which helped address the roles and responsibilities of intermediaries. In this part, the theory helped to address how intermediaries communicate with the government and communities. The published literature shows that intermediaries can play a role as an intermediate between the government and communities, that is, intermediaries can be seen as a place that interested communities can visit and have access to ICT, information and other ICT services (Gcora et al., 2015; Kapondera & Hart, 2016; Stoltenkamp et al., 2013; Western Cape Government, 2015; Zolfani et al., 2012).

Another concept of the structuration theory shows the relationship between individuals and society. In this case, the study was guided by the theory of understanding the relationship between intermediaries and communities. Literature shows that intermediaries faced some challenges when communicating with the government, those are challenges such as slow response rates to citizens requests, lack of customer service orientation from some of the government’s staff (Mawela et al., 2017). The structuration theory helped to derive two core themes, namely; roles and responsibilities and communication. Those two themes helped to identify the gaps in the literature, and as a result, sub-questions were derived from the themes. The themes and sub-questions are summarized in section 2.6.4 below.

2.8.3.2 Applicability of the institutionalization theory to the study

This study was also guided by the institutional theory and the structuration theory. Institutionalization theory will help examine the roles played by the e-centres and community libraries as Western Cape Province institutions. Institutionalization theory also assisted to examine the infrastructure and resources available in e-centres and community libraries and the benefits of using e-centres and community libraries. Finally, institutionalization theory will help examine the challenges the e-centres and community libraries face and how they respond to those challenges.

Information Technology initiatives in public sector organizations involve a complex set of interactions and decisions (Hassan & Gil-Garcia, 2008). These decisions and interactions are influenced by the properties of technology and business rules and existing rules, norms, values and meaning systems (Madon et al., 2009; Meyer, 2008). The institutionalization theory focuses on how the intermediaries as institutions focus on Information Technology adoption, Information

Systems design, and Information Technology usage in Organizations (Hassan & Gil-Garcia, 2008).

Institutionalization theory will be applicable for this study to find out about the infrastructure of the intermediaries, the roles set for the intermediary staff in terms of computer skills possessed by intermediaries' staff. This means that the level of e-skills of intermediaries' staff will be assessed, the type of technology found in intermediaries, and how they are being used in intermediaries. This also means that this theory will assess if the intermediaries have an infrastructure to be used to facilitate or enhance information sharing between the communities and the government.

The Institutionalization theory guided the study in an attempt to address the research problem on hand. By doing so, Institutionalization theory focused on the infrastructure, available ICTs, services provided, benefits of using intermediaries and challenges faced by intermediaries. The published literature shows that intermediaries serve as public places where communities can visit to access ICT and information (Kapondera & Hart, 2016; Lwoga & Chigona, 2019; Stoltenkamp et al., 2013; Western Cape Government, 2015; Zolfani et al., 2012). The literature also shows that interested communities can visit intermediaries and use available facilities to communicate with the government (Kapondera & Hart, 2016; Kapondera & Namusanya, 2017; Majumder, 2016). However, intermediaries face some challenges, such as lack of adequate resources (Breitenbach, 2013; Kapondera & Hart, 2016; Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013). The literature also shows that the operating hours of intermediaries were also a challenge to communities, affecting the way communities make use of available ICT (Gcora et al., 2015). It is eminent from the literature that the above-stated challenges could affect the way intermediaries offer the services and most probably not meet communities' needs.

The Institutional theory helped derive two core themes: services delivered and the challenges faced by intermediaries. Those two themes helped to identify the gaps in the literature, and as a result, sub-questions were derived from the themes. The themes and sub-questions are summarized in section 2.8.4 below.

2.8.4 Core themes of the study

Table 1 below summarises the core themes of the study

Table 1: Core themes of the study

Section	Theme	Sub-theme: Interview questions
Roles and responsibilities	Roles and responsibilities	<ul style="list-style-type: none"> • What is your role and responsibilities within the e-centre/community library? • How many colleagues do you work with and how do you share responsibilities and duties? • What are the requirements for one to perform your duties in the e-centre/library? • What happens during the time that you can't make it to the e-centre/library, maybe due to unforeseen circumstances or other commitments? • What are the roles of intermediaries in South Africa? • Have you attended any training? • What areas did the training address? • What areas did the training not address?
Communication	Communication	<ul style="list-style-type: none"> • Do you have any links or connections with government departments? And which departments do you have link with? • Do you think the links are assisting communities? Which information is shared with those links? • How do you assist communities to communicate with the government? • What is the role of the e-centre in information sharing between the government and communities? • What are the benefits of having intermediaries in enhancing information sharing between the government and communities? • What is the need and means for information sharing between the government and communities? • What can be done to improve information shared between the government and communities through the e-centre?
Services provided	Services	<ul style="list-style-type: none"> • Which Information and Communication Technologies are available in this e-centre/library? • Where do you receive your technology and equipment? • How often are the technology and equipment serviced? Who pays for the service? • Do you charge communities for any services? If yes, which services? • Which Information and Communication Technologies are available in this e-centre/library? • Where do you receive your technology and equipment?
Challenges	Challenges	<ul style="list-style-type: none"> • What do you think the community expect from this e-centre/library? • Are those needs addressed in this centre? • Does the community feel the need to use e-centre/library to communicate with the government? • What could be done better to improve communication between the communities and the government through the e-centre? • Are there any programmes that are offered here that can help communities increase the level of engagement with the government? • What are the challenges faced by intermediaries in enhancing information sharing between the government and communities?

The themes were identified from the interviews transcripts. The following steps were followed to identify the themes. Once the data was transcribed, the first step was to group all related responses together according to their questions. The second step followed was to identify keywords from the interview questions and those keywords were used as a pre-defined themes. The third step was to identify all repeating words from participants` responses for each question. The next step was to identify similarity of words and phrases from participants` responses. In addition, the differences of words and phrases were also identified. Lastly, the following four core themes of the study were identified from the interviews transcripts and they are presented in table 1. Those themes are roles and responsibilities, communication, services and challenges faced by intermediaries. The table above also depicts how interview questions were derived and grouped according to the themes and sections.

2.9 Conclusion

This chapter reviewed the literature to understand why and how communities and government should share information, the role of intermediaries in sharing the information, and the challenges these intermediaries face. This was achieved by discussing reviewed literature on the need and means for information sharing between the government and communities. This chapter also discussed the roles of intermediaries in information sharing and the following roles were discussed; providing access to ICT, intermediation role between the government and communities and an increase on oppurtunities for communities. The chapter also discuss the benefits realized by communities when using intermediaries facilities, hose benefits are in terms of economically and socially. This chapter also reviewed literature on challenges faced by intermediaries, those challenges are in terms of management structure, managerial issues and pricing challenges. This chapter also discussed two theories that guided the study and those theories are Institutional and Structuration theories. This chapter concluded by discussing how the themes for this study were derived.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the procedures that were followed when gathering, analyzing and interpreting research data. The first section discusses the research methodology, followed by the research paradigm, research design, data analysis of the data collected and ethical considerations. This chapter concludes by providing a summary of what has been discussed.

3.2 Research methodology

The term “methodology” might be different in various disciplines of research. A methodology is an organization of principles, practices, and procedures applied to particular research (Melnikovas, 2018). A research methodology refers to the theory of how research should be conducted (Saunders et al., 2019). It is often described as a strategy of inquiry that is based on assumptions, theories and perspectives of what constitutes good research (Melnikovas, 2018; Myers & Heinz, 2011). A methodology can be seen as an approach for undertaking research that moves from underlying research problem to research design and data collection using different methods and techniques. This means that research methodologies vary according to the type of research, and the discipline where research is being undertaken. There are different research methods which are qualitative, quantitative and mixed methods (Haradhan, 2018; Strijker et al., 2020).

This research sought to investigate an in-depth understanding of intermediaries' role in information sharing between a government and communities in Western Cape. The qualitative research is suitable for this study.

3.2.1 Qualitative research

This research sought to evaluate intermediaries' role in information sharing between communities and a government in Western Cape. This was done to determine how intermediaries can enhance information between communities and the government. Qualitative research uses a realistic approach that seeks to understand Phenomena in context-specific settings such as “real-world setting [where] a researcher does not attempt to manipulate the phenomena of interest” (Golafshani, 2003; Haradhan, 2018). This was achieved by thorough engagement with the

intermediaries` managers, specifically intermediary managers. A qualitative research methodology was suitable for this study. Qualitative research is a process of building a complex and complete picture of the phenomena of interest to seek a deeper truth and in their natural setting (Haradhan, 2018; Saunders et al., 2019).

Qualitative research is concerned with a phenomenon that relates to or involves kind or quality, and when the interest is in investigating reasons for human behaviour (Haradhan, 2018; Kothari, 2009). With qualitative methodology, one can get an insight into why or how do people do particular things. As opposed to quantitative research, qualitative research is specifically essential in understanding human behaviour's underlying motives (Haradhan, 2018; Kothari, 2009). Therefore, this research made use of a qualitative research method.

3.2.2 Quantitative research

The quantitative methodology focuses on measuring quantity or amount, and it is suitable for phenomena that can be expressed in terms of numbers (Kothari, 2009). Quantitative research also focuses on collecting numerical data and generalizing it across a group of people (Bacon-Shone, 2020). It has been historically a basis of social Science research (Apuke, 2017). This study was mainly focused on qualitative research methodology. However, quantitative research methodology was partially used to support addressing the research problem.

3.3 Philosophical perspective

Research is defined as a process that people undertake to explore things systematically and increase their knowledge (Saunders et al., 2019). Research is a systematic and methodological process of enquiry and investigation with a view of increasing knowledge (Apuke, 2017; Bacon-Shone, 2020). Even though research can be seen as a systematic process to find out things and increase knowledge, there are different views about what research involves, how research should be undertaken and how it adds to the existing knowledge. Therefore, research is based on a systematic process that defines the objective, manages data, presents findings within established frameworks, and follows existing guidelines (Ryan, 2018; Saunders et al., 2019). The research process has three notable measurements which are ontology, epistemology and methodology (Creswell, 2009) that will be discussed in this section.

A paradigm is a set of basic beliefs that deals with first principles, and it represents a worldview that defines the nature of the world, the individual's place in it, and shows the different relationships to that world and its parts (Guba & Lincoln, 1994). A research paradigm is a term frequently used in Social Sciences which is a way of examining social phenomena from which specific understanding of these phenomena can be gained, and explanations are tempted (Saunders et al., 2019). Therefore, a paradigm is an overall conceptual framework within which a researcher may work, informing the basic belief system that guides the investigator (Guba & Lincoln, 1994; Sobh & Perry, 2006).

Each research is based on underlying assumptions that constitute valid research and which research methods are suitable for the particular research being undertaken (Myers & Heinz, 2011). Different kinds are underlying qualitative research paradigms and there are three popular research paradigms identified; positivism paradigms, interpretive paradigms and critical research paradigms (Dammak, 2015; Scotland, 2012).

3.3.1 Ontology

Ontology is a study of existence and being of the world and the nature of reality. Since ontology is an area of philosophy that focuses on answering questions such as “what exists and what it looks like” (Clarke, 2010). Ontology gives a better view of understanding how reality is. Researchers need to take a position about their assumptions of how really things are and how they work (Scotland, 2012). Those assumptions are based on whether the reality is acknowledged to exist in a physical objective (realism) form or a subjective (relativism) form (Clarke, 2010). Objectivism form shows that external entities exist in reality external to social actors concerned with their existence (Saunders et al., 2019). In this ontological stance, only one reality exists, and the nature of reality can be generalized (Vaishnavi & Kuechler, 2004). Subjectivism holds that social phenomena are formed from the views and resulting actions of those social actors and their existence (Saunders et al., 2019). In this ontology stance, multiple realities are shaped by content and the nature of reality changes (Vaishnavi & Kuechler, 2004). Therefore, relativism ontology believes in searching for meanings bearing in mind that there may be more than one truth on the inquired phenomena. Realism ontology searches for the truth or facts, and it does not change.

- **Positivist approach**

Positivists hold a realistic ontology assumption, and there is only one reality (Dammak, 2015). To them, reality is external to realities. Reality is objective. The positivist ontology believes that the world is external and that there is a single objective reality to any research phenomenon or situation regardless of the researcher's perspective or belief (Dammak, 2015; Saunders et al., 2019). Positivists also claim that there is a difference between a fact and a value (Dammak, 2015; Guba & Lincoln, 1994; Saunders et al., 2019). Positivists also claim it is important to clearly distinguish between fact and value judgment. An ontological positivist researchers they seek objectivity and use consistently rational and logical approaches to research (Dammak, 2015; Saunders et al., 2019).

- **Interpretivist approach**

Interpretive, like critical realism, developed as a critique of positivism but from a subjectivist perspective. Interpretivist approach put emphasis on that humans are different from physical phenomena because they create meanings and Interpretivists study these meanings (Saunders et al., 2019). The ontological position of interpretivism is relativism. Relativism is the view that reality is subjective and differs from person to person (Guba & Lincoln, 1994. Reality is subjective, and the reality is explored by the person who is observing it. Access to reality is through social constructs such as language, consciousness, and shared meanings. The interpretive epistemology is one of subjectivism which is based on real world phenomena, meaning that there is a relation between the world and knowledge. The world does not exist independently of the knowledge about it.

3.3.2 Epistemology

Epistemology reflects the nature of the researcher's relationship with what can be known (Janse van Rensburg & Roodt, 2009; Saunders et al., 2019). The epistemology concerns the researcher's view regarding acceptable knowledge (Saunders et al., 2019). Therefore, epistemology explores what the knowledge depends on and certainty of that knowledge. Epistemology assumptions are concerns with how knowledge can be developed, acquired and how knowledge can be communicated (Guba & Lincoln, 1994; Scotland, 2012). Both positivist and interpretive approaches will be discussed below.

- **Positivist approach**

Positivist approach denotes that objects exist independently to their knower (Eusafzai, 2014). Thus, the discoverable reality is independent of the researcher (Scotland, 2012). Therefore, positivists believe that reality is constant and can be observed as an object without interfering with the phenomena being studied. Positivists hold a realistic ontology assumption, and there is only one reality (Dammak, 2015). To them, reality is external to realities. Epistemologically, positivists observe that there is no relationship between the object and the knower, thus making them two separate entities (Dammak, 2015; Saunders et al., 2019). This means the researcher does not affect nor is affected by the phenomena being studied. Positivists believe that the phenomena should be isolated and observation should be repeated to get the accurate reality of what is being observed. This often involves manipulating reality with variations in a single variable to identify regularities and predictions can be made based on previously observed and explained realities (Clarke, 2010; Dammak, 2015). To achieve that, it is mostly advocated that positivists will use a structured methodology that will emphasize quantifiable observations that can sometimes lead them to the statistical analysis (Saunders et al., 2019). Positivists often use a quantitative method (Guba & Lincoln, 1994).

- **Interpretivist approach**

Interpretivist approach denotes the importance of social action, socially constructed meanings and relativism of values (Djamba & Neuman, 2014). The ontological stance of interpretive approach is that of relativism. Relativism is the interpretation that the reality is subjective, and reality may differ from one person to another (Guba & Lincoln, 1994). This implies, the view of the reality cannot be generalized as it is subjective from person to person. The interpretive approach's ontology stance is that the reality is constructed and there is more than one reality, and the relativists tend to search for meanings and engage in reality creation (Scotland, 2012). They acknowledge that there are different interpretations of reality, and it is up to the relativists to seek understanding and interpret those realities. Therefore, interpretive epistemology is subjective and is based on real-world phenomena.

Since different people may construct meanings in different ways, the interpretive paradigm does not question ideologies but to accept it; therefore, researchers need to interact with the world to construct knowledge and meaningful realities (Eusafzai, 2014; Scotland, 2012). The

interpretive methodology focuses on understanding the phenomena from individuals' perceptions and investigating interactions amongst, and the researcher needs to be part of that (Creswell & Creswell, 2009). In this interpretive methodological process, researchers use the qualitative methodology to seek understanding and realities through open-ended interviews, open-ended observations, open-ended questionnaires and focus groups between the researcher and the individuals (Scotland, 2012).

In this study, the interpretive paradigm was more relevant in learning meanings and knowledge about intermediaries' role in information sharing between the government and communities in Western Cape. Individuals have a different interpretation of reality and therefore, using the interpretive approach yielded an understanding of the phenomena being studied from different individuals' perspective. Furthermore, the phenomena being investigated was also underlined within the research participants' understanding and meaning of the benefits and challenges they face in enhancing information sharing between the government and communities in Western Cape. The interpretive research paradigm allows understanding research participants' thoughts and reality while they are in their social context (Scotland, 2012).

3.4 Research design

The research design describes all the steps followed from the commencement stage, data collection, data analysis, and the last stage of proposing recommendations for the research problem being investigated. Research design is the discipline of planning procedures and instructions to conduct studies to get the most valid findings and interpret them (Saunders et al., 2019). Research design is a blueprint for conducting a study taking control of all the elements that may affect the research findings' validity (Akhtar, 2016). The purpose of the research design is to ensure that the research findings help answer the research question or test the research hypothesis as straightforward as possible (Akhtar, 2016; Saunders et al., 2019). Therefore, one can define a research design as a set of steps and guidelines to be followed from the conceptualization stage to data collection, data analysis, and the recommendation or formulation of a suitable framework for the problem being addressed. This research focuses on intermediaries' role in information sharing between communities and the government in the Western Cape. The research design comprised of eight steps that were followed as guidelines for conducting this study:

Step 1: Identified the research problem

The identified research problem “There seem to be a disparity between the roles set by the government and roles played by intermediaries”, that affects information sharing between communities and the government (Chigona et al., 2009; Lwoga & Chigona, 2019). The research problem affects communities that visit intermediaries to share information with the government.

Step 2: Formulated research aim, objectives and research questions

The research aim and objectives were established based on the research topic and the research problem being investigated. Research aim and objectives were used to ensure that the research is kept within the scope. Establishment of the research question was based on the aim and objectives of this study. The research question was broad, and therefore sub-questions were formulated to simply the main research questions aligned with the research aim and objectives.

Step 3: Conducted the literature review

After identifying the research problem, establishing research aim and objectives, literature was reviewed to understand the research conducted concerning the research being undertaken. The literature review was also aligned with research aim, objectives and research questions. The literature review was guided by each of the four research sub-questions that were established: need and means for communication between government and communities, roles of intermediaries, benefits, and challenges encountered by intermediaries.

Step 4: Validate research instruments

After the reviewing published literature was completed, and its findings were analyzed, there was a need to adjust research instruments and tools. This helped to ensure that the research study is kept within the scope to gather relevant and valid data.

Stage 5: Collect data from participants

After the research, instruments were validated and improved. A purposive sample of 15 participants working in the intermediaries in the Western Cape was used to collect data for the study. Data was recorded and documented.

Step 6: Analyze and interpret data

The data collected was typed out in Microsoft Word documents. The researcher started to read the data. This was a repeatable process to identify the relationships between the data and the

relationship between the data and the research objectives. This helped to group related data together and to identify different themes from that data. Data was analyzed during the process.

Step 7: Present and discuss findings

After the data was interpreted and analyzed, it was presented in different themes and data was also presented in tables and diagrams. This was done to answer the research questions and confirm if the research aim and objectives were achieved.

Step 8: Suggest recommendations

The final stage was to suggest recommendations to intermediaries to enhance information sharing between the government and communities in Western Cape. A suggestion for further research pertaining to this study was also provided.

3.4.1 Sample and sampling

This research required in-depth engagement with the intermediaries to get a comprehensive insight of the problem being addressed; purposive sampling was a suitable way to choose the sample. Purposive sampling is usually used to obtain data in qualitative research (Saunders et al., 2019). Even though this research used qualitative methodology, purposive sampling was still appropriate.

A sample was drawn from a pool of intermediaries that the government established. Two intermediaries were from Thusong centres, while the remaining were from Smart Cape Access centres. Both types of centres serve different communities within the Western Cape by offering them amongst others free access to ICTs, basic computer training, access to government information and services.

Purposive sampling was chosen because it produces a sample comprising specific characteristics that are considered importantly related to vulnerability (Palys, 2008). In this study, these characteristics include the participant being a staff in the e-centres or community library being referred to as an intermediary, and the participant must have worked for more than one year in that e-centres or community library. This helped to select participants based on their characteristics. In addition, due to the short time and limited information to conduct a study, purposive sampling was deemed suitable for this study (Palys, 2008).

A purposive sample of 15 participants was selected from intermediaries' staff in Western Cape. The participants were working in those intermediaries on a daily bases. The sampling was not biased regarding age and gender, but participants were all selected because they have worked there for at least a year. Under the researcher`s assumption, if the participant has worked for at least a year, then the information they would provide could be relevant and could be used to address the research problem being investigated. The researcher chose locations that are from urban and peri-urban areas in order also to compare if the intermediaries in those two areas provide the same services or not. The purposive sample of 15 participants was sufficient to collect data used to answer the research questions and achieve the research aim and objectives.

3.4.2 Data collection instruments

This study made use of semi-structured interviews to collect data. Semi-structured interviews have the flexibility to follow up on new information presented in the context of an interview and to explore in-depth new finding (Saunders et al., 2019). Interviews were regarded as a primary method to collect information for this study. Using interviews allowed the researcher to explore in-depth information about intermediaries' role in enhancing information sharing between the government and communities in Western Cape.

Semi-structured interviews were conducted at the intermediaries` geographic locations. The researcher requested interviews` appointments with the participants by sending emails and by making phone calls. The interview questions were aligned with the study's purpose, and no question made the interviewees uncomfortable, and therefore they felt free to answer those questions. Even though the interviews were semi-structured, the researcher followed the pattern when asking the questions. In addition to that, interviewees were also asked to elaborate in some questions, and there were also follow-up questions. This was done to get in-depth responses to the questions that would help answer the research questions for the study being undertaken. The interview questions were used to meet the following research objectives:

- The needs and means for sharing information between communities and the government in the Western Cape
- To identify the roles of intermediaries in South Africa.

- To explore the benefits of having intermediaries in enhancing information sharing between the government and communities.
- To explore challenges faced by intermediaries in enhancing information sharing between the government and communities.

3.5 Data analysis

The following section describes the steps followed to analyse data.

3.5.1 Qualitative data analysis

Qualitative data analysis was used to analyze the data collected through interviews and reviewing policy documents. Qualitative Data Analysis (QDA) is the range of processes and procedures whereby the qualitative data that has been collected is organized in the form of explanation, understanding or interpretation of the people and situations being investigated (Saunders et al., 2019). The methodological stages of were followed to analyse the data and they are; identifying the substantive area, collect data, open code, write memos, conduct selective coding and theoretical sampling, Sort memos and find the theoretical code(s), read the literature and write up the theory (Scott, 2009). Figure 2 shows the steps followed in analyzing collected data.



Figure 2: Steps used in analyzing the qualitative data

The first stage involved transcribing recorded interviews and notes taken during data collection. Some of the responses were in IsiXhosa and Afrikaans, and therefore the data was translated to English accordingly. The transcribed data was manually captured onto Microsoft Excel spreadsheets. The same applied to research findings from the intermediaries` policy documents and the literature. The captured data was validated to ensure that it was reliable and if it can be used for analysis.

The second stage involved a thorough reading of the captured data to group related data and to identify themes to be used with the literature and aligned with the research aim and objectives.

This process also involved grouping follow-up interview questions and the findings from the literature were also grouped accordingly.

The third stage involved linking the data to the conceptual framework developed, thus being the themes identified. This helped keep the data collected within the research scope to answer the research questions. The data was analyzed, and the results from the data were described. Some of the findings were presented in diagrams, and some were presented in the text.

The last stage of data analysis involved carefully describing the results. The core findings and results were presented, followed by additional findings. The research findings will be presented and discussed in the next chapter.

3.6 Summary

This chapter discussed the research design and methodology used in this study. The research paradigms; interpretive and positivist, were addressed as they guided the study conducted. This chapter also discussed the qualitative research methodology used to guide this research. Furthermore, this research discussed the purposive sampling method used to gather data from 15 participants working in the Western Cape intermediaries. Interviews and reviewing literature process as part of data collection instruments were also discussed.



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CHAPTER 4: RESEARCH FINDINGS

4.1 Introduction

This chapter presents the findings of the study and provides an interpretation of the findings. In chapter 2, the literature review established a theoretical framework that guided the research in answering the research question. Semi-structured interviews and reviewing policy documents were conducted with key informants from intermediaries, and data were analyzed and grouped according to core themes identified from the data collected and the research questions.

4.2 Background of participants

The findings are based on the perceptions of the participants from intermediaries within the Western Cape Province. A total of fifteen participants were invited, and they all voluntarily participated in the study. All participants were volunteering or working at the intermediaries that were participating in this study being undertaken. One participant was selected from each intermediary. The participants were selected from various Western Cape communities such as Cape Town, Mfuleni, George, Gugulethu, Khayelitsha, Bellville and other areas within the province. Eleven of the participants were intermediaries' managers, and the rest were staff who were serving roles and responsibilities similar to those of the intermediaries' managers.

All participants are assigned a number from 1 to 15 to protect their confidentiality and identity.

Table 2 below provides participants' demographic profiles in terms of the age range, gender and ethnicity of participants, duration of stay in Western Cape, and their duration with their respective intermediary.

Table 2: Demographic profiles of participants

Participant	Job title	Age range	Gender	Ethnicity	Duration of working at the centre
Participant 1	Manager	25-34 years	Female	African	Between 1 and 3 years
Participant 2	Manager	35-44 years	Female	African	More than 3 years
Participant 3	Ordinary employee	45-54 years	Female	Coloured	More than 3 years
Participant 4	Manager	Below 25 years	Female	Coloured	Between 1 and 3 years
Participant 5	Manager	45-54 years	Male	African	Between 1 and 3 years
Participant 6	Ordinary employee	25-34 years	Female	African	Between 1 and 3 years
Participant 7	Manager	25-34 years	Male	African	More than 3 years
Participant 8	Manager	35-44 years	Female	Coloured	Between 1 and 3 years
Participant 9	Manager	25-34 years	Female	African	More than 3 years
Participant 10	Ordinary employee	35-44 years	Male	Coloured	Between 1 and 3 years
Participant 11	Manager	35-44 years	Female	Coloured	More than 3 years
Participant 12	Ordinary employee	25-34 years	Male	African	More than 3 years
Participant 13	Manager	25-34 years	Female	African	Between 1 and 3 years
Participant 14	Manager	45-54 years	Female	Coloured	Between 1 and 3 years
Participant 15	Manager	35-44 years	Male	African	More than 3 years

4.2.1 Age, gender and ethnic group of participants

The participants' age range was between 24 years and 49 years old, with the average age being 36 years and the median age being 35.5 years. The participants have been classified into four groups of age: below 25 years old, between 25-34 years old, between 35-44 years old and between 45-54 years old. Table 2 shows that there was one participant whose age was below 25 years old, six participants were between 25 and 34 years old and constituted the majority of the sample, five participants were between 35 and 44 years old, three participants were between 45 and 54 years old. There was no participant who was 55 years and above. Even though age was not used as a selection criterion of participants, it is interesting to notice that about half of the participants were below the average age of 36 years.

The participants comprised of five males and ten females. Nine participants were African, and the remaining six belonged to a Coloured ethnic group. Age, gender and ethnic group were used to determine if they influence how intermediaries operate and carry out their daily activities.

4.3 Roles and responsibilities of intermediaries

The participants indicated their roles and responsibilities involved are providing information to communities, ensuring that information provided to communities is timeous and up-to-date, managing the centre and assisting communities with accessing the internet and email.

4.3.1 Providing information to communities

The intermediaries provide information to communities. This information is business information, government information, information about intermediaries and their services, information about jobs information and research information. When communities visit the intermediaries, they may use ICT to access any information provided should they wish to do so. Information is also provided to communities through pamphlets, posters, word of mouth, newspapers provided by the government or printed by the intermediaries. Communities seeking such information can find such

information when they visit the intermediaries, and communities can benefit from receiving the information they are seeking.

“we are also involved in small businesses, people who are maybe looking on information on how to start a business and so on we have a section for that, so we have to make sure that that section is up to date.” Participant 2

“We have a section for jobs, where people come and they ask for information about jobs vacancies, we have newspapers that we keep aside then people can come and have a look and make copies if they want”. Participant 7

“We have print out of all the careers that city of Cape Town is offering, we update it on a daily basis if there is something new.” Participant 11

“Our role is to help people get the information they need at the library, for example, information relating to employment opportunities” Participant 8

Even though most of the information searched and required by communities is electronically and accessible through ICT, intermediaries must also make sure that information supplied to them by the government and other non-governmental organizations that they print for communities is timeous. This is done to ensure that the communities have access to the latest editions of books, timeous and accurate information.

“we are also involved in small businesses, people who are maybe looking on information on how to start a business and so on we have a section for that, so we have to make sure that that section is up to date”. Participant 5

“We must empty the returned books shelf every morning because if you don't do your shelving and patron phone and they need a book then you won't find it in the shelf.” Participant 3

Therefore, it is crucial for intermediaries to ensure that the information they provide to communities is timeous and accurate information to the communities, this could mean that that information provided through the internet, intermediaries should always be familiar with relevant government websites and other online government platforms. However, they can ensure that they assist communities in accessing recent and updated content on the internet.

4.3.2 Managing the intermediary

Managing an intermediary might require an individual to oversee the centre, people, and other resources pertaining to its operation. Intermediaries' managers have responsibilities such as managing the team, volunteers, resources, managing their daily operations, and ensuring that the intermediaries work for the communities as intended.

“My role as a centre manager is to manage the centre as a whole, in case a fight maybe breaks out or people can't come to a certain agreement, the centre managers will always step-in in order to address the issue”. Participant 12

“My role is to manage the centre, welcoming citizens on a daily basis (whoever comes to access the internet and need help with regard to business, government vacancies, creating emails, applying for different internships, I will always be assisting them with the internet”. Participant 13

“My role is to manage the centre, welcoming citizens on a daily basis and whoever comes to access the internet and need help with regard to businesses, government vacancies, creating emails, applying for different internships, I will always be assisting them in the internet” Participant 8

“I deal with school children who want access to the internet, which helps them with their projects. I also help unemployed people who struggle to use the computers and access the internet”. Participant 4

Even though there are some sort of issues required for one to be one of the intermediary's staff, there could be some sort of generic requirements for one to perform duties of being an intermediary staff. Those are amongst others being able to assist people from different diversity and culture, knowing how to manage an intermediary, possessing ICT skills so that you can be able to assist communities in need. This can also be evaluated by finding out if participants received any training that helps them render the services.

In determining the requirements for one to perform the intermediary roles and responsibilities, the majority of the participants identified people, managerial, computer skills as crucial in offering

their services. When managing an intermediary, it is also important to have the ability to work with people from different cultures, diversity, background, age and beliefs. The study found that customer service skills are also required

“You need to have your customer service skills because you are going to be working with citizens on a daily basis”. Participant 7

“you need to be firm because they tend to take advantage of you if they see they can walk over you”. Participant 5

In this context, customer service skills include patience, understanding people from different backgrounds and different needs, welcoming and approachable.

“you must be able to work in diversity and also be able to manage diverse people, and you must have people’s skills and be approachable”. Participant 2

It is evident from the findings that working with diverse communities with different needs requires the intermediaries` staff to possess customer service skills.

4.3.2.1 Managerial skills

Possessing managerial skills is one of the requirements for one to be a manager at the intermediary. A manager should be able to manage resources such as human resources, financial resources, and to be able to manage facilities found at the intermediary`s premises.

“my role is to manage the centre, welcoming citizens on a daily basis”. Participant 12

“as a centre manager is to manage the centre as a whole, in case a fight maybe breaks out or people can’t come to a certain agreement, the centre manager will always step in in order to address the issue” participant 14

In South Africa, the lack of human managerial and technical capacity in the centres was identified as one of the success inhibitors. Skills’ training has been minimal and has not prepared telecentre managers for the challenging task of promoting their services, or sustaining a viable operation, usually under challenging circumstances (Gomez & Pather, 2010).

4.3.2.2 ICT skills

Managers and staff working at the intermediaries should possess basic computer skills so that they should be able to assist communities when they seek assistance while working on computers.

“you need computer skills because you need to remember that you are working with computers on a daily basis; if someone comes to the centre to use a computer they know why they came to the centre to use the computer for certain reason, so you need to be able to assist that person on the computer if they need assistance in that computer” participant 2

Most communities visit intermediaries to make use of ICTs such as computers, and some of them do not possess computer skills, and therefore it is evident from the findings that managers and staff should be able to assist those communities with any challenges they may be facing on the computer or on the internet. One of the groups of communities that visit the intermediaries is school pupils who need assistance with accessing the internet.

“I deal with school children who want access to the internet, which helps them with their projects”. Participant 8

The findings show that computer skills are required to assist communities that need help with accessing computers and the internet but do not possess such skills. In determining the participants' ICT skills, the participants were asked to indicate their level of computer and internet skills. This was done to determine if the participants have required skills that they can use to assist communities. Basic computer skills and internet skills were used as ICT skills. The participants were asked to indicate how proficient they are with using a computer and the internet. The level of computer and internet skills was obtained through Likert scale statements. The Likert scale statement indicates how a person is generally familiar with how computers work and the internet and can do what they want to do without any difficulties. This used a scale of one to ten: very bad (1) to average (5) and to excellent (10) which participants indicated during the interview.

In terms of computer literacy, the study found that two participants rated themselves six out of ten, four participants rated themselves seven out of ten, four participants rated themselves eight out of ten, two participants rated themselves nine out of ten and three participants indicated that they

were very excellent with the use of computers. Table 3 below show the results from participants regarding the level of computer skills and level of internet skills:

Table 3: Level of ICT skills

Participant	Level of computer skills	Level of Internet skills
Participant 1	10	10
Participant 2	7	6
Participant 3	8	8
Participant 4	6	6
Participant 5	8	9
Participant 6	10	9
Participant 7	7	7
Participant 8	6	7
Participant 9	8	8
Participant 10	7	8
Participant 11	9	9
Participant 12	7	8
Participant 13	10	10
Participant 14	9	10
Participant 15	8	8

The findings show that all participants possess computer skills that are more than the average of level 5. The participants have the necessary computer skills to assist and train communities on how to use computers.

In terms of the internet skills, the study found that two participants rated themselves six out of ten, two participants rated themselves seven out of ten, five participants rated themselves eight out of ten, three participants rated themselves nine out of ten and three participants indicated that they were very excellent with the use of computers. It is also evident from the study that all participants

possess internet skills that are more than the average level 5. It is noticeable that there is only one participant who is proficient with the use of the internet.

These two questions were asked to determine the staff level of computer and internet use capability to determine if their skills level influences how intermediaries provide services. However, participants were not asked if they acquired the ICT skills from the training provided by intermediaries or the government or acquired those skills elsewhere.

4.3.2.3 Training

The researcher asked the participants if they had received any training before or during the time they were part of the intermediaries to determine whether training received helps the participants perform their duties at the intermediaries. Participants received training from the Western Cape Government, City of Cape Town and other Non-Government Organizations (NGO). The training cover aspects such as making use of ICT available to intermediaries.

“The trainings provided by City of Cape Town and the Western Cape government provide one with skills that are necessary for completing one’s job requirements”. Participant 12
Fourteen participants indicated that they received training before they started working at the intermediary. The participant that did not receive any training before starting working at the intermediary stated that:

“I have not attended any training. I was a matriculant, then I applied for the PAY¹ internship, the PAY internship was when the matriculants of the previous years they were chosen to do a Western Cape government internship”. Participant 14

It is evident from the response that the participant only received training while they have already started working at the intermediary, and they added:

“Starting off as an intern, I started at the centre; I didn’t know anything about dealing with people. I am fresh from school. I didn’t know absolutely anything.” Participant 11

¹ A Premier’s Advancement of Youth (PAY) Project aims at creating opportunities for matriculants to gain workforce experience in the Western Cape Government. The PAY internship gives matriculants an opportunity for a year of mentoring, on-the-job training and exposure to skills training and development to make the interns more marketable and employable (WCG, 2020)

However, despite them not receiving training before starting at the intermediary, they applied and used skills that they have acquired elsewhere to be able to start with their roles, the participant added:

“...because I had computer skills that I gained while I was attending high school, I was placed in the centre like this”. Participant 12

Another significant finding showed that not all participants received the same training number, and not all training provided covered the same aspects. Some participants received one or two training, while others received more than two training.

“Yes, a lot of training, within the city of Cape Town”. Participant 15

Participants were asked to indicate the aspects covered in the training they received. Even though not all participants received the same number of training, it is evident from the findings that all participants received basic computer training. Basic computer training included Microsoft Excel training and Microsoft Windows training. However, none of the participants indicated if the basic computer training included aspects such as using the internet and accessing emails. All participants were trained on how to use the Smart Cape system. Other pieces of training provided to some of the participants were reference training, assistance training.

“...we also provide skills that help an individual to be equipped with some interpersonal skills”. Participant 7

A participant added that training in isiXhosa language is provided to assist them when communicating with those who only speak isiXhosa.

“...also Xhosa training, but I was supposed to go but I didn't go”. Participant 5

The participant stated that they missed the training due to a family matter that needed their urgent attention. At the time of the interview, the participant had not received another training, and at that point, it is certain if they received training to replace the one they missed.

Even though the participant did not attend the training, it is evident from the finding that there was only one intermediary that was offered isiXhosa training. The other training that some intermediaries received was customer service training. This training equips trainees with skills and abilities to work with people from different background and cultures.

It is evident from the findings that the training(s) offered usually cover everything required for them to be able to perform their daily duties. The participants indicated that they did gain or were equipped with the necessary skills to teach or assist communities. They are also provided with an opportunity to suggest anything which they believe should be covered in the future, which might not have been covered on specific training

4.3.3 Intermediate between communities and the government

The study found one participant who stated that their intermediary does not play any role in assisting with information sharing between communities and the government. However, it was not clear whether the participant is not aware of how their intermediary assists with information sharing.

“The library plays no role in the process of information sharing between the government and the community.” Participant 11

Other participants stated that they play a role in assisting communities with sharing information with their government. The study found that there is a need for communities to communicate with the government. It was found that communities communicate with the government to have access to government information. This information includes, among other information regarding social grants applications, information about the South African Revenue Services (SARS), and information about vacant government jobs.

Basically the need for them to communicate with the government is that they can know about the job vacancies which are available on the government website.” Participant 6

“...the main thing that they look for, they are just looking for information.” Participant 10

Another participant stated that communities need to communicate with the government because the government does not visit some communities and communities might be facing issues such as lack of water, health issues, and high crime rate.

“It's because mostly the government is not with the people, that's why.” Participant 12

The findings from the study correspond with the literature which states that face challenges and issues that they may need to communicate them the government; those issues are among others high unemployment, high crime rate, health issues, safety issues, gender-based violence and rape (Farber, 2009; Anderson, 2011).

There are different means the communities can use to communicate with the government. The study found that communities can use facilities located at the intermediaries' premises to communicate with the government. Communities can visit intermediaries and have access to computers that are connected to the internet and be able to access government websites. Through computers at the intermediaries' premises, communities can use email accounts to send and receive electronic information from the government. Each member of the intermediary has a free email account created for them. These are some of the responses from the participants regarding the use of email communication:

"...it can easily get to any government department or to the president's office so that that concern is responded to immediately". Participant 8

"Since we are providing free access to the Internet I think that's the easiest way to communicate and to get responses and comment to the government". Participant 4

The findings echo the literature that states that the many governments including South Africa have expanded their information and services to online platforms, the use of sending emails to share information between the government and communities is one of the platforms (Abu Tair & Abu-Shanab, 2014; Memarzadeh & Jahany, 2014; Sandoval-Almazan & Gil-Garcia, 2012).

Participants also justified why communities should make use of intermediaries to share information with the government. One of the reasons amongst others is the cost and time to visit the government offices.

"You have to go through different modes of transport to the government and that is very costly." Participant 1

"The best way for them to communicate with the government is if they come and visit our centre and go online because they won't be able to physically go to the offices or department". Participant 8

"It's because most of the time the government is not with the people, that's why. So internet is the one that makes things to be much easier, faster and that is the only connection we use" Participant 10:

The study also found that some communities that stay close to government offices are not affected by transport costs to physically go to government offices. However, in some cases, they may

choose to visit the intermediary to avoid the long waiting period at the government offices, or they need to make an appointment to see a certain person.

“...because you have to make an appointment in order to see a very certain person who works with certain departments.” participant 3

The study also found that some intermediaries do assist in facilitating information sharing between the government and communities. The first thing that was noted from the responses was that most of the communities that visit the intermediaries are not computer literate and the intermediaries will then train them on how to use the computer and the internet for them to be able to communicate with the government on their own.

“You will find that most of the people that need those services are not computer literate. ...So that is our job to when they come we facilitate the process we help them step by step on how to do it”. Participant 5

“...we will assist them doing that so that they can know how to do it themselves in the future”. Participant 1

It was found from the study that some intermediaries facilitate information sharing between communities and the government by creating communities free email accounts and help them use those email accounts to communicate with the government.

“We assist them to create an email account”. Participant 8

Another participant stated that they facilitate information sharing between communities and the government by putting posters from the government on the noticeboards for communities to read.

In some cases intermediaries monitor what the communities send to the government when they are assisting them by making sure that if the communities are sending messages to the government, it should be about matters about the community or community concerns.

“Any form of communication that one passes or when one communicates to the government should be of community concern not of political organization concerned”. Participant 8

In another intermediary, they stated that they do not monitor or intervene with communities when using the internet or when they are sending out emails to the government. The intermediaries will facilitate the communication process by helping the communities to send the emails regardless of the recipient.

“...if the people want answers or they want a website where they can complain; the only thing that we do we just give them that website and then they go to there and we can't intervene”. Participant 5

“They just write whatever and then they just send to whoever; that's how they communicate.” Participant 10

The study also found that intermediaries also use other methods such as word of mouth to transmit information from the government to the communities.

4.4 Expectations from communities and services provided by intermediaries

Communities expect different services from intermediaries. Those expectations are good customer service, assistance with job search, increased operational time and time to use intermediary premises facilities.

4.4.1 Expectations from communities

To determine if communities' expectations and needs were met, participants were asked what they think the communities expect from the intermediaries

4.4.1.1 Good customer service

Communities expect to be treated fairly, and they also expect a good service from intermediary's staff.

“What the citizens expect when they come into the centre is obviously to be welcomed with a smile, to get treated equally, so it's not like we treat the one citizen more than the other citizen”. Participant 7

“They expect that what they could get here is good service”. Participant 13

It is evident from the findings that interpersonal skills, patience and knowing how to work with people from different backgrounds are some of the communities' expectations. Other communities expect the staff at the intermediaries to have knowledge and answers to every question they might have.

“They expect one to help them in anything at the library even after they have been shown how to go about doing a certain task at the library”. Participant 13

“The people from the community expect to be spoon-fed”. Participant 15

It is evident from the findings that communities expect intermediaries to help them and do some tasks for them, especially those who may lack knowledge in doing certain tasks such as accessing the internet.

4.4.1.2 Assistance with job searching

Some communities visit intermediaries to search for jobs, and they expect the staff to assist them with job searching and job applications.

“When they come to use our computers they believe that they will find jobs because everyone who comes in this library they are looking for jobs”. Participant 9

The communities expect the staff to know all information about the jobs and the sites they are accessing to search for jobs.

“Somebody would come and say that the Google is not working can you come and fix it, so they expect us to know everything that happens on the internet even if we are not part of that”. Participant 1

It is evident from the findings that communities expect the intermediaries to assist them in browsing different websites offering jobs, including government jobs.

4.4.1.3 Increasing time to use computers and operating times

The study found that intermediaries offer each community member 45 minutes a day to use a computer. The findings echo the findings from the literature that state that each community member is allocated 45 minutes per day to make use of computers in the premises (Coetzee, 2007; Stoltenkamp, Kabaka & Kies, 2013; Chigona et al., 2016; Pather & Uys, 2016). Participants indicated that the communities expect the time allocated to use a computer to be increased; however, they did not state the amount of time allocated time should be increased.

The study found that some intermediaries operate from Monday to Friday, while some operate from Monday to Saturday. The operating times might impact accommodating some communities

that might want to make use of facilities over the weekend or after hours. The operating hours of intermediaries affect the accessibility, and the use of facilities in the intermediaries (Gcora et al., 2016) participants stated that communities expect the operating days to be extended to 7 days a week, one of the participants from an intermediary that operates from Monday to Saturday responded by stating that:

“Sometimes people expect the library to also operate on Sundays and on public holidays”.

Participant 14

Figure 3 below summarizes all communities’ expectations from the intermediaries. Communities expect the staff at intermediaries to respond quickly to their questions and to issues they are facing. Communities also expect the staff to assist them with searching and finding jobs; they expect the staff to know everything and to be able to fix or address any problem communities are facing. Communities expect free internet and allocated time to be increased; they also expect intermediaries’ staff to provide good services and help when a need arises. Lastly, communities expect the intermediaries to operate on weekends and public holidays.



Figure 3: Communities expectations from intermediaries

4.4.1.4 Addressing community expectations

Participants were asked whether or not they feel that the communities` expectations were addressed and met. All participants agreed that communities` expectations were met. However, it was evident from the findings that not all expectations were met.

“I would say some people would go out complaining that their needs have not been met”.

Participant 3

“...however when it comes to the issue of operating on Sundays and public holidays there is nothing the library can do about that because it is a standard operating procedure for all libraries under the City of Cape Town”. Participant 12

Some communities complain that their needs are not addressed whenever they do not find what they are looking for at the intermediary.

“This person is looking for a book and this book is out or this book is missing, so the public sort of wants us to respond very quick to their problem, in a way they do complain and say that we are not meeting their needs the way we were supposed to”. Participant 11

In some intermediaries, the participants indicated that they met the communities' expectations; a participant stated that some communities are happy with the services provided to the extent that they keep coming back and invite friends and families to visit the intermediaries.

“There is some of them that do spread the word, so our centre becomes familiar all the time”. Participant 4

It is evident from the findings that the expectations are met.

“They actually expect us to know everything and that is highly impossible but we try to answer them or give them whatever that they want” Participant 13

4.4.2 ICTs available at the intermediaries

There are different ICTs available at the intermediaries` premises. These ranged from computers, phones, internet connectivity, scanners, printers and fax machines. It was evident from the findings that all intermediaries have computers with internet access, phones and printers while some have scanners and fax machines. However, communities cannot make use of some ICT services, such as fax machines.

“In order for them to print their documentation we will then help them save the document to the print files so that we can help them from our admin computers”. Participant 5

It is evident from the study that there are no public or private organizations that provide technology and equipment to the intermediaries.

In terms of the infrastructure, the study's findings divided infrastructure into three categories, namely; connectivity, technologies and software. The study found that all intermediaries have internet connectivity, while some have Wireless Fidelity (Wi-Fi). The study also found that some intermediaries have an intranet connection; however, participants were not asked to describe how they use the intranet connection. The findings correspond with the literature that states that intermediaries are places where communities can visit and have free access to the internet (Chigona et al., 2009; Grovneveldt, 2013; GCIS, 2014; Mbatha, 2016).

The study found that there are different technologies available to intermediaries and for the communities to use. However, it was found that not all intermediaries have the same technologies in their respective premises. The technologies found at all the intermediaries' premises were computers, printers, copy machines, and telephones. The findings support the literature that states that technologies found in intermediaries are computers, photocopy machines, fax machines, printers and telephones (Zolfani et al., 2011; Stoltenkamp et al., 2013; WCG, 2016; Kapondera & Namusanya, 2017). However, the study found that some intermediaries do not have fax machines and even those that have fax machines are not available for public use.

“Our faxing can't be done by the community”. Participant 15

The study also found that two of the intermediaries were equipped with smartphones that the communities can use. Those two Smartphones are to be used to communicate with the government; communities are freely allowed to use the Smartphones to call or interact with the government's department.

The findings from the study do not correspond with the findings from the study that was conducted by Mbata (2016) in Kwazulu Natal Province that showed that some of the intermediaries have a Digital Satellite Television (DStv) decoder, television and digital versatile disc (DVD) player. However, this was not the case in the Western Cape

The participants also indicated the software installed on the computers at the intermediaries premises. The common software installed in all intermediaries is Microsoft Office, Operating system and Smart Cape software. The Library Management System is only installed in the intermediaries that loan out books to communities.



Figure 4: Intermediaries infrastructure

Figure 4 shows a breakdown of the ICT infrastructure ranging from physical premises, technologies and software installed. All intermediaries have internet and intranet connectivity, while some participants said they have Wi-Fi connectivity, whereby communities can use personal devices to connect to the internet.

“We have the Wifi, we got a free wifi, it is for everyone you just need to have a library card first and then a good thing about it is that you get 500MB every month for free.”

Participant 6

The computers found in the intermediaries premises differ based on the intermediary location and the number of communities that visit the intermediary. For example, Bellville had 20 computers to serve the communities.

“We`ve got 15 computers upstairs that is for free, you just need to have a library card to use them and, we got 5 computers here but these ones are only for e-resources”. Participant

3

The study found that all intermediaries` premises are equipped with computers connected to the internet for communities to use. The number of computers found in the intermediaries ranges from 5 to 20 depending on the intermediary`s premises and the number of communities served by the intermediary. The findings correspond with the literature that states that intermediaries` premises

is where communities can visit and make use of ICTs available (Chigona et al., 2016; Kapondera & Namusanya, 2017).

The researcher asked participants two questions: “how often are the technology and equipment serviced? And who pays for the service?” These questions were asked to get an insight into who is responsible for servicing the equipment and determine if the technology and equipment found at the intermediary are always updated on time. The majority of the participants stated that the government is responsible for servicing and paying for servicing and maintaining the technology and equipment found in their intermediaries` premises.

“It is the City Of Cape Town, if something breaks down I just call and they will attend to it.” Another participant stated that *“...someone is called in to fix stuff, when they do not work or are out of order”* Participant 14

On the other hand, another participant stated that they never needed servicing the technology and equipment they have, the participant response:

“We haven` t experienced that, the centre has been here for two years now or almost two years, we haven` t had an issue where the computer or equipment breaks in order for us to fix it” Participant 11

“I don` t know who pays for the equipment” Participant 15

“To avoid issues with the computers, we will always make sure that all the equipment is working so that the citizens can be happy”. Participant 13

It is evident from the findings that most intermediaries` technologies and equipment are serviced, maintained and paid for by the government. It can take from 2 days up to 60 days for the technology and the equipment to be fixed when broken.

4.4.3 Supplier and maintenance of technologies

Participants were asked to specify where the technologies at the intermediaries` premises are received from. All participants said that they receive their technologies from the City of Cape Town and the provincial government.

“It is the City Of Cape Town, if something breaks down I just call and they will attend to it.” Participant 7

“We receive everything here from the Western Cape Government”. Participant 2.

It was found from the study that all technologies are supplied by the Western Cape government and the City Of Cape Town government. The literature shows that most of the intermediaries are run by the government (Gcora et al., 2016). The Western Cape government and the City of Cape Town support, maintain, repair and upgrade software found at the intermediaries when asked where they receive the technology from.

“We get it from the City of Cape Town. The wifi was from the mayor.” Participant 14
Breitenbach (2013) stated that the maintenance of computers was not formally part of the intermediaries' initial design, but as time progressed, this was included, and the responsibilities were shifted to the government.

Even though the government provided the technologies, they did not provide funding to cover those technologies' operational expenses (Chigona et al., 2016; Gcora et al., 2016). Therefore, it is the government's responsibility to send someone to fix any broken equipment. The study found that most of the technicians responsible for servicing and maintaining those equipment are not situated close to intermediaries, and therefore sometimes it takes a while to service the infrastructures after a technician has been sent to the premises. Non-functional technologies can affect how intermediaries provide their services and how communities use facilities in intermediaries (Gcora et al., 2016; Mbatha, 2016).

4.5 Services provided by communities

The researcher asked participants to indicate their services at their intermediary to determine if the services provided can also assist in information sharing between communities and the government. Services offered were not the same in each intermediary. Figure 5 below shows the services that intermediaries offer.



Figure 5: Programmes offered by intermediaries

4.5.1 Basic computer training

The study found that six intermediaries offer basic computer training to the communities. The basic computer training aims to equip communities with skills to use a computer and the internet.

“...basic things like how to start a computer, how to register yourself, how to log into emails, and how to do a word document, excel e.t.c”. Participant 9

In one of the intermediaries where they do not offer computer training, they assist the communities in need.

“we don’t really have a person who trains, who is more advanced or who understand computers better” Participant 4

The finding supports the literature that states that intermediaries provide basic computer literacy lessons (Zolfani et al., 2011; Stoltenkamp et al., 2013; WCG, 2016; Kapondera & Namusanya, 2017).

“We also have a computer literacy that we give free of charge to the public, those who don’t know how to use a computer we do teach them how to.” Participant 2

4.5.2 Awareness of services offered by intermediaries

The responses that were received showed that some intermediaries visit communities to make them aware of the benefits and services rendered by the intermediaries. This is done through community outreach programmes that some intermediaries provide for the communities.

“We also go out to people who cannot come to the library, we tell them about the services that we have in the library”. Participant 13

It is evident from the finding that some communities are not aware of the intermediaries and the services provided. This finding supports the literature that states that some communities are not aware of intermediaries, roles, and services provided (Komba, 2013; Mtega & Malekani, 2009; Stoltenkamp et al., 2013).

4.5.3 Pricing

Participants were asked to indicate their services for free and those they charge in their intermediaries premises. The study found that there were some services that were provided for free of charge while other services were charged for. For example, when asked, “Do you charge the community for any services?”

“Not for the use of the internet but rather for printing and photocopying. Participant 11

It was interesting to note that there were intermediaries that do not charge communities for any service.

“No, we don`t charge the users anything at all” Participant 14

Table 4 below shows the comparison of how the intermediaries charge for the services provided.

Table 4: Pricing of services by intermediaries

Service	Library	E-Centre
Use of Computer	Free	Free
Use of Internet	Free	Free
Basic computer training	Not Applicable	Free
Printing	70 cents per page	Free (10 pages)
Photocopy	60 cents per page	Free (10 pages)
Scanning	Not Applicable	Free
Faxing	Not Applicable	Not Applicable
Use of telephone	Free (government calls only)	Not Applicable
Joining Fee	Free	Free
Membership replacement card	R20	Not Applicable
Borrowing a book	Free	Not Applicable

4.5.3.1 Free Access to computers and the internet

The study found that all intermediaries were not charging communities for using computers and the internet.

“Everything for free because at the end of the day we want all the citizens to be able to access government information or access whatever documentation they want to access onto the computer”. Participant 15

This finding supports the literature that states that intermediaries provide free access to computers and the internet (Groveneveldt, 2013, GCIS, 2014; WCG, 2016).

4.5.3.2 Basic computer training

It is evident from the study that some intermediaries provide basic computer training to communities for free, whilst other intermediaries do not provide basic computer training to communities. However, the intermediaries that do not provide computer training assist communities in using computers and the internet without charging them.

“We also have a computer literacy that we give free of charge to the public, those who don't know how to use a computer we do teach them how to.” Participant 12

The above finding supports the literature that states that through intermediaries, communities receive computer literacy and they are assisted on how to make use of ICT for free (Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013; Western Cape Government, 2015; Zolfani et al., 2011).

4.6 Communication

The following section addresses communication links between intermediaries and the government. Furthermore, information shared between intermediaries, and the government is also discussed.

4.6.1 Communication links between intermediaries and the government

Participants were asked to indicate if they have any communication links with the government and mention those links. It was evident from the study that all intermediaries have communication

links with the government's departments. However, they do not have the same links to the departments.

"We have a partnership with schools and clinic. Those are the only departments".

Participant 13

"...the department of education, we do communicate like they make sure we get the latest exam papers that we provide to grade 12 students." Participant 8

Whilst other participants stated that they have links with the government, a quote from a participant "we have connections with the department of education, and department of health", participant 3 and 10 expressed their views as follows:

"Department of water affairs, Department of energy, and Department of health, Department of education, and Department of fire and rescue services." Participant 3

The findings show that all libraries have a communication link with the department of library and Information Sciences

The study found that the department of education assists intermediaries by providing study materials, past papers for students and other materials that can help students with their studies and the learning process. The study echoes the literature that shows that libraries provide books, other study materials and community information services (Majumder, 2016).

The study also found that some government departments provide intermediaries with pamphlets, newsletters, posters that are pasted in the intermediaries for the public to read or collect. This supports the literature that shows that intermediaries are places where communities can access information and knowledge (Chigona et al., 2009; Gcora, 2016; Majumder, 2016).

4.6.2 Information shared through communication links

Participants were asked if they think the links are assisting communities and also to indicate which information is shared with those links? All participants stated that the communication links they have with the government's various organization and departments are assisting communities.

The intermediaries with partnerships and/or communication links with clinics said that communities are helped in terms of health awareness.

"Yes they do, because the partnership with the clinic helps with HIV and AIDS awareness".

Participant 2

“when it is awareness days like World Aids Day, we invite community members to the library” Participant 15

Participants from intermediaries with partnerships and/ or links with the schools and the Department of Education help the students by providing them with question papers that they receive from the government, especially those who are doing grade 12.

“what we do is that we make sure that they get the question papers for free, they take them home for free, we make sure that we get every subject that people could be doing in the city of Cape Town or in the Western Cape Government”. Participant 11

“when it is towards exams time that is when we get a lot of students coming in, a lot of learners coming in to look at the question papers, I can say they are happy when it comes to that”. Participant 12

“For schools, we market the library for the school pupils”. Participant 14

It is evident from the findings that the communities are benefiting from using the facilities found at the intermediaries, which echo the literature that states that shows that mostly during school holidays, intermediaries are full of school learners (Chigona et al., 2016)

One participant indicated that they have a link with the Department of Labour, and they receive job opportunities from the department to give to communities seeking jobs.

“like by the information centre downstairs they have all government forms, they have Z83 forms in order for people to complete online applications whenever they are looking for a certain government forms online they will always us or advise us where on site you will need to go in order to find that form to print for the citizens” Participant 6

Some of the participants expressed that communities share information with the government through the intermediaries, there is information such as that relating to sewerage blockage, electricity problems, water problems, and other communities' issues.

4.7 Communication challenges

Intermediaries face challenges when communicating with the government. Those challenges are ineffective communication and communication challenges. Intermediaries also experience communication challenges when communicating with communities. Those challenges are ineffective communication between communities and intermediaries; communities are not aware

of intermediaries' services and lack of computer skills by communities which could impede the way communities communicate with intermediaries and the government.

4.7.1 Challenges faced by intermediaries when communicating with the government

The study found that a lack of effective communication between intermediaries and the government is a challenge facing some intermediaries that would choose to communicate with the government. One of the respondents stated that sometimes they do not get answers from the government, and even if they receive responses, it is usually the unexpected responses.

“I'd say the challenges would be when you don't get the answer that you were wishing for or sometimes people will interpret the response in their wrong perspective”. Participant 6

“Of course the government has all these challenges because you made application and you don't get a response and then you must resort to some other ways of getting the information like you have to contact someone there and make inquiries”. Participant 8

Another participant indicated that they do not communicate directly with the government, and they have to communicate to the government through their managers.

“I can't answer that one because we only communicate with our seniors and then they're the ones who are communicating with the government”. Participant 4

The ineffective communication brings a misunderstanding between the government officials and the intermediaries, affecting the way they render their services. The challenge of the reporting channel where they have to communicate with their seniors who will then communicate with the government takes time, resulting in delayed responses from the government.

4.7.2 Challenges faced by intermediaries when communicating with the communities

The study found that there are times where intermediaries will call for community meetings to address some of the government services offered by intermediaries, but some communities do not attend those meetings. These meetings are announced verbally since some communities do not have computer skills, and calling the meetings through the e-mail platform would not be efficient.

“The challenges, it's very clear you can organize a meeting then you find that It's only the regular people that come to attend those meetings”. Participant 10

Another participant added that the communities' lack of computer skills becomes a serious problem because calling for a meeting through word of mouth takes time, and some communities do not even receive the message. They could use other means such as email services, but some communities lack computer skills.

“Communities do not have computer skills” Participant 15

The study also found that some communities are very impatient when intermediaries try to train them on how to use computers, the internet and e-mail services. This becomes a challenge because even if intermediaries send out emails, some communities could not read and respond.

“Sometimes when you are teaching a person, they are not patient. They would want to go and that time you dedicated yourself to help them to gain skills”. Participant 2

“most of the time I don` t know why when you give them a computer they are always afraid of a computer”. Participant 9

Another challenge found in the study is awareness. Some communities do not know about intermediaries and the services offered by intermediaries.

“I think our biggest challenge is the marketing, to market the E-centre in the community”.

Participant 13

This challenge may affect how communities communicate with the government through intermediaries because if they do not know services offered, they may not visit intermediaries at all.

4.8 Summary

This chapter presented the findings from the participants of the study. Fifteen participants volunteered to participate in the study. The chapter started by describing the background of the participants. Roles and responsibilities of intermediaries were also addressed. Furthermore, the chapter addressed services expected by communities, ICTS available at intermediaries` premises, and the intermediaries' services. Subsequently, the chapter concluded by addressing communication between intermediaries and the government and their challenges when communicating with the government and communities.

CHAPTER 5: DISCUSSIONS

The previous chapter presented the findings of the study from the participants. This chapter will discuss those findings in relation to the published literature. This will be done by discussing the findings according to identified themes, concluding the study, and providing recommendations to address the research problem and future research recommendations.

5.1 Discussion of findings

In this section, the roles and responsibilities of intermediaries, benefits and services provided by intermediaries, communication and challenges faced by intermediaries will be discussed.

5.1.1 Roles and responsibilities of intermediaries

There were roles and responsibilities identified were found from the study that echoes the findings from the literature reviewed. Those roles and responsibilities provide information to communities, manage intermediaries, and be an intermediate between government and communities.

Intermediaries provide various information to communities. The study found that this information ranges from business information, career information, and information about the communities to government information. The findings correspond with the literature that states that an intermediary is a place that communities can visit and access information (Kapondera & Namusanya, 2017; Majumder, 2016). The study also found that intermediaries intermediate information sharing between the government and communities. The literature shows that intermediaries offer communities free access to internet and email (Lwoga & Chigona, 2019; Mtega & Malekani, 2009; Uys & Pather, 2016). Communities can visit intermediaries and make use of the internet and the email to communicate with the government. However, some communities might have minimal knowledge and ability to make use of the internet and email. Intermediaries must possess ICT skills to the extent that they should assist communities that are unable to use ICT to communicate with the government. The study found that participants possess ICT skills that they can use to assist communities to communicate with the government.

5.1.2 Benefits and services provided by intermediaries

This section discusses benefits and services provided by intermediaries. This will be done by first discussing expected services by communities, ICTs available at intermediaries, and intermediaries' benefits and services.

Communities expect to be treated fairly, and they also expect a good service when they visit intermediaries. It is evident from the findings that interpersonal skills, patience and knowing how to work with people from different backgrounds are some of the expectations by communities which contribute to good service. Participants were asked whether or not they feel that the communities' expectations were addressed and met. All participants agreed that communities' expectations were met. However, the study found that there are still communities that are not aware of intermediaries' services. This finding supports the literature that states that some communities are not aware of intermediaries, roles, and services provided (Kapondera & Hart, 2016; Komba, 2013; Mtega & Malekani, 2009; Stoltenkamp et al., 2013).

There are different ICTs available at intermediaries' premises. The study found that there are different technologies available to intermediaries and for the communities to use. However, the study found that not all intermediaries have the same technologies in their respective premises. The technologies found at all the intermediaries' premises were computers, printers, copy machines, and telephones. The findings support the literature that states that technologies found in intermediaries are computers, photocopy machines, fax machines, printers and telephones (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2019; Stoltenkamp et al., 2013; Uys & Pather, 2016; Western Cape Government, 2015; Zolfani et al., 2012). The study found that all ICTs available at intermediaries are supplied by and maintained by the Western Cape government and the City Of Cape Town government. The literature shows that most of the intermediaries are run by the government (Breitenbach, 2013; Gcora et al., 2015). The study found that available ICTs can assist communities to communicate with the government. Therefore it is crucial to make sure that ICTs are always function because that might affect how communities communicate with the government. The findings support the literature that states that non-functional ICTs can affect how intermediaries provide their services and how communities use facilities in intermediaries (Gcora et al., 2015; Mbatha, 2016).

Intermediaries provide communities with services that may assist communities to share information with the government. The study found that intermediaries provide ICT training to computers. The ICT training includes providing basic computer training that assists communities in using ICT and the internet. The finding supports the literature that states that intermediaries provide basic computer literacy lessons (Kapondera & Namusanya, 2017; Lwoga & Chigona, 2019; Stoltenkamp et al., 2013; Western Cape Government, 2015; Zolfani et al., 2012). The study found that after communities receive the training, they might use ICTs available to communicate with the government and access online government information and services.

Communities can benefit from visiting intermediaries and making use of available facilities. The study found that communities can benefit in terms of economic and social benefits. The communities benefit from free access to ICTs, the internet and basic computer training in terms of free services, saving costs to communicate with the government. The study's findings echo the literature that states that communities can realize many benefits from using intermediaries in terms of economic, social and communication benefits (Kapondera & Hart, 2016; Kapondera & Namusanya, 2017; Lwoga & Chigona, 2019). Communities can save on travelling costs to visit government offices (Kapondera & Namusanya, 2017; Mtega & Malekani, 2009; Stoltenkamp et al., 2013). However, there is limited research addressing if all communities benefit from those services because other communities might still have to incur costs to reach the nearest intermediary.

5.1.3 Communication

This section discusses the communication needs and means of communication between communities and the government. This section further discusses how intermediaries can assist in addressing intermediaries' role as an intermediate between the government and communities.

Communities may wish to communicate with the government to address health, safety and crime, and education (Anderson, 2011; Van der Westhuizen & Swart, 2016) Some communities feel a need to communicate with the government to address local issues and to participate in decision making of issues that affect them (GCPSE, 2016; Madumo, 2014), and it was found that this can improve service delivered by the government because the government will know about the issues that are addressed by the communities. Communities can access government websites, telephone,

email and social media to send suggestions, complaints, comments and requirements (Abu Tair & Abu-Shanab, 2014; Butt et al., 2019; Nwanekezie et al., 2016; Wang & Lim, 2011). The study found that communities can visit intermediaries to make use of ICTs to communicate with the government. However, there is limited research on whether communities use those ICTs to communicate with the government or access government information and services. The study also found that all intermediaries have communication links with the government that could provide a quicker way for communities to communicate with the government. However, there is still limited research on whether those communication links are effective or not.

5.1.4 Challenges faced by intermediaries

Intermediaries face different challenges. The study found that some intermediaries face challenges such as lack of adequate resources, shortage of skilled staff, pricing, operating hours and communication challenges.

The study found that a shortage of skilled staff of intermediaries might impact how communities can use technologies to share information with the government. In terms of shortage of skilled staff, intermediaries' managers and staff receive training to help them acquire skills to assist communities in using technologies (Kapondera & Namusanya, 2017; Stoltenkamp et al., 2013; WCG, 2013; Zolfani et al., 2012). However, there is limited research addressing whether the training received is sufficient for intermediaries to assist communities in using ICT to communicate with the government.

Some communities face challenges of lack of adequate resources and operating hours challenges. The study found that not all intermediaries have the same type and amount of ICTs. The study found that it may take more than a month to fix or repair a technology that is not functional in some intermediaries. The findings echo the literature that state that a lack of adequate resources is another challenge faced by intermediaries (Breitenbach, 2013; Kapondera & Namusanya, 2017). The study also found that all intermediaries offer each interested community 45 minutes to use computers and the internet a day. The study supports the literature that state that each user of the intermediary is allocated 45 minutes to use computers daily (Coetzee, 2007; Kapondera & Hart, 2016; Stoltenkamp et al., 2013; Uys & Pather, 2016). The study also found that some intermediaries operate from Monday to Friday. This might impact communities that can be unable

to use intermediaries during the week and only available during the weekend when intermediaries are not operational, thus affecting the use of ICTs to communicate with the government. Even though communities offer free services, other services are not offered for free, and that might also negatively affect communities who might want to use those services to communicate with the government.

Intermediaries face challenges when communicating with the government and with communities. The main challenge is ineffective communication faced by intermediaries. This supports the findings from the literature that states that However, the South African government undoubtedly faces challenges such as slow response rates to communities' requests, inconvenient hours offered by the government institutions, and long distances to reach government offices (Mawela et al., 2017; Nkosi & Mekuria, 2010). These challenges invariably affect how the government communicates with the communities (Mawela et al., 2017). The study found that ineffective communication between the intermediaries and the government might affect how communities share information with the government.

Other challenges the intermediaries and communities face are late government responses; some communities are not aware of the intermediaries. Therefore it becomes difficult for the intermediaries to communicate with the government.



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CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This study sought to answer the main research question, which is: “*What is the role of intermediary in information sharing between the government and communities in Western Cape?*” To simplify the main research question, four sub-questions were asked:

- What are the needs and means for information sharing between the government and communities?
- What are the roles of intermediaries in South Africa?
- What are the benefits of having intermediaries in enhancing information sharing between the government and communities?
- What are the challenges faced by intermediaries in enhancing information sharing between the government and communities?

This chapter will address how the main question and each sub-question was answered, thus showing how the main aim and objectives of the research were met. This will be done by first addressing the main aim and objectives and how they are met. Secondly, this chapter will address the study's limitation, recommendations based on the study, and future study recommendations.

The first objective to explore the needs and means for information sharing between the government and communities was met and already discussed in the findings. The study found that communities' needs to share information with the government were for communities to report local and community issues such as health, safety and crime, and education issues. The results also showed that communities feel a need to participate in policymaking and issues that affect them. The study also found that communities can also use ICTs available in intermediaries' premises to access and communicate with the government through government websites, telephone, email, and social media to send suggestions, complaints, comments, and requirements. However, there is still limited research on whether communities use intermediaries to communicate with the government.

Another objective was to explore the roles of intermediaries in South Africa. This objective was achieved by finding that intermediaries provide information to communities, and they also serve a role as an intermediate between communities and the government. The objective of exploring benefits and services provided by intermediaries was also achieved by finding that communities

can benefit economically and socially when they visit intermediaries. The findings of the findings were that communities receive free basic computer training, save travelling costs to visit government offices, and have free access to ICTs, government information, and services. The last objective was to identify challenges faced by intermediaries. This was achieved by finding results that state that intermediaries face challenges such as operational hours, amount of time allocated to each community member, lack of skilled staff and lack of adequate resources. The study also found that a lack of effective communication between intermediaries and government and communities is a common challenge. It was imminent that intermediaries' role in information sharing between communities and the government is to provide free access to ICTs and for intermediaries' staff to assist communities in communicating with the government.

6.2 Recommendations

Based on the findings' results, the following recommendations were suggested to enhance information sharing between communities and the government. Those suggestions are increase resources, increase operational hours, improve internet speed, increase communication channels between the government and intermediaries, increase number and levels of training, and provide more intermediaries. Furthermore, recommendations for future research were also suggested.

The recommendations are based on the findings from the literature reviewed for this study and responses received from interviews with participants of this study. The recommendations are proposed to determine how intermediaries can enhance information sharing between the government and communities. The recommendations are grouped into two categories, namely; practical recommendations and recommendations for future research.

6.2.1 Recommendations based on research findings

Increasing the number of resources was the first suggestion. This includes the number of computers provided in every intermediary's premises. Furthermore, it is suggested that the number of staff should be increased and the number of technicians to assist with repairing and maintaining non-functional ICTs. It is also suggested that the number of trainings should also be increased to provide intermediaries staff with adequate skills to assist with information sharing between communities and the government. It is also suggested that intermediaries extend operational hours

and operate every day. Moreover, after increasing the number of resources, it is suggested that intermediaries should also extend the time allocated to each community to use the computer every day to an accepted time frame by communities.

6.3 Contribution of the study

This research could help understand the role of intermediaries in information sharing between the government and communities in the Western Cape. This will assist implementers and policymakers of intermediaries and determining how intermediaries can enhance information sharing between communities and the government. Furthermore, this study's practical contribution can assist intermediaries in ensuring that they deliver services that the government sets to assist communities with the sharing of information with the government.

6.4 Limitations of the study

This section acknowledges some of the limitations of the study conducted. The study was limited to fifteen participants that volunteered to participate, and they were part of intermediaries that were initiated by the Western Cape provincial government and the City of Cape Town. The English language was used as a medium of communication during interviews. However, some participants faced a language barrier during interviews as they struggled to understand the question(s) in English. The number of participants and the language barrier challenge did not affect the validity of the study.

All participants were chosen from intermediaries across different regions in the Western Cape Province. The sample was kept at fifteen due to the availability and reachability of intermediaries' staff, and generalizability of the findings may not apply to all intermediaries in the Western Cape. This did not affect the validity of the study.

6.5 Recommendations for future research

Due to a sample for this study limited to fifteen participants, it is highly recommended to increase the sample size to get greater insight into the research problem being addressed. For future study, it is recommended that communities, government officials involved in implementing intermediaries and policymakers are also invited to participate in the study. This will help to gain

greater insight into what communities expect in terms of using intermediaries to communicate with the government and if their expectations are met or not.

Due to this study's scope limited to intermediaries in the Western Cape Province, it is recommended that the study expands to other provinces in South Africa. It is also recommended to also include other intermediaries that the government does not own. This will also help compare if they also face the same challenges as the government's intermediaries.

6.6 Conclusion

This study evaluated the role of intermediary in information sharing between the government and communities in Western Cape. The study found that intermediaries play an additional role as an intermediate between the government and communities. However, there were challenges identified and were addressed in this dissertation. Those challenges include pricing, infrastructure, communication, managerial and management structure. The results suggest that intermediaries should ensure that intermediaries' staff should receive more training, operating times and days should be extended, more intermediaries should be built. The results further suggest that more ICTs should be provided; technologies should always be maintained and repaired on time, communication between intermediaries and the government needs to be improved. The dissertation concluded by providing recommendations for future research.

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Appendix 1: Consent form



UNIVERSITY of the
WESTERN CAPE

Consent Form for Participation in a Research Study University of the Western Cape



Topic: The role of intermediaries in information sharing between government and communities in the Western Cape

Description of the research and your participation

You are invited to participate in a research study conducted by Murendeni Nelwamondo as part of his MCom Information Management (Master`s degree) in the university of the Western Cape. The purpose of this research is to evaluate the role of intermediaries in information sharing between the government and communities in Western Cape to advice policy makers on how they can implement policies that will enhance information sharing between the government and communities through the use of intermediaries.

Your participation will involve answering 12 interview questions through a semi-structured interview. It will take about 30 minutes to complete the interview

Risks and discomforts

There are no known risks associated with this research. If any risk is identified, it will be communicated with the participant accordingly.

Potential benefits

This research may help to determine working policies that can be implemented and enhance information sharing between communities and the government.

Protection of confidentiality

Your personal information will be kept confidential at all levels in compliance to Protection of Personal Information (POPI) ACT. Answers to the multiple choice and interview questions will be used for academic and research purpose only. Your identity will not be revealed in any publication resulting from

this study. Protection of your privacy is assured and answers to the research questions will only be available to the researcher and the supervisor.

Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise, please find the contact details below:

Particulars of the researcher and the supervisor

Name: Murendeni Nelwamondo

Faculty: Economic and Management Sciences

Department: Information Systems

Thesis: Masters Level

Field of study: Community informatics

Contact no: +27 76 535 4647

Email: 3117631@myuwc.ac.za

Supervisor: Dr James Njenga

Supervisor Tel no: 021 959 3680

I, the undersigned, confirm that (please tick box as appropriate):

1.	I have read and understood the information about the project, as provided in the Information Sheet dated _____.	<input type="checkbox"/>
2.	I have been given the opportunity to ask questions about the project and my participation.	<input type="checkbox"/>
3.	I voluntarily agree to participate in the study.	<input type="checkbox"/>
4.	I understand that I can withdraw at any time without giving reasons and that I will not be penalized for withdrawing nor will I be questioned on why I have withdrawn.	<input type="checkbox"/>
5.	The procedures regarding confidentiality have been clearly explained to me.	<input type="checkbox"/>
6.	The use of the data in research, publications, sharing and archiving has been explained to me.	<input type="checkbox"/>
7.	I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.	<input type="checkbox"/>
8.	Select only one of the following:	<input type="checkbox"/>
	<ul style="list-style-type: none">I would like my name used and understand what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognised.I do not want my name used in this project.	<input type="checkbox"/>
9.	I, along with the Researcher, agree to sign and date this informed consent form.	<input type="checkbox"/>

I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study being conducted by Murendeni Nelwamondo as part of his MCOM Information Management (Master's degree) in the University of the Western Cape.

Participant:

Name of Participant

Signature

Date

Researcher:

Name of Researcher

Signature

Date



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WESTERN CAPE

Appendix 2: Questionnaires and interview questions

Questionnaires

1. What is your gender?

A. Male	B. Female
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2. Your age group

A. 18-24 years	B. 25 – 34 years	C. 35 – 44 years	D. 45 – 54 years	E. 55 and above
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3. What is your ethnic group?

A. African	B. Coloured	C. White	D. Asian	E. Other
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4. Are you a permanent resident of Western Cape?

A. Yes	B. No
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5. For how long have you been residing in Western Cape?

A. 1-5 years	B. 6-10 years	C. 11-20 years	D. More than 20 years
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6. For how long have you been working in this e-centre/community library?

A. 0-6 months	B. 6 – 12 months	C. More than 1 year	D. More 3 years	E. More than 5 years
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7. From 1 to 10 how do you rate your level of computer skills? While 1 being very bad and 10 excellent

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

8. From 1 to 10 how do you rate your level of internet skills? While 1 means very bad and 10 excellent

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

9. Have you received any training since you started working here?

A. YES	B. NO
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10. How many trainings have you received so far since you started working here?

A. None	B. One	C. More than One	D. More than 3	E. More than 5
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11. Have you ever visited a government website?

A. YES	B. NO
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12. Are you aware of online information and services offered by the government?

A. YES	B. NO
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13. How many computers are available for communities to make use of?

Please answer here _____ (in integer format, e.g 5)

14. In times when a computer that is not working, how long does it take for it to be fixed after reporting?

A. within 30 days	B. Within 2 months	C. Within 6 months	D. More than a year	E. Never experience that
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15. How fast or slow is the internet speed here?

A. Very Slow	B. Slow	C. Fair	D. Fast	E. Very Fast	F. No internet connectivity
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Interviews

Theme	Sub-theme: Interview questions
Roles and responsibilities	<ul style="list-style-type: none"> What is your role and responsibilities within the e-centre/community library?

	<ul style="list-style-type: none"> • How many colleagues do you work with and how do you share responsibilities and duties? • What are the requirements for one to perform your duties in the e-centre/library? • What happens during the time that you can't make it to the e-centre/library, maybe due to unforeseen circumstances or other commitments? • What are the roles of intermediaries in South Africa? • Have you attended any training? • What areas did the training address? • What areas did the training not address?
Communication	<ul style="list-style-type: none"> • Do you have any links or connections with government departments? And which departments do you have link with? • Do you think the links are assisting communities? Which information is shared with those links? • How do you assist communities to communicate with the government? • What is the role of the e-centre in information sharing between the government and communities? • What are the benefits of having intermediaries in enhancing information sharing between the government and communities? • What is the need and means for information sharing between the government and communities? • What can be done to improve information shared between the government and communities through the e-centre?
Services offered	<ul style="list-style-type: none"> • Which Information and Communication Technologies are available in this e-centre/library? • Where do you receive your technology and equipment? • How often are the technology and equipment serviced? Who pays for the service? • Do you charge communities for any services? If yes, which services?

	<ul style="list-style-type: none"> • Which Information and Communication Technologies are available in this e-centre/library? • Where do you receive your technology and equipment?
Challenges	<ul style="list-style-type: none"> • What do you think the community expect from this e-centre/library? • Are those needs addressed in this centre? • Does the community feel the need to use e-centre/library to communicate with the government? • What could be done better to improve communication between the communities and the government through the e-centre? • Are there any programmes that are offered here that can help communities increase the level of engagement with the government? • What are the challenges faced by intermediaries in enhancing information sharing between the government and communities?

Appendix 3: Ethics clearance statement



DEPARTMENT OF RESEARCH DEVELOPMENT

14 December 2015

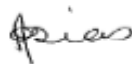
To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Mr M Nelwamondo (Information Systems)

Research Project:	The role of intermediaries in information sharing between government and communities in the Western Cape.
Registration no:	15/7/195

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.



Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape