SOCIAL ENTERPRISES' IMPROVISATION OF SERVICES TO COMMUNITIES THROUGH THE USE OF MOBILE DEVICES

by

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DECLARATION

I, William Howard Olivier, declare that the content presented in this thesis is my work and has not been previously published or submitted for any academic qualification. The opinions presented in this thesis are my own and not necessarily those of CPUT.

Signed:  Date: September 2024

ABSTRACT

Social enterprises within the Western Cape of South Africa seek to provide services to communities to improve their well-being and alleviate poverty. Despite information and technology communication (ICT) advancements, social enterprises (SEs) within the Western Cape have not been able to integrate their operations with ICT functions. This lack of integration leads to a disconnect between many communities and those providing the services. As a result, services, such as distributing messages and information related to social and economic growth, and opportunities for communities, are hindered. Thus, this study aimed to develop a framework to integrate mobile technology into the operations of social enterprises for service improvisation.

In achieving the study's aim, objectives were formulated: (1) To examine and understand the factors that influence how SE uses the information to provide services to communities; and (2) To investigate how mobile technologies can facilitate ease of access to information and service distribution. Quantitative methods were employed to achieve the research objective. The case study was applied, based on which a social enterprise organisation was selected using a set of criteria. Data was collected from the SE using the semi-structured interview technique. The data was analysed following the interpretive approach, guided using the Technology Acceptance Model (TAM) as a theoretical lens.

From the analysis, connectivity, network infrastructure, capabilities, affordability, accessibility, contextualisation, language translation, and knowledgeability influenced the integration of mobile technology with SE functions to improvise services for the communities. The factors were categorised as technical and non-technology to better understand how mobile technology can be integrated with SE services. The factors were interpreted following the subjective approach. Based on the interpretation, a framework was developed. The framework can be used to guide the integration of mobile technology and SE services. It thus significantly impacts both the community members and the SE in providing and receiving services.

Keywords: Social Enterprise, Information and Communication Technology, Improvisation, Mobile Technology, Service delivery, Community.

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DEDICATION

I wish to dedicate this study to my immediate family, the family in our congregation, friends, and colleagues. Also, to my late mother and father, whom I wish to thank for raising me up with values that allowed me to travers life to where I am right now.

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CHAPTER 1
INTRODUCTION AND BACKGROUND

1.1. Introduction

Service delivery remains a pressing issue in communities worldwide (Masuku & Jili, 2019). Many communities are not receiving the much-needed services while poverty and unemployment remain pressing issues. Governments in many countries have undertaken the responsibility to address the service delivery needs of communities (Kosec & Wantchekon, 2020; Dik-Sagoe, 2020) but have been constrained by resource challenges that have made it difficult to provide these critical services (Thusi, Matyana, & Jili, 2023). In particular, the South African government has been struggling or could not fulfil its service delivery mandate to communities (Mathenjwa, 2016). Considering these struggles by governments and social challenges within communities, there has been a growing awareness and responsiveness by individuals and groups to address these social challenges such as unemployment and poverty (Fraizer, 2011). Social entrepreneurs are individuals and founders who drive social change and through their actions and involvement establish social enterprises as output.

William Drayton, social entrepreneur pioneer and founder of the leading international social enterprise, Ashoka, describes a social entrepreneur as one who identifies problems within societies and through engaging individuals and groups, seeks to solve these problems through innovative means (Leviner, Crutchfield, & Wells, 2007). Social Enterprise is described as having a social mission to provide services to local communities by combining its social mission with market-oriented business practice to be self-sustaining and support its social mission (Doherty, Haugh, & Lyon, 2014). The emphasis in social entrepreneurship lies in the word "social" which focuses on the social issues in communities and not so much on "profit-making" as is the case with business entrepreneurship (Malunga, Iwu, & Mugobo, 2014).

Information and Communication Technology (ICT) continues to draw attention as a key enabler for innovation and employment (Bilbao-Osorio & Dutta, 2014). There is a

strong connection between ICT adoption, economic development, and social change. Thus, organisations (like social enterprises) agree on the importance of adopting ICT to support their social mission and business operations (Tauringana & Afrifa, 2013). ICT is essential in mediating relationships between communities and government (Sofyani et al., 2020). Because of this, SE can also benefit from the use of ICT in its service delivery to communities.

With the increased penetration rate of mobile phones in both urban and rural areas, access to ICTs for many has come by using mobile phones (Singh et al., 2016). Prior research has also raised excitement over the potential of mobile devices as tools to be used in community development (Goggin & Clark, 2009). There has since been an increase in social connectivity and access to information and communication through mobile devices as an ICT tool (Miyajima, 2022). In South African households, the percentage that accessed the internet using mobile devices at the end of 2018 was sitting at 60% with households in rural areas accounting for 45% and metropolitan areas for 67% (ICASA, 2020).

With this increased access to the Internet, social enterprises that seek to impact societies through their social objectives can benefit from the use of ICT, which has also proven to play a significant role in sustainable development (Wronka-Pospiech & Fraczkiewicz-Wronka, 2014). With the potential of ICT to change society for the better, non-governmental organisations such as social enterprises have thus sought to integrate ICT as a tool to improve their service delivery to the public (Parthiban & Qureshi, 2020). The integration of ICT into SE in South Africa can especially help make available critical information to the public which is so needed for public participation and decision-making. Making information available through ICT channels is critical because most of the poor and needy are in urban areas where the delivery of services is most needed (Kosec & Wantchekon, 2020).

Since the most common way of communication is the use of a mobile phone, one needs to consider that many factors influence people's acceptance of mobile technology (Almarashdeh, 2018). The use of mobile devices in the improvisation of services is neither straightforward nor easy, in that many factors influence both providers and recipients of services. Common factors such as user attitudes,

perceptions, and beliefs are regarded as determinants that affect technology acceptance (Alharbi & Drew, 2014). The Technology Acceptance Model (TAM) is an information systems theory that models how users come to accept and use technology (Karimi, Marina, & Kinyua, 2017). Thus, TAM will be employed to examine the factors that influence Social Enterprise improvisation of services to the communities. These factors include how users come to accept and use technology for services.

1.2. Background

Poverty and inequality are still extremely high in South Africa and reducing poverty and inequality are ongoing concern listed in development policies and programmes in South Africa (Bundy, 2020). There is a strong relationship between unemployment and poverty and their impact on human development and economic growth (Priambodo, 2021). It can further be noted that socio-economic problems and the economic welfare of communities are related to the high unemployment rate in the country. (Jeke & Wanjuu, 2021).

The problem of unemployment can also be attributed to the lack of access to information regarding job opportunities (Gürtzgen et al., 2021). This means that even though information related to job opportunities is available, it is not always accessible to individuals especially, in poorer communities. There are several reasons for this lack of access to information. Because most of the available information is in electronic form, access to it has been a challenge for many. Some have the means to access the information, but they do not know how. Others know how to access the information, but they do not have the technology to access the information. In this latter case, even if they do have the technological devices, there is always the problem of data and network connectivity to access information. There is thus a continuing challenge and disconnect between the available services and the ability to access important information related to job opportunities.

Many organisations providing the knowledge and means to access critical information related to job opportunities focus mostly on high-income communities. This leaves the poorer communities vulnerable and unable to gain access to much-needed information. Unlike many other organisations, social enterprises focus on poorer low-income communities to address the socioeconomic problems they face, a mandate

which government struggles to meet (Javed, Yasir, & Majid, 2021). These services can include the distribution and availability of critical information through accessible means and technologies.

The concept of Social Enterprise (SE), which is aimed at addressing socioeconomic problems in communities, has received much attention from academic researchers in recent years (Kiss, Kratki, & Deme, 2021; Cardella et al., 2021). This focus on Social Enterprise is of particular interest because it has been key in community development as it focuses on social objectives while still operating with business principles (Javed et al., 2021). Social enterprise ventures focus on sustainable development, and this provides much hope to communities in developing countries because it stimulates economic growth through activities that lessen the reliance on government funding (Lyne, 2017). A study of Social Enterprise in a South African context, for example, looks at how SE practice can be used to tackle socioeconomic problems through community development (Ngatse-ipangui & Dassah, 2019).

Research studies show that Information and Communication Technology (ICT) plays an important role in reducing poverty and improving economic growth (Hameed, 2018). With the potential of ICT to address many socio-economic difficulties for many communities, SE has sought to integrate ICT channels in their operations to improve the way they provide their services (Parthiban & Qureshi, 2020). There is, however, not much research that looks at the role and the application of ICT in SE (Javed et al., 2021).

1.3. Research Problem

Social Enterprise within the Western Cape province of South Africa seeks to provide services to communities to improve their well-being and contribute to poverty alleviation. Currently, there is a lack of ICT integration within the operations of social enterprises within the Western Cape, even though there have been many technological advancements. This lack of integration leads to a disconnect between many communities and those who provide the services. As a result, services, such as the distribution of messages and information related to social and economic growth, and opportunities for communities, are hindered (Nxele, 2018). The problem is that no framework helps social enterprises to integrate ICT within their service delivery to

these communities.

1.4. Research Aim and Research Question

1.4.1. Research Aim and Objectives

This study aimed to develop a framework that would help integrate mobile technology into the operations of social enterprises within the Western Cape and enhance service delivery to the communities.

The following objectives were listed to break down the main aim of the study:

1. To examine and understand the factors that influence how SE uses information to provide services to communities.
2. To investigate how mobile technologies can facilitate ease of access to information and service distribution.

1.4.2. Research Question and sub-questions

Based on the problem, the research's main question, as articulated below, sought to guide how to address this problem. The main question asked was:

How can a framework be developed to aid the integration of mobile technology within the operations of SE in the Western Cape to improve their service delivery to the communities?

This main question was divided into two sub-questions to answer the main question systematically.

1. What are the factors that influence how SE uses information to provide services to communities?
2. How can mobile technology be used to facilitate ease of access to information and service distribution?

1.5. Literature Review

Existing literature was consulted to highlight the work already done which addresses the problem area as stated in section 1.1. The literature review focuses on the keywords Social Enterprise, Community, Information and Communication Technology, Mobile Devices, and Technology Acceptance Model.

1.5.1. Social Enterprise

Within the current economic environment, where funding for socio-economic

development is hard to come by, organisations need to be financially self-sustaining while also addressing social needs in local communities (Chell, 2007). Social Enterprise (SE), which drives the idea of self-sustainability, has extended the traditional social purpose initiatives of non-profit entities such as NGOs and charitable trusts (Goval, Sergi, & Kapoor, 2017). SE stimulates economic growth through activities that lessen the reliance on government funding (Lyne, 2017).

Many researchers have described the term Social Enterprise (SE) as an organisation with a social mission that makes use of business ventures to be self-sustaining to support their social functions. The Social Enterprise Academy Africa (SEAA) refers to Social Enterprise as those doing business that brings about positive social and/or environmental changes (Littlewood & Holt, 2018).

Social enterprise growing practices are fuelled by the quest for sustainability (Alter, 2007). Therefore, social enterprises are self-sustaining and entrepreneurial in their endeavours (Ureche, 2023). The idea of social enterprises being self-sustaining is supported by Gonin et al. (2012), who describe a social enterprise as one that seeks to achieve social missions through business ventures.

SE has received much interest and prominence from politicians and policymakers. Because of this interest, they regard social enterprise as crucial to enhancing the socio-economic progress in South Africa. SE brings many vital innovations and crucial services to marginalised populations within the country (Chikadzi, 2014).

1.5.2. Community

The term "community" is widely used within different settings. Community is commonly used to denote a group of people and where they are physically located (Han et al., 2016). Although a distinction can be made between a community that refers to locality (geographical communities) and a community that refers to a group of interest (community of practice), the meaning is changing to be more relationship-specific (Lo, et al., 2015). A community of practice refers to a group of people identified by their shared interest and commitment which is not limited to a group within the same location (Hansson & Wihlborg, 2016).

This study focuses on a community where people share common interests and reside within a specific geographical location. The common interest would be the services and support that community members receive, and the place is the specific local community serviced by social enterprise.

1.5.3. Information and Communication Technology

There has been a steady increase in the impact of ICT on our daily lives. ICT has become a potent force for transforming political, economic, and social life worldwide (Fahmi & Mendrofa, 2023). ICT consists of the components and processes that enable the storage, processing, and distribution of information (Ssewanyana, 2015). A broad term defines ICT as an umbrella that consists of communication devices such as television, mobile devices, computers, and applications and services (Charoensukmongkol & Moqbel, 2014).

The fields in which ICT has been applied are vast and include, among others, healthcare service (Zonneveld et al., 2020), agriculture (Spielman et al., 2021), and community development. This study focuses on using ICT for community development as it has become a more effective enabler for community engagement (Ingrams, 2015).

1.5.4. Mobile Technology

Information and communication technology has expanded to include mobile devices such as mobile phones, personal digital assistants (PDA), video game consoles (e.g. PlayStation Portable), smartphones and tablet computers (Free et al., 2013). Since its adoption in 1990, mobile phones have evolved, and we now have smartphones that have become part of everyday life (Kakihara, 2014).

A larger proportion of the South African population has access to the internet using smartphones. (Roussos, 2012). The Independent Communications Authority of South Africa (ICASA), in its 2020 report, shows that there was an increase of 81% in smartphone penetration in 2018 and an increase of 91% in 2019, which also points out that more people are subscribing to the internet and other related services using mobile devices (ICASA, 2020).

Mobile devices in this research refer to mobile phones, smartphones and tablet computers that are utilised as a communication tool between social enterprise as the service deliverer and the community as recipients of services.

1.5.5. Technology Acceptance Model

Based on the objectives of this study, as presented in section 1.3 above, the Technology Acceptance Model (TAM) was used to underpin this research. Initially introduced by Davis, TAM is widely cited as a model that looks at how technology acceptance affects individuals and groups (Guner & Acarturk, 2018). Using the two main determinants, namely perceived ease of use and perceived usefulness, TAM has been widely used to predict ICT adoption in many areas (Teeroovengadum et al., 2017). It is also noted that TAM has frequently been used in investigating users' acceptance or rejection of information technology systems (Granic & Marangunic, 2015).

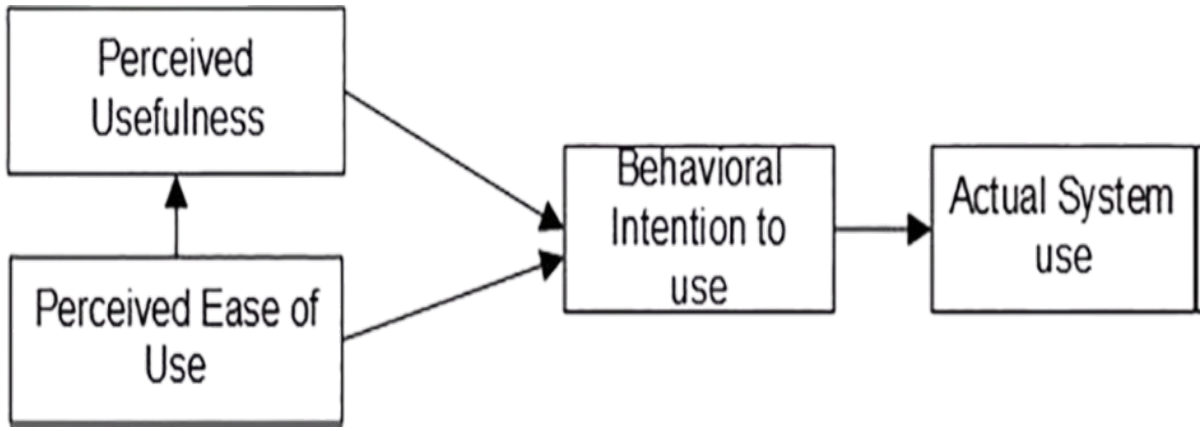

Figure 1.1 Technology Acceptance Model (Davis, 1989)

As an information systems theory, TAM models the way users accept technology and how they use that technology. TAM's key constructs are shown in Figure 1, and they include *perceived usefulness (PU)*, *perceived ease of use* (PEOU), *behavioural intention* (BI) and *actual usage* (AU). Alharbi and Drew (2014) explain the relationships between and effects of each of these constructs upon each other. Here, they explain that PU and PEOU have an impact on BI; and PEOU has a direct impact on PU.

1.6. Research Design, Methodology, and Ethics

The research design and methodology consist of methods, approaches, and

techniques. Figure 1.2 summarises the research design and methodology applied in the research. Also, the figure depicts the order in which the methods, approaches and techniques were employed toward achieving the objectives of the research.

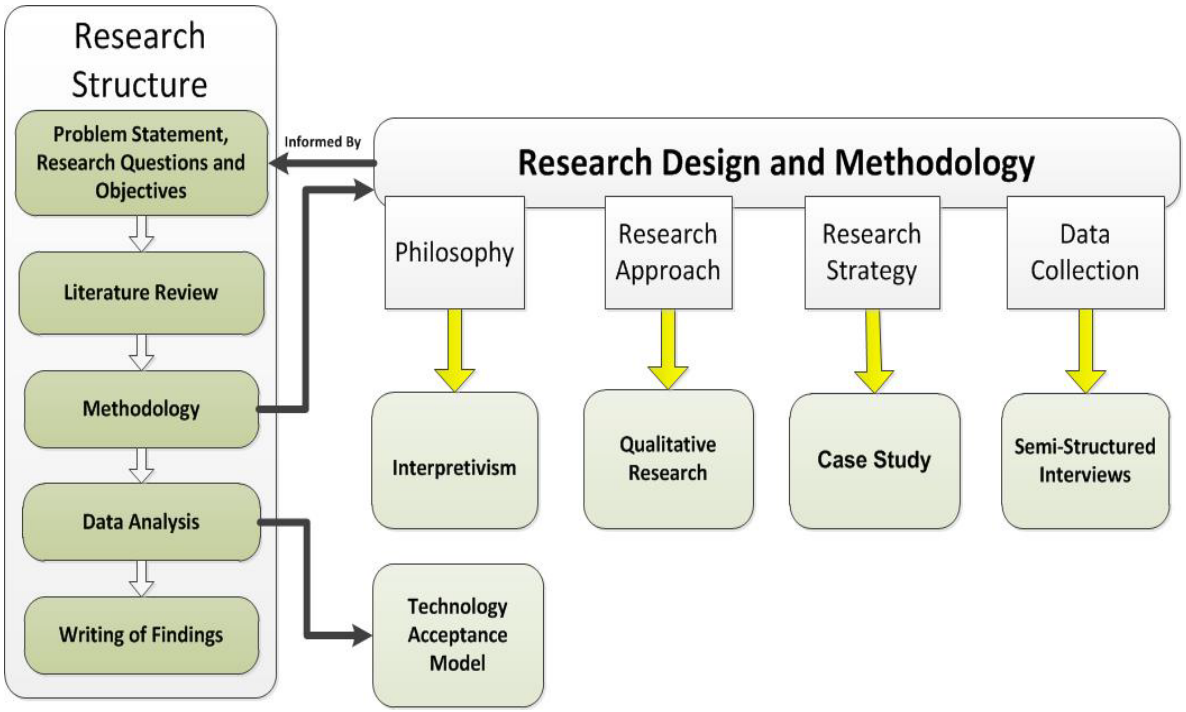

Figure 1.2 Summary of Research Design and Methodology

1.6.1. Research Design

Kothari (2004) describes research design as "the conceptual structure within which research is conducted". Dawes et al (2009) argue that to arrive at empirical deduction to address the problems of research, the research design must show how progressively and logically all components of the research are supposed to work together. The research design must therefore address questions like what, why, where when and how.

1.6.2. Research Methodology

It is important to use the appropriate research methodology for the research problem. The research methodology in this study is determined by the problem statement driving this research, which is the steps taken to derive reliable answers to the research questions (Ellis & Levy, 2008). The methodology thus describes how the researcher solved the research problem.

The methodology in this research includes the philosophy underpinning the research, the approach by which the research was carried out, the research strategy, and the methods for gathering data.

1.6.3. Interpretivism

This research study adopted an interpretivist view which requires that a phenomenon be understood or viewed from the participant's perspective (Thanh & Thanh, 2015). This perspective can be achieved through the interpretive methodology where it is believed that the reality under investigation is socially constructed (Scotland, 2012).
It is with the above in mind that this study took on an interpretive position because it needs to understand and interpret reality as constructed by members of a particular community and the social enterprise within their natural setting. The individuals who give their perspectives are those of the social enterprise as the service provider, and those in the community are the service recipients.

1.6.4. Research Approach

Researchers distinguish between two research approaches, namely, qualitative and quantitative approaches. Even though both approaches are used to gather and analyse empirical data using multiple techniques (e.g., surveys, case studies, interviews, and questionnaires), there are real differences between these approaches (Neuman, 2014). This study followed the qualitative approach.

1.6.5. Qualitative Research

The intended objective of this research was to discover the underlying motives of human behaviour, which makes the qualitative research method appropriate for this study. This is because qualitative research can be viewed as the aim of exploring and understanding what meaning individuals or groups would give to a social problem (Creswell, 2014). The interest in investigating reasons for human behaviour can be an example of qualitative research where the range of factors of human behaviour can be analysed (Kothari, 2004). Using this approach, the study is concerned with the subjective assessment of attitudes, opinions, and behaviour.

1.6.6. Research Strategy

The possible goals for a study are delimited by the nature of the research problem being addressed (Ellis & Levy, 2008). Part of answering the research question is to describe and explain the behavioural pattern of a certain group of individuals and therefore the type of study to be conducted will be descriptive in nature.

Case Study

A case study was chosen for this research to help the researchers gain an in-depth understanding of a complex issue situated in its natural setting not isolated from its context (Crowe et al., 2011). The interaction between the case and its context was therefore examined to arrive at a sound understanding of the case (Yin, 2013).

1.6.7. Data Collection

In data collection, the researcher needs to know that data can be classified as primary data or secondary data. According to Kothari (2004), there is a difference in the method of collecting primary data and secondary data. Where the data collection of secondary data is merely a compilation, the collection of primary data needs to be original. For this study, the primary method for data collection was interviews, which are discussed in the next section.

Interviews

The data collection method used in this research was interviews during which questions relating to the study were the focus of a conversation between the researcher and the participant (Kothari, 2004). Because interviews can be in the form of personal interviews or telephone conversations, participant availability determined which form was employed.

The type of interview that was used was a semi-structured interview where there was a list of themes and questions to be covered but varied from interview to interview and, depending on the flow of the conversation, the order of the questions varied or were omitted based on a specific organisational context (Saunders, Lewis, & Thornhill, 2009).

The researcher is also aware of the two other categories of interviews namely

structured interviews, which use a predefined set of questions where the interviewer must follow a rigid procedure, and unstructured interviews, which do not follow a set of predefined questions and the interviewer has greater freedom to ask supplementary questions (Kothari, 2004).

1.6.8. Data analysis

Data analysis is described as an ongoing process of analysing participants' responses where the researcher would employ specific steps found in a specific design as well as general steps (Creswell, 2014). The general steps involve ordering, categorising, and coding data. The specific steps to analyse data for this research involved the use of the Technology Acceptance Model (TAM) which is described in section 2.5 above. TAM consists of five main components, which include Perceived Usefulness (PU); Perceived Ease of Use (PEOU); Attitude Towards Using (ATU); Behavioural Intention (BI) and Actual Usage (AU). The components will be used to guide the data analysis as follows:

i. To examine and understand the factors which influence the services social enterprises provide to communities in South Africa. This includes an understanding of how mobile devices are perceived to be useful; users' (service providers and community members) perceived ease of use of the devices; and the behavioural intentions of actors toward the use of mobile devices for providing and receiving social services.

ii. The constructs of TAM will be used to investigate how mobile devices are used to facilitate ease of access to information and service distribution. This includes the behaviour of actors toward the usage of the devices in providing and receiving social services.

1.6.9. Units of Analysis

The analysis as described above will be carried out in units. The unit of analysis can be referred to as the subject (what or who) of the study that a researcher can generalise on (Long, 2011). Basic elements in research such as people, organisations, schools, and interest groups are units of analysis. When doing educational research, for instance, schools and/or people would be the unit of analysis (Keller, 2012).

The units of analysis were in two main categories: staff members of SE and members of the communities. This is primarily because these categories of units perceive social services and the use of mobile devices differently. Thus, the units of analysis for this research study were:

i. Staff members of SE who include trainers, secretaries, project leaders & managers
ii. Members of the community who receive services like training, counselling, and start-up support.

1.6.10. Ethical Consideration

All people recognise common ethical norms but are differently interpreted and applied based on people's life experiences and values (Resnik, Elliott, & Miller, 2015). In this research, ethical considerations were correctly applied.

The researcher, therefore, ensured that this research did not place any participant at risk of harm or danger. The researcher also adhered to ethical standards set by the Faculty of Informatics and Design of the Cape Peninsula University of Technology. An ethical clearance letter was obtained from the faculty. A consent letter was sent out to prospective participants wherein they were informed of the nature and purpose of the study. In this letter, the participants were also assured that before the interview, they had the right to withdraw from the interview and that all responses from participants would be treated confidentially and anonymously. Participants also consented and gave their permission for all interviews to be recorded.

1.7. Delineation of the research

This research investigation focused on social enterprises within the Cape Flats of the Western Cape of South Africa and how they distribute information to the community they serve. The study looks at how mobile technology is adopted for communication between managers and staff members, as well as the distribution of information to the local communities. The implication of adopting mobile technology can greatly enhance the way in which social enterprises provide service to the community they are serving.

1.8. Study Contribution and Significance

This research aimed to gain insight into the functions of social enterprises and the factors that contribute to their adoption of mobile devices for messaging to aid service delivery. This study can contribute to the social science community's understanding of Social Enterprises' (SE) function and their behaviour toward adopting mobile devices to aid social enterprise messaging. Thus, the study aims to contribute to theocratically, methodologically and practically.

1.9. Summary

This chapter provided an introduction and overview of the study undertaken. The background to the study is sketched as well as the background of the research that was undertaken. The problem statement highlights what the problem is, why it is a problem and the implications, should this problem not be addressed. The chapter continues to list the research aims and objectives as well as the research question and sub-questions. A brief literature review is provided followed by the research methodology. The research methodology includes the research design, research approach, research strategy as well as the data collection techniques employed. The chapter ends with the ethical considerations, research delineation as well as the study contribution and significance.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of literature related to the study of social enterprise and mobile technology adoption, including the related themes. The chapter is divided into six main parts with sub-sections. The first part covers information and communication technology (ICT), highlighting its importance in community development. The second part focuses on mobile technology (MT) which is a subset of ICT. The third part covers social enterprise (SE), its definition, operations, its relation to South Africa and the rest of the world as well as the context of the information systems field. The fourth part discusses social systems (SS), which highlights the communities and service delivery to the needy communities. The fifth part covers the improvisation of services in communities by social enterprise using information and communication technology, as well as improvisation in the context of information systems. The final part explains the technology acceptance model (TAM), and its usage in analysing mobile technology adoption by social enterprises and the community.

2.2 Information and Communication Technology

Information and communication technology (ICT) has become a driver of social and economic advancement in many countries (Vu et al., 2020). Its potential to address social ills such as unemployment, and poverty, and its drive for community development are evident in many scholarly writings (Sofowora 2009; Alao, Chigona & Brink, 2022; Kumar & Agarwal, 2020). Access to information has become a basic tool for economic and social improvements and this has made ICT so potent because of the accessibility to information via the internet, technologies, and devices that enable this accessibility (Okocha et al., 2019). Access to information enabled by ICT is capable of providing many opportunities for education and employment, which in turn brings about economic and social change at community levels (Narmetta & Krishnan, 2020).

ICT is best defined in terms of its applicability in various domains. Some of the areas where ICT is applied include education, healthcare, business, and agriculture (Das, 2019; Ye, 2020; Rumata & Sakinah, 2020; Fatumo et al, 2021). As an effective enabler

of community engagement, ICT has been used for community development (Ingrams, 2015). This is especially relevant as the need for information sharing has become prevalent among citizens of local communities and the necessity for governments to provide the necessary infrastructure and services for public engagements (Vivier, Wenzel, & Sanchez, 2015). Information has become the driving force of modern society (Islam et al., 2010) and by exploring the potential of ICT to enhance interconnectivity and strengthen the capacity to act increasingly interdependent, local communities can act as possible agents for community development (Frey, 2005). Proper infrastructure, however, has been lacking in many communities of South Africa, although South Africa is regarded as the leader in Africa when it comes to ICT infrastructure (Mbatha, 2016).

There is no universal definition for ICT and many researchers have defined it highlighting its various aspects. ICT is widely used to refer to the convergence of many communication technologies such as computers, mobile phones, broadcasting, the internet, and multimedia (Lloyd, 2005). The term ICT evolved from IT (the precursor of ICT), which largely focused on the processing of information and development for internal administrative functions using computers, whereas ICT includes both information processing and the communication of that information (Heeks, 2008). The definition of ICT, however, is best viewed when looking at the areas where ICT is applied, which is the discussion in the following sections.

2.2.1 ICT in Community Development

There has been a vast improvement in ICT in recent years which has not only seen developments in business and emerging economies (Nabi et al., 2022) but also given access to ICT to disadvantaged communities in developing countries (Booi, et al., 2019). Projects that are aimed at giving ICT access to disadvantaged communities are referred to as ICT4D. According to Heeks (2009), ICT4D involves the use of ICT for community development within developing countries. The use of this term came about through two events in 1990 namely: (i) the birth of the internet and (ii) the Millennium Development Goals. Walsham (2017), however, ascribes ICT4D research to have started in the mid-1980s when research was mainly done in the Information Systems (IS) field. Many ICT4D projects are aimed at narrowing the digital divide as well as creating an environment for communities to take ownership of the development

projects (Tanner & Du Toit, 2015).

Attwood et al. (2013) point out that for middle-income countries, the use of ICT remains limited for many resource-poor citizens, especially internet-based tools. The importance of being able to connect to internet resources using ICT is stressed by Rey-Moreno and Pather (2020) when referring to how technology is improving people's lives in this day and age. Information and knowledge have become an important resource that for many citizens is out of reach if there is no access to ICT facilities. ICT is viewed as a resource for building capacity in communities. Access to computers and the Internet has become an essential need for people of all ages (Singh, Pavothra, & Joshi, 2022).

The South African government has prioritised making access to ICT available to citizens who have no access to computers or the Internet. One such initiative was the Smart Cape Access which was an initiative of the Cape Town City Council that provided free access to ICT for residents of Cape Town (Chigona et al., 2010).

2.2.2 ICT in Civic Organisations

Over the last two decades, there has been a significant increase in civil societies like non-government organisations (NGOs) and nonprofit organisations (NPOs). According to the International Organization's Yearbook, NGOs have grown to over 65,000 (Bilbao-Osorio et al., 2014). NPOs and NGOs depend on information technology in their day-to-day operations (Bălăcescu, 2021). NGOs have also realised the importance of ICT in their attempts to provide services to the community. Gutierrez (2014) points out the challenges that NPOs, which operate within the social sector, face in the implementation of ICT being, (i) the different educational attainments, (ii) conflicts in adoption rate, and (iii) project management approaches not being consistent with NPO principles.

To address the need for sufficient information exchange between local municipalities and residents, Vivier et al. (2015) pose two questions, namely: (i) What is the most suitable platform for communication between government and citizens, and (ii) How can ICT be used to enhance substantive public service engagements? The engagement of NPOs and their adoption of ICT are hampered by their view of

Information Systems being a drain that can take away scarce resources (Gutierrez, 2014). Raspopovi and Vasi (2014) report that among professionals when it comes to the implementation of ICT for NGO activities, a communication gap exists between ICT experts and NGOs. Other challenges include irregular collaboration between NGO professionals and ICT experts which impacts the completion time of projects as well as the unwillingness of NGOs to share information about their initiatives with ICT experts (Raspopovi & Vasi, 2014). Despite these challenges, NGOs soon realise the influence of ICT as it promotes alliance amongst NGOs themselves and other groups with shared interests through the use of the internet and other web-enhanced tools (Shava & Maramura, 2016).

There is a difference in the way that ICT is viewed by the social sector such as NPOs and the private sector. To the private sector, the value they get from Information Systems and other supporting technology is economic, efficiency and competitive advantages (Gutierrez, 2014).

2.3 Mobile Technology

Mobile phones are regarded as part of ICT which has expanded to include other mobile devices such as personal digital assistants (PDA), video game consoles (e.g. PlayStation portable), smartphones, and tablet computers (Free et al., 2013). The mobile phone industry has experienced huge growth in recent years considering that the selling of the first billion phones took 20 years, the second billion four years, and the third billion in only two years (Bhavnani et al., 2008). Mobile phones have thus become the primary means of communication in both developed and developing countries.

Besides the fact that mobile phones have evolved into personal PCs for most people because of their computing and communicative capability, mobile phones are also used for social and economic development worldwide (Goggin & Clark, 2009). In Rashid and Elder's (2009) view, the rapid growth of mobile phones in developing countries has seen them becoming increasingly important for development, although evidence suggesting so was very little. The growth in mobile phone usage can also be ascribed to the ICT trend moving toward more compact and portable devices (Ingrams, 2015).

The increase in mobile usage has resulted in it being used in various forms of service delivery. The next section deals with four of these areas, namely; usage for health services, usage in government-civic engagement, usage in education, and usage in small and medium enterprises (SMEs).

2.3.1 Government-Civic Engagement

Mobile technology usage has become an important daily activity for people since the late 1990s (Ferreira et al. 2020). In developing countries, mobile phones have begun to play a vital role in encouraging citizens to engage in society and participate in governmental affairs (Foli & Belle, 2015). The local government in South Africa is mandated with service delivery and in the process communicates with citizens on key issues relating to service delivery (Vivier et al., 2015). The mobile phone has become a tool by which citizens can now interact with government structures to get access to service delivery-related information. This is also known as m-government where the public is encouraged to participate in transforming digital government information using their mobile phones (Foli & Belle, 2015).

2.3.2 Healthcare Services

The portability, technological capability, and popularity are some of the features that have made mobile technology an important tool for healthcare service delivery (Free et al., 2013). Amongst the many usages of mobile phones by practitioners in South Africa and Kenya, one use is when HIV patients are sent several reminders of their anti-viral treatment appointments (Aker & Mbiti, 2010) as well as receiving information relating to HIV/AIDS education and awareness (Goggin & Clark, 2009). Awad et al., (2021) note the advances made in healthcare through mobile technology use.

These advancements make it possible for patients to be actively involved with their health care and directly interface with healthcare providers concerning their health (Wildevuur & Simonse, 2015). Goggin and Clark (2009) also reported that the involvement of mobile phones in providing healthcare services is particularly noticeable in remote areas where there is little infrastructure.

2.3.3 Educational Use

Much research has been conducted relating to mobile phone usage in education (Sevillano-garcí & Vazquez-Cano, 2015). Baran (2014) notes that the attractiveness of mobile devices for educational purposes has also seen much investment in providing infrastructure, content and resources to integrate mobile devices into learning environments. This new learning environment goes by many names. Mobile learning (m-learning) is a name that has been used mostly worldwide and refers to E-learning where learning content is accessed using mobile devices (Elfeky & Masadeh, 2016).

Mobile phones on students have both negative and positive impacts. One study conducted indicated that while some students feel that the mobile phone interferes with learning, others feel that it helps their learning.

2.3.4 Small and Medium Enterprise

ICT in this day and age is seen as an important tool for many businesses including small and medium enterprises (SME) regarded as an avenue for developing the South African economy (Jeza & Lekhanya, 2022). For SMEs to live up to their expectations as economic drivers, they need to make use of ICT, which is recognised to improve business performance and competitiveness potentially (Hasanah, Shino, & Kosasih, 2022). Due to their portability, affordability and accessibility, mobile phones are seen as the best ICT platform to adopt as opposed to desktop personal computers which are expensive and difficult to maintain (Dorris et al., 2024). The benefits that mobile phones offer can greatly contribute to SMEs' economic performance (Mdoma, Christian, & Agbugba, 2024).

2.3.5 Mobile Technology as Part of ICT

Computing platforms in ICT have evolved a lot in recent years. Mobile phones in particular have become a very affordable ICT platform (Dar & Lone, 2022). Much of ICT activity and usage are now conducted using mobile phones. Much of the computing and processing is shifting to mobile platforms. Much of the processing which required large machines is now done on much smaller devices which are more compact and portable. ICT platforms are no longer restricted to desktop computers fixed in computer laboratories or offices. ICT is becoming more and more portable,

and the devices are becoming more compact and powerful (Dhyani et al., 2022). ICT's mobility is because of the range of portable devices which are both compact and light machines. Collaboration and communication in education, for instance, show an increase because of the use of portable devices (Heikkinen, 2023).

2.3.6 Mobile Use in the Social Sector

Access to ICT is increasingly made possible through the availability of mobile phones and would be an effective tool to use for micro-entrepreneurs (Paas, Eijdenberg, & Masurel, 2021). The increase in mobile phone usage has reached ten times more than landlines in sub-Saharan Africa over the last two decades (Odhiambo, 2022). With the potential and possibilities that mobile phones offer, those in the social sector like NGOs and social enterprises can take advantage of this to grow their impact on communities. Social sectors struggled to have access to proper technologies to enhance their impact as well as their day-to-day functions because of funding issues. With the affordability of mobile phones and the various apps available, access to ICT for social enterprises has become easier.

2.4 Social Enterprise

The following section is first looking at the definition of social enterprise followed by how they have been operating. This section also discusses why social enterprises do what they do in the context of the world, with a particular focus on South Africa, as well as within the context of the field of Information Systems.

The debate around defining social enterprise (SE) has been ongoing for the first decade after the concept first appeared in 1989. Over recent years, many researchers and practitioners have reached some common ground around the definition of SE. In South Africa, a definition for SE was adopted during a national conference hosted by the International Labor Organization (ILO) in October 2009.

Practitioner organisations in South Africa added their view of what SE is. In particular, the African Social Entrepreneurs Network (ASEN) has been very instrumental in bringing legitimacy to SE in South Africa (Bignotti & Myres, 2022). The Social Enterprise Academy Africa (SEAA) also, in its SE definition, highlights the environmental element which seeks to help the world's poorest people to get out of

poverty and, at the same time, do business that brings positive environmental and social change (Littlewood & Holt, 2015). The main idea around the definition of SE by practitioners would, therefore, be aimed at serving poor communities and making an environmental impact while applying market-oriented practices to do so.

Definitions from other countries include that of the United Kingdom (UK) and the United States of America (USA) in particular. The UK government has defined SE as a business with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or the community rather than being driven by the need to maximise profit for shareholders (Park & Wilding, 2013). Jones (2007:2), as cited by Chikadzi (2014) notes a definition by the Social Enterprise Alliance based in the USA which refers to Social Enterprise as ‘‘an organization or venture that advances its social mission through entrepreneurial, earned income strategies.’’

When using the term, distinctions can be made between scholars from the United States and European scholars (Dey & Teasdale, 2013). The US scholars according to Dees (1998) emphasise revenue-raising activities by non-profit organisations, whereas European scholars refer to the earned income of community enterprises as just one of a range of sources (Tracey, Philips, & Haugh, 2005). Also, in the USA, SE is viewed as an innovative response of non-profit organisations to funding problems (Defourny & Nyssens, 2014). Kerlin’s (2010) view on the USA and Europe differences is that commercial ventures by nonprofits are the focus in the United States whereas in Europe the focus is on cooperatives and their work around work integration for less fortunate communities.

Some consensus on a high level of abstraction regarding the nature of social enterprise has been reached by both scholars and practitioners who agree that social enterprises pursue financial success through business activities while combining it with social purposes (Young & Lecy, 2014).

SE growth has been exceptional in many regions across the world over the last three decades (Kerlin, 2010). For both Europe and the United States, the first appearance of the concept was in the early 1990s. In Italy, the idea was promoted through the launching of a journal called ‘Impresa Sociale’ in 1990 and the Harvard Business

School in the US promoted the concept through the launch of the ‘Social Enterprise Initiative in 1993 (Defourny & Nyssens, 2012). Italy, in particular, also saw the emergence of cooperative-like initiatives in the late 1980s that responded to unmet social needs like personal services and work integration (Defourny & Nyssens, 2014). This, according to Defourny and Nyssen (2014), led to the passing of a law in 1991 by the Italian Parliament which saw the formation of “social cooperatives”. Unlike in Italy, the concept of Social Enterprise in Germany (which also first appeared in the 1990s) has not been legally defined or understood in detail but yet saw various organisations adopting business principles while aiming for the common good of society (Birkhölzer et al., 2015).

In East Asian countries, civic society organisations developed in the late 1990s and the concept of social enterprise, although closely linked to socio-economic changes in the late 1990s, was only introduced around 2000 (Defourny & Kim, 2011). Non-profit organisations in Japan were first termed ‘community business’ and it was only in early 2000 that innovative organisations that combined social and economic goals began to use the concept of social enterprise (Defourny & Kim, 2011). In 2011, the Japanese government highlighted the importance of non-profit organisations in policy proposals for social inclusion after social risks increased, but no mention was made of social enterprise as a legal form (Nakagawa, 2015). In Hong Kong, the significant increase in welfare expenditure and the pressures that public funding came under in the late 1990s and early 2000s led to the Poverty Commission advocating social enterprise as a vehicle for improving skills level and employability as well as poverty alleviation (Defourny & Kim, 2011).

2.5 Social Structures

The community that SE seeks to deliver services to is generally referred to as a place-oriented concept of people participating together within a social structure (Hsu & Liao, 2014). Within this social structure, there is normally a shared interest and commitment to that interest which, according to Hansson and Wihlborg (2016), is also referred to as a community of practice. This shared interest is the much-needed service delivery that SE aims to address through their improvisation.

The formation of social structure, according to Parsons (1951), happens through

shared cultural values-orientations. In addition to the shared cultural values, human actions within a social structure contribute to their unique communication and interactions. In a social system, human actions and the structure in which they act are seen as a whole.

2.6 Improvisation of Services

Literature on Improvisation mostly draws on the example where jazz musicians improvise to create something new during their performance (Hatch, 1999; John, Grove, & Fisk, 2006). Ciborra (1996) describes improvisation as an event where people purposefully develop something new which is influenced simultaneously by chance, intuition and competence. Improvisation is also introduced as an alternative perspective to the structural and methodical planned behaviour of bringing change within an organisation (Bansler & Havn, 2004).

2.6.1 IS Development and Implementation

The implementation of new technology and systems normally goes through a process of planning and incremental change which is managed in a structured manner. In many cases, changes happen spontaneously and are when thinking and action happen on the spur of the moment (Ciborra, 1996). In these events, things happen in uncoordinated ways which enhances creativity and also speeds up the process of technology adoption (Tjørnehøj & Mathiassen, 2010).

2.6.2 Organizational Improvisation

Although improvisation is spontaneous to enhance creativity, it is often required as a crisis response for crisis management (Adrot & Robey, 2008). Preparation for unforeseeable events and the ability to improvise is a practice of crisis management in many organisations (Ley et al., 2012). Organisations and decision-makers can learn from improvised action when they are prepared to improvise in emergencies while also understanding the cognitive processes in improvisation (Mendonca & Wallace, 2007). The ability of organisations to respond to crises is important and, therefore, improvisation is a core element in crisis response because of the uncertainty and uniqueness of every crisis. (Adrot & Robey, 2008).

2.6.3 Service Delivery Improvisation

The engagement between those providing service and those who receive service can sometimes be so scripted and tight that it cannot respond to unusual needs (John et al., 2006). It is therefore important for the ability to improvise to deal with unforeseen events and matters that require urgent attention. One way of improvisation in service delivery is using available resources to creatively disseminate messages about potential opportunities to communities (Arora, Ward, & Petter, 2010). Mobile devices as available resources would, therefore, be a good communication channel for both service providers and recipients of services.

2.7 Technology Acceptance Model

2.7.1 Overview of TAM

The Technology Acceptance Model is an underpinning theory which investigates why users come to accept and use or reject technology. TAM was introduced by Davis (1989) as an information systems theory that models how users come to accept and use technology. TAM consists of two factors, namely perceived usefulness and perceived ease of use which determines technology acceptance within the workplace (Edmunds, Thorpe, Conole, 2012).

Many researchers in the field of technology acceptance point out how technology has become part of almost every person's life and how important it is to understand why people accept and use or reject technology. As stated by Davis and Venkatesh (1996), many organisations face risky decisions to supply or consume technology because of the uncertainty of the eventual effectiveness and use of information systems. Companies invest a lot of money in designing and implementing software and despite the benefits that these systems offer, users prefer not to use them, which results in failed investments (Calisir et al., 2015).

These information systems or technologies end up being underutilised and no return on investments can be realised by organisations if systems are not used by the intended users (Yi & Hwang, 2003). It has therefore become important within the field of information systems to study the acceptance and adoption of technology by users. A lot of research has been done and many models have been designed to investigate the factors that impact users' acceptance behaviour (Yi & Hwang, 2003). One such

model is the Technology Acceptance Model developed by Davis in 1989 as part of his doctoral studies. There are two theories of particular interest regarding the formation of TAM, which is the Theory of Reason Action (TRA) and the Theory of Planned Behavior (TPB).

2.7.2 Theory of Reason Action (TRA)

The TRA was developed by Fishbein and Ajzen in 1975 to evaluate human behavioural intentions to understand and predict human behaviour and attitudes. In TRA, Fishbein and Ajzen (1977) propose that an accurate prediction for a person's behaviour is his behavioural intention to perform an action which impacts the actual performance of the action. The way Martins et al. (2014) put it is that, through a person's beliefs, his attitude is influenced, which leads to his intention to behave, and which eventually causes him to express some behaviour.

Two factors influence behavioural intention. These are (1) Attitude towards the behaviour (A), which is a person's favourable or unfavourable feelings towards that behaviour and (2) Subjective Norms (SN), which is the person's perception about whether important people expect him to perform or not perform the behaviour (Chang, 1998). Because TRA was drawn from social psychology, it could not be applied to information systems in its current form and would therefore later be adapted to form TAM which was specifically tailored for user acceptance in Information Systems (Silva & Dias, 2008).

2.7.3 Theory of Planned Behaviour (TPB)

The other theory that motivated TAM was the TPB, developed about a decade after the TRA to predict and explain human behaviour within a given context (Silva & Dias, 2008). In addition to attitude toward behaviour and Subjective Norms, Ajzen also added a third construct, namely perceived behavioural control (Mathieson, 2016). The perceived behavioural control points to a person's decision to perform a behaviour out of his own will and understanding of the consequence of performing or not performing a behaviour (Shore et al., 2018; Silva & Dias, 2008).

Although both TRA and TPB have been applied to evaluate technology acceptance in IS, it has proven to exclude the use of subjective norms in these cases (Mathieson,

2016). Mathieson (2016) further states that beliefs in TPB are specific to each context which makes it differ from TAM in that it is more difficult to generalise across different user contexts, although both TAM and TPB were derived from TRA (Lee, 2010).

2.7.4 TAM Tenets

As stated earlier, TAM was developed by Davis in 1985 and is regarded by researchers as an underpinning theory suitable to give an understanding of factors impacting information technology acceptance in organisations (Iyamu, 2014). As an adaptation of the TRA, TAM consists of two factors, namely perceived usefulness and perceived ease of use which determine technology acceptance within the workplace (Edmunds et al., 2012). These perceptions are influenced by external variables, including the characteristics of a system, the training experience and the development process of the system (Venkatesh & Davis, 2016).

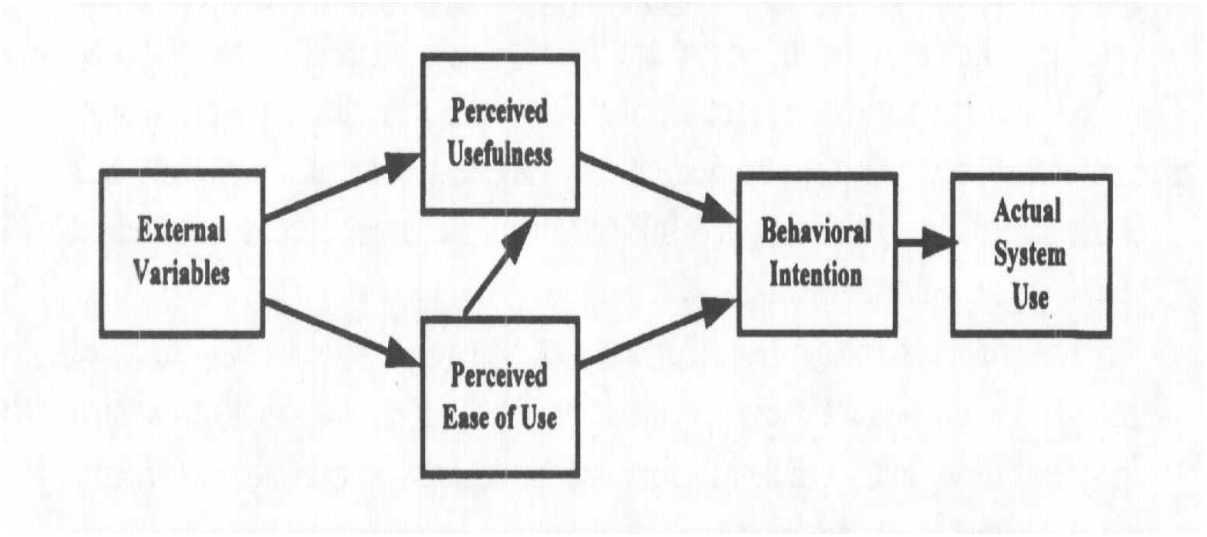

Figure 2.2 Technology Acceptance Model (Davis & Venkatesh, 1996)

In the model above, it is shown that there are external factors that impact a person's perception of both the usefulness and ease of use of a system. This means that factors like system features and system training experience do impact whether a person perceives a system to be useful or easy to use. TAM went through various developments and in the original model shown in Figure 2.1, Davis indicates that the three factors, namely Perceived Usefulness, Perceive Ease of Use and Attitude

towards using, explain users' motivation towards the use of a system (Chuttur, 2009).

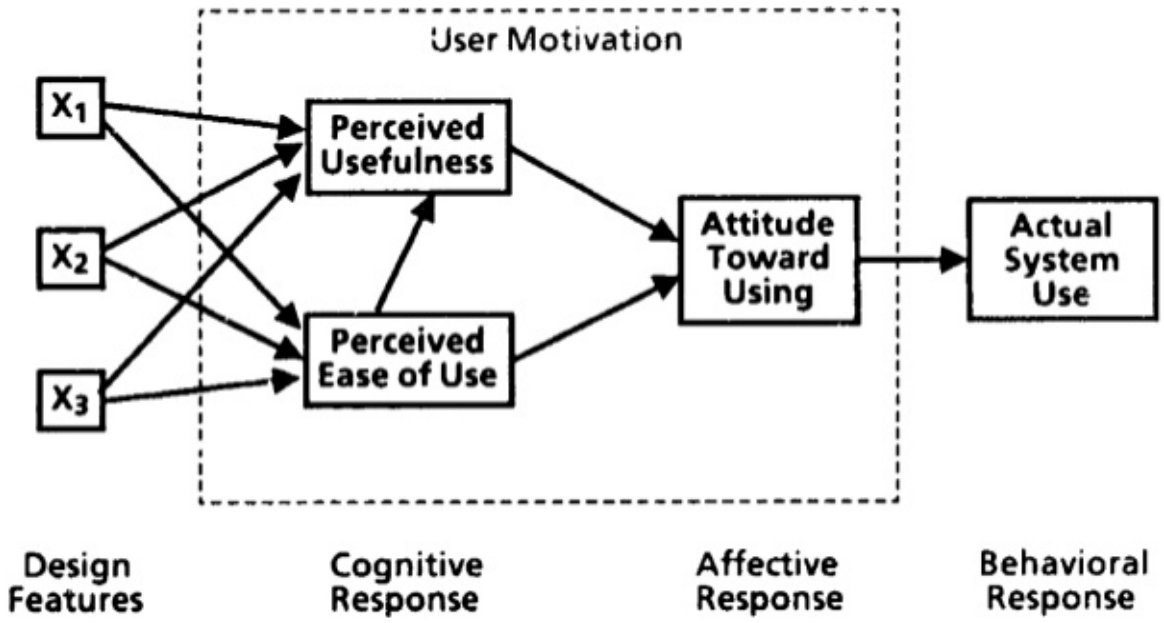

Figure 3.2 Original Technology Acceptance Model (Davis, 1986)

In Figure 2.2 Davis points to the effects that design features (indicated by X1, X2 & X3) have on users' perceived usefulness (PU) and perceived ease of use (PEOU). Shore et al. (2018) refer to PU and PEOU as cognitive responses that impact effective responses and behavioural responses.

Another variation of the TAM model, as shown in the diagram below, refers to internal/external variables as elements that impact PU and PEOU and, in addition to that, Attitude Towards Use (ATU) is included as a determinant of Behavioral Intention to Use (BI) (Mugo et al., 2017). As shown in this diagram, a user's attitude towards using (ATU) is a key determinant for BI, which impacts the user's actual use (AU) of the system. ATU is influenced by the two key determinants, namely PU and PEOU. PU is the degree to which a user perceives a system to be useful in helping him to accomplish a task. PEOU, on the other hand, is the degree to which a user finds a system easy to use. In other words, can the user perform a task with ease without having to struggle to get to certain system features?

2.7.5 The Applications of TAM

Various articles were written on the application of the Technology Acceptance Model.

The fields in which TAM has been applied are computer science, information systems, and information science (Silva & Dias, 2008). More specifically, TAM has been applied in e-commerce, eHealth, eLearning and eGovernment.

Yoon (2016) applied TAM to investigate factors that impact user acceptance of mobile library applications in academic libraries. Mugo et al. (2017) also applied TAM to the utilisation of mobile technologies and proposed how the development and utilisation of mobile technologies for T & L can be predicted through the adoption of TAM. Still, within the field of teaching and learning technologies, Alharbi and Drew (2014) apply TAM in an attempt to understand academics' behavioural intentions in using Learning Management Systems (LMS). The authors continue to propose a theoretical framework based on TAM for effectively implementing LMS and to measure the behavioural intentions of academics for using an LMS.

In mobile technology and mobile services, Park and Kim (2014) explored the key determinants of TAM in integrating the model for mobile cloud services. The authors' purpose was to examine how the identified factors (such as user perception of mobility, security, connectedness, services and satisfaction as key components of cloud services), affect user perceptions and acceptance of services (Park & Kim, 2014).

Qi et al (2009) extend the TAM to analyse the adoption of mobile data services by Chinese subscribers and their findings indicate that subscribers' consumption intention is greatly affected by mobile voice services and the innovation experience of mobile data services.

2.8 Summary

This chapter gave an insight into what other researchers have written on the keywords contained in this research. It first recorded a literature review on ICT and how it shaped the current usage of ICT in community development. It also highlighted the significant role ICT plays in NGOs, NPOs and other civic organisations. Gutierrez (2014), for instance, highlights the implementation challenges that the social sector faces, which is in contrast to already established private and public sectors. Mobile Technology is the second keyword on which a literature review was done. Here, mobile technology was discussed as used in the context of government-civic engagement in the quest

for better service delivery by government agencies as well as increased involvement by citizens. Other areas where mobile technology has become an important tool for information engagement and sharing are healthcare service delivery (Free et al., 2013), education delivery (Sevillano-garcí & Vazquez-Cano, 2015; Baran, 2014) and SMEs (Jeza & Lekhanya, 2022).

The chapter also highlighted social enterprise as a driver of socioeconomic change. It points out the newness of the concept in the South African context, and how it developed in the European and American contexts. Key authors, including Defourny & Nyssen (2014) and Kerlin (2010) as well as practitioner organisations like ASEN and SEAA define Social Enterprise and mainly highlight it as having a social mission through entrepreneurial, income generation strategies.

Community is discussed under the banner of Social Structures and refers to the target to which social enterprise aims to deliver services. Along with this, the idea of improvisation is highlighted, which deals with spontaneous changes when thinking and actions happen on the spur of the moment (Ciborra, 1996). These spontaneous actions are where services are delivered by using available resources to distribute messages of potential development opportunities to communities (Arora et al., 2010).

The last section in this literature review chapter discussed TAM as the underpinning theory for this research study. It gives an overview of TAM, points out its origin, and highlights TRA and TPB as two theories from which it was developed. The main tenets of TAM, including PEOU, PU and ATU are discussed and how it impacts behavioural intents (BI) and the actual use (AU) of a system/technology. Many authors have written on the application of TAM, including Mugo et al. (2017); Yoon (2016); Alharbi & Drew (2014); Park & Kim (2014) and Silva & Dias (2008).

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the steps taken during the research process as well as the experience and challenges encountered during the data collection. The research methodology and design applied in this study is shown in Figure 3.1 and describes how the researcher went about achieving the research objectives outlined in Chapter 1, namely:

i. To examine and understand the factors that influence how SE uses information to provide services to communities.
ii. To investigate how mobile technologies can be used to facilitate ease of access to information and service distribution.

The research methodology is the process by which the researcher applies the chosen methods to research a particular phenomenon. The diagram below outlines the approaches, methods, and techniques applied in this study.

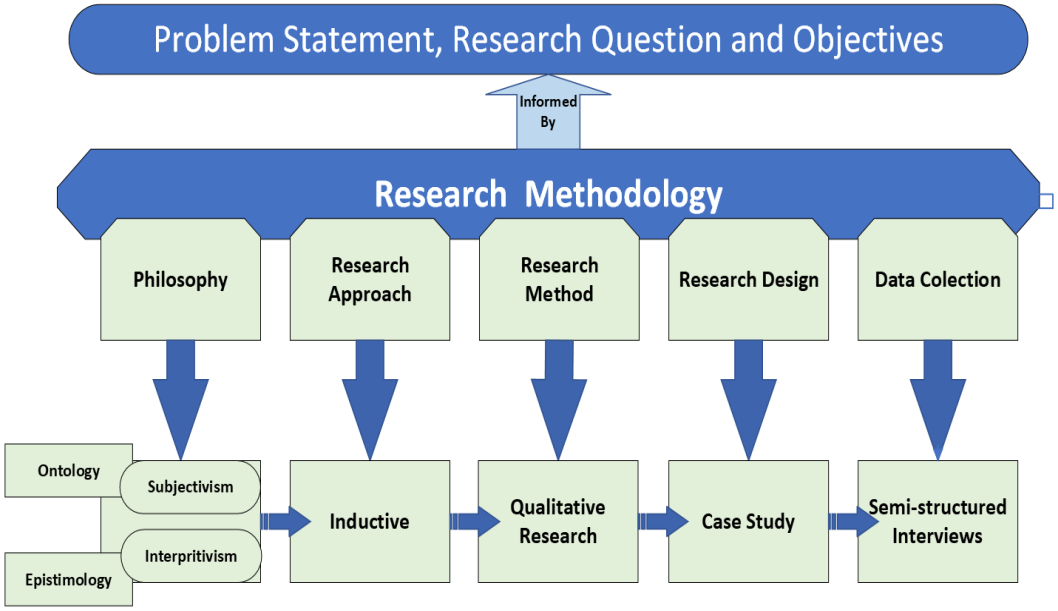

Figure 3.4 Research Design and Methodology

The following sections look at the philosophical assumption, the research approach,

the research methods, the research design, and the data collection techniques.

3.2 Philosophical Assumption

In research, there is a philosophical assumption that informs the appropriate research process to acquire knowledge within a study that answers the research questions. Research philosophy is described by Saunders et al. (2015) as knowledge that is developed based on a system of beliefs and assumptions. Cameron (2011) again indicates that a set of assumptions makes up a research paradigm which is how the researcher views the world. Neuman (2014) defines a paradigm as a system of thinking that includes basic assumptions and answers important questions like which research techniques to use.

According to Saunders et al. (2009), a particular research philosophy determines the choice of research strategy and methods as part of that strategy. A person's worldview influences how reality is perceived as well as how to go about discovering knowledge around the perceived reality. The researcher's worldview is also referred to as the research paradigm which deals with the way a researcher sees the world which is shaped by their abstract beliefs and principles. Two aspects that influence the researcher's worldview and choice of research methodology are ontological and epistemological assumptions where ontology looks at the nature of reality, and epistemology looks at how knowledge is derived (Kant, 2014).

3.2.1 Ontology

Ontology is the study of being and the nature of existence (Creswell, 2014). In other words, ontology is about the nature of reality (Saunders at el., 2009). According to Scotland (2012), ontology is concerned with that which makes up reality. He further states that the importance of a researcher is to position themselves as to how things are and how they work.

The nature of reality in the context of the study is that there are communities that face challenges when it comes to receiving services from service providers like the social enterprises working in these communities. The fact that not all communities benefit from services being delivered points out the reality of information distribution challenges faced by both service providers and receivers.

3.2.2 Epistemology

The researcher's ontological beliefs influence their epistemological beliefs. Marsh and Furlong (2010) regard ontology and epistemology as related and that a researcher's epistemological position is affected, but not determined, by his ontological position. Epistemology, according to Scotland (2012), is how knowledge is created, how knowledge is communicated and how knowledge is acquired. Guba and Lincoln (1994) state that epistemology features the question of how the researcher relates to that which can be known. Kant (2014) points out that when the researcher can identify the nature of the reality under investigation (ontological position), the research then looks at what can be known about that reality (epistemological position). There are different epistemological viewpoints or approaches by researchers in how they go about acquiring knowledge. Two of these views will be discussed next, namely, positivism and interpretivism.

3.2.2.1 Positivism

Positivism is defined by Yin (2011) as a natural science with universal truths and the researcher's role is to discover these truths. The discovery of knowledge of something can only be acquired through our senses (hearing, seeing, touching, and smelling) and promotes the idea of experimentation (Greener, 2008). Positivists follow a realist ontology and they believe that knowledge is discovered objectively (Scotland, 2012). This means that reality can be described by properties that are measurable and independent of the researcher (Myers, 1997).

3.2.2.2 Interpretivism

This study aims to uncover people's subjective views of what they experience in their surroundings. Positivism would therefore not be a suitable approach for this study as it deals with objective views. This study is interested in people's subjective views, and it was important to gain a deeper understanding of participant's perceptions of the impact of the adoption of mobile technology when it relates to service delivery.

Interpretivism is viewed by Scotland (2012) as multiple realities where reality is constructed by individuals. The researcher thus seeks answers to the research investigation by viewing the world as constructed by the experiences and perceptions

of individuals (Thanh & Thanh, 2015). Myers (1997) further highlights interpretivism as a study where understanding of a phenomenon is sought in the meanings that people assign to it. It is therefore important for the researcher to know that research is conducted with people as social actors who can interpret things in a particular way (Saunders et al., 2009). The need to interpret and explain people's behaviour is therefore core to interpretivism (Hay, 2011).

This study aims to discover what meanings people give to phenomena in their natural setting and thus an interpretivist view best suits this study.

3.3 Research Approach

Researchers often distinguish between three approaches that form the basis of their investigation, namely, deductive, inductive and adductive approaches (Woo et al., 2017). The deductive approach is aimed at testing theory and usually starts with a hypothesis. The logic of deduction is to make logical conclusions based on existing truth. It thus takes that which is generally true to make assumptions, propositions, and conclusions about that which is specific. Inductive, on the other hand, seeks to build theory from existing truths. The researcher observes the world and develops a theory from the empirical evidence that was observed (Neuman, 2014). Stated differently, the researcher comes to certain conclusions by deriving meaning from the collected data (Creswell, 2014).

The inductive approach was more appropriate for this study as it sought to build a theory based on the observed empirical evidence. The researcher wished to derive meaning from the understanding and perceptions of participants regarding the adoption of mobile technology for service delivery within their natural settings.

3.4 Research Method

Academic research differentiates between two main research methods; Qualitative and Quantitative research. Creswell (2014) states that research should be viewed either as more qualitative or more quantitative but not as opposites and includes mixed method research as the third approach which finds itself in the middle of qualitative and quantitative approaches. Mkhomazi and Iyamu (2013) support this by saying that the two approaches complement rather than contrast each other. The research

question and objectives inform the approaches but also influenced by the underpinning philosophical position.

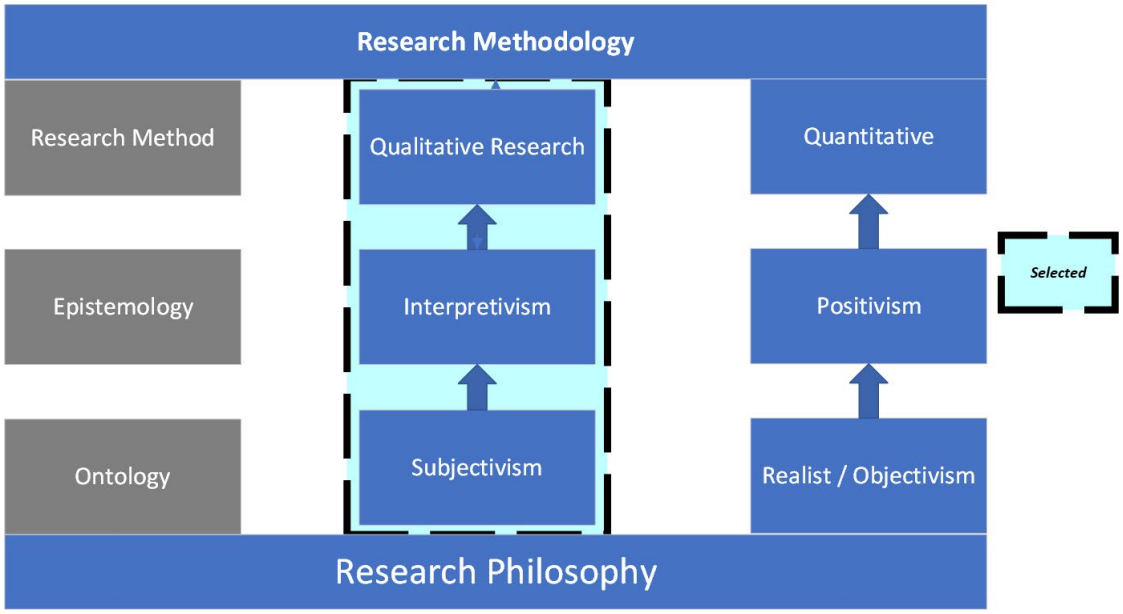

Figure 3.5 Research Approach as Influenced by Philosophical Underpinning

Figure 3.2 shows how each research approach is influenced by the selected philosophy as well as the selected approach indicated. Each of the research approaches is further discussed below.

3.4.1 Quantitative research

Kothari (2004) regards research where the measurements of natural phenomena are based on quantity and amounts as quantitative research, adding that it is further subdivided into experimental, simulation and inferential approaches. Quantitative researchers go on the philosophical premise that reality is measured objectively and use quantitative methods to collect data that yields accurate and objective information (Adjei-Boateng, 2020). Creswell (2014) further states that objective theories in quantitative research are tested by examining the relationship between variables measured on instruments and the data analysed through statistical processes. A quantitative study such as experimentation is normally used where relationships between variables are discovered and in so doing, hypotheses are tested (Kothari, 2004). The researcher uses statistical procedures to draw inferences from the population sample to test hypotheses used in the experimentation (Creswell, 2014).

When referring to a hypothesis, Neuman (2014:68) has the following definition:

"*An empirically testable version of a theoretical proposition that has not yet been tested or verified with empirical evidence. It is most used in deductive theorizing and can be restated as a prediction*."

Quantitative research is mostly used in natural science in the study of natural phenomena (Myers, 1997) where reality is measured objectively and where the researcher takes an outsider's view. Quantitative research applies to phenomena that are expressed in measurements of quantity, whereas qualitative research is concerned with phenomena that involve quality or kind (Kothari, 2004).

Seeing that this study aimed to understand people's behaviour regarding the adoption of mobile technology for service delivery, the quantitative research method would not be suitable as it objectively measures reality and is not interested in people's subjective views. It was important to discover what meaning people give to experiences in their natural setting and a deeper subjective understanding was therefore necessary.

3.4.2 Qualitative Research

The alternative to quantitative research is qualitative research which, for many academic and professional streams, became a mainstream form of research that allows for in-depth studies on a wide range of topics (Yin, 2011). In the search for in-depth inquiry, the researcher often takes an insider's view, which means that the researcher's report is influenced by their position and experience as a researcher (Greener, 2008). Qualitative research follows relativist ontology and an interpretive epistemology as the aim is for subjective views and the discovery of realities as constructed by individuals.

The study of human behaviour, where the aim is to discover the underlying motives of people, is of particular interest in qualitative research (Kothari, 2004) which has its origin in social science where cultural phenomena are studied (Myers, 1997). This means that the researcher takes an insider view discovering reality as constructed by people's subjective views. Creswell (2014) therefore looks at qualitative research as

the aim of exploring and understanding what meaning individuals or groups would give to a social problem. Kothari (2004) again states that through qualitative research the various factors which motivate people to behave in a particular manner can be analysed. Instead of trying to define qualitative research, Yin (2011:7) highlights five features of qualitative research for consideration. These are:

1. The meaning of people's life is studied in the real-world environment.
2. The views and perspectives of people are represented clearly.
3. The context within which people live is covered.
4. Human social behaviour is explained through the contribution of insight into existing or emerging concepts.
5. Multiple sources of evidence are used rather than a single source.

The meanings that people construct concerning their lives are through their engagement and the way they interpret the world they live in (Creswell, 2014). In qualitative research, people need to express themselves in their current setting. In the view of Maxwell (2004), this equates to understanding what meanings people give to the situation and circumstances they find themselves in.

The views and perspectives of people do matter in qualitative research. It is thus important for the researcher to represent the perspectives of the participants as viewed by them within the social or cultural context they live in. It is in qualitative research that social processes can be studied and examined within people's social context (Neuman, 2014). The contribution of insight into existing or emerging concepts helps to explain the social behaviour of people and these contributions come from multiple sources instead of a single source.

The objectives of this research were to **(i)** examine and understand the factors that influence the services that social enterprises provide to communities in South Africa; and **(ii)** to investigate how the use of mobile devices can facilitate and ease access to information and service distribution. Because of the nature of the questions asked, and because of people's involvement and the importance of their perception, the study could best go ahead by discovering which meanings people give within this context. The researcher believed that adequate insight could only be gained by discovering knowledge as given by participants within the setting or environment being

investigated. To obtain quality data, the researcher had to get meaning as constructed by individuals within their social context. A qualitative research approach was selected as the researcher needed to understand the meanings people give to the situations and circumstances they find themselves in (Maxwell, 2004). The next section looks at the research design selected for this study.

3.5 Research Design

The choice of research design discussed here was informed by the research objectives. Ellis and Levy (2008) state that the possible goals for a study are delimited by the nature of the research problem being addressed. The researcher chose a particular strategy, including methods, in the process of solving the research problem. The choice of research strategy and methods involved is underpinned by the research philosophy (Saunders et al, 2009). Within the selected research method (qualitative research) for this study, there are different methods that one can select from. These methods, which include ethnography, grounded theory, and case study will be discussed in the next paragraphs.

3.5.1 Ethnography

Ethnography has its origin in anthropology. It is a research design approach where the researcher observes behavioural patterns of a cultural group within their natural settings over a prolonged period (Creswell, 2014). Ethnography refers to the process by which the social expressions of people and groups are described and interpreted by the ethnographer/researcher (Lune & Berg, 2017). This process involves observing the interaction of many people over time while studying and interpreting their shared cultural beliefs, behaviours and values (Creswell, 2013).

Ethnography requires the researcher to spend lengthy periods within the natural settings of people and groups, to observe detailed evidence (Yin, 1994). Because the researcher needs to learn from those being observed and their perceptions, the researcher must appreciate what is happening around them without attempting to change the events or even agreeing with the observed events and perceptions (Lune and Berg, 2017). This approach, however, was not necessary for this study as it did not require observing people over lengthy periods.

3.5.2 Grounded Theory

As a qualitative approach in research design, grounded theory, through systematically collected data, seeks to develop a theory that is grounded in the collected and analysed data (Ramalho *et al.*, 2015). In grounded theory, a general abstract theory is derived through a process that involves collecting data in multiple stages (Creswell, 2014). The process of collecting and analysing data systematically allows the researcher to record aspects of the study as soon as they are identified (Corbin & Strauss, 1990).

3.5.3 Case Study

The case study method can be described as a means to gain an in-depth understanding of a complex issue within its natural setting (Crowe *et al.*, 2011). An empirical inquiry is made through which a phenomenon is investigated within its current setting. A case should therefore not be isolated from its context. Yin (2013) states that the case should examine the likely interaction between the case and its context to arrive at a sound understanding. The case study thus allows empirical events to be investigated while studying the real-life events within a specific setting.

For this research, the case study method was employed to address the research questions. Two cases in the Western Cape, South Africa, were selected for the study. The communities are Khayelitsha and Philippi. The choice of two cases was mainly to have two distinct views from settings and environments with different cultures and traditions.

3.6 Data Collection

Data collection is based and guided by the research approach and strategy chosen for this study which is qualitative research and the overarching strategy to collect data was a multiple case study. Of the selected cases, individuals were selected for interviewing and criteria were drawn up and used for the selection of participants. The different techniques for collecting data in case study research include interviews, observations, questionnaires and documentation (Twining *et al.*, 2017). The following section discusses the two methods of data collection, namely, interviews and documentation and how the interviews were arranged and conducted.

3.6.1 Interviews

An Interview is defined by DeMarrais and Lapan (2003) as a process where questions relating to the research are the focus of a conversation between the researcher and the participants. Interviews can be conducted by the researcher in the form of face-to-face interviews, telephonic interviews, or focus group interviews (Kothari, 2004). With interviews, the researcher is provided with a useful way of learning about the world of the participants (Qu and Dumay, 2011).

From the range of interview formats, namely, structured, unstructured and semi-structured interviews (Kothari, 2004; Doody & Noonan, 2013), semi-structured interviews were selected for this study. The predefined questions for the semi-structured interviews were compiled based on the research questions, served as a guide to the researcher, and allowed the freedom to seek clarity from the participants (Doody and Noonan, 2013). Semi-structured interviews were also chosen for the data collection because of their flexibility and usefulness in disclosing sometimes hidden organisational and human behaviour (Qu & Dumay, 2011).

The interview questions were drawn up and served as a guide to both the researcher and the interviewed participants. Questions were rephrased where necessary to give clarity. Follow-up questions were also asked to prompt for information where appropriate. The interview questions were categorised as follows:

A. About Organisation
   - Questions about the organisation and the participant's involvement in the organisation

B. Organisation’s functions and operations
   - Questions about the organisation’s functions and operations and what type of services they provide to the community.

C. Marketing of services
   - Questions about the organisation's marketing strategies and processes in which people are informed about the services they provide.

D. About technology integration
   - Questions about how the organisation currently uses technology as well

as how it is integrated into the work functions. These also include questions about the future intended use of technology and communication platforms.

A detailed form of the interview guide is presented in Appendix A.

3.6.2 Participant Criteria

Two social enterprises were selected to form part of the case study. After obtaining clearance to proceed with data collection, the organisations were contacted to arrange interviews with participants. Both organisations provide some sort of service to the communities they are involved in and there are therefore, both service providers and recipients. The participants therefore fall into two categories, namely, those in the community that are the beneficiaries of the provided services and staff members of the respective social enterprise organisations. The criteria for these different participant categories were as follows:

1. Organisation staff.

   These include directors, people who have worked for three or more years and who are involved in various roles, ranging from the board of directors, project officers and coordinators, fieldworkers to support staff.

2. Community Groups and Members

   These include those who directly or indirectly benefit from the services provided by social enterprises. The selection criterion here is any person in that community who has been exposed to the provided services or community leaders who are part of a community group and have been involved in a project driven by the social enterprise organisation.

3.6.3 Interview Process

Before interviews could be arranged, the organisations were sent consent letters in which they were requested to grant their permission to partake in the study and would be available for interviews.

Interviews were arranged using telephone calls or via email. All interviews were either conducted at the organisation’s office in the case of the first category or at the location

where services are provided and received in the case of the second category of participants. The interviews took place between July and September of 2023. Before the commencement of each interview, the participants were asked if the interview could be audio recorded, to which the participants agreed. The longest interview was 57 minutes, and the shortest interview was 5 minutes. The reason for the short interview of 5 minutes was firstly, it was not a pre-arranged interview and secondly, the person who was interviewed did not have much time and struggled with English. It should finally be noted that during the semi-structured interviews, the researcher did not cover all question categories with all participants. Because of the different roles of the participants, community members were not asked certain question categories. Questions were limited to obtain information relating to their experience as service recipients.

3.7 Data Analysis

The data was collected using people who responded to questions based on the way they viewed the world around them. In the data analysis process, the researcher followed an interpretive approach because each response to a single question is different based on the meaning that each respondent gives to it. Rich data is obtained through the process of probing during the semi-structured interview which allowed the researcher to get a deeper insight into what meaning a respondent gives to their world.

To get meaning from the data collected, participant's responses were analysed through an ongoing process where the researcher made use of specific steps as well as general steps (Creswell, 2014). The general steps in the data analysis process involved organising, categorising and coding data. The specific steps were the application of a theory as a lens to analyse data. The next two sections discuss these two steps in detail.

3.7.1 Data Organization and Coding

The data goes through a process of being organised, categorised and coded, which is where large phrases of statements in textual data are reduced to short phrases or simple words to capture the meanings (Neuman, 2014). The reason for organising and categorising data was to create themes to establish patterns between data themes. Before data could be analysed, the audio recordings were first transcribed word for

word and captured in a Word document, which was given line numbers for easy referencing purposes. The researcher continued to clean up the transcribed text by correcting spelling errors and making sense of some of the unclear sentences. English was not the mother tongue of most of the participants and the researcher needed to make sense of the way sentences were phrased. Where still unclear, the researcher had to re-listen to the voice recording.

3.7.2 Application of TAM

It is of critical importance to select the appropriate theory to underpin a study because the outcomes will be determined by it (Iyamu, 2013). The selection of the Technology Acceptance Model was mainly driven by the research objectives of this study as outlined in Chapter 1. The selection was also because of the appropriateness of TAM in showing how technology is accepted and used and also highlighting the factors that influence the users' decisions (Pitt et al., 2011; Lu & Yang, 2014).

The determinants of TAM, namely, Perceived Usefulness, Perceived Ease of Use, Behavioural Intention and Actual Use, were listed as themes during the categorisation, organisation, and coding process. These determinants indicated how users would accept and use a particular technology. This study examined how users would adopt mobile technology in their social enterprise functions. Other variables were listed and served as external impacts on Perceived Usefulness and Perceived Ease of Use. These variables included the make and models of mobile phones, mobile phone features, and exposure to mobile phone usage.

The collected data were categorised into data obtained from the community members and data obtained from the social enterprise staff members. During the data analysis process, the tenets of TAM were used to determine participants' perceptions of the use of mobile technology for the purpose of related tasks. As an example, perceived usefulness helps to uncover how participants perceive mobile technology to be useful for performing work-related tasks.

3.8 Ethical Considerations

All people recognise common ethical norms but are differently interpreted and applied based on people's life experiences and values (Resnik, Elliot, & Miller, 2015). The

researcher ensured that ethical considerations were correctly applied in this research. The researcher therefore ensured that the research did not place any participant at risk of harm or danger.

The researcher also ensured that the ethical standards set by the Faculty of Informatics and Design of Cape Peninsula University of Technology were adhered to. An ethical clearance letter was obtained from the faculty. Consent letters were sent out to participants wherein they were informed of the nature and purpose of the study. In this letter, participants were also assured before the interview that they had the right to withdraw from the interview and that all responses from participants would be treated as confidential and anonymous. Permission was also requested from participants for interviews to be recorded.

3.9 Summary

This chapter looked at the choice of research methodology as informed by the research aim and research question, and a summary of the methodology is shown in Table 3.1. The two aspects which influenced the researcher's worldview, namely, ontology and epistemology were discussed as well as the different types of positions under each of these aspects. What was pointed out was that a realist / objectivist ontological stance leads to a positivist epistemological position. In contrast, relativist / constructivist ontology leads to an interpretivist epistemological stance.

Level		Contrasting Stances (Choices)	
Underpinning Philosophy	***Ontology*** Beliefs about the nature of reality	***Realist, Objectivist*** There is one objective reality	***Subjectivist, Constructivist*** There are multiple realities
	Epistemology Beliefs about how knowledge is acquired	***Positivist*** You discover reality There is one true explanation	***Interpretivist*** Meaning is culturally defined
Research Approach	**Methodology**	***Quantitative Research***	***Qualitative Research***
	Design	Overarching strategy for collecting data	

			Experimental Quasi-Experimental Random Controlled Trails	***Case Study*** Action Research Ethnography
		Emphasis	Deductive Reasoning	***Inductive Reasoning***
	Data Collection	**Methods**	Techniques for collecting data such as Survey / Questionnaire; Structured, ***Semi-Structured***, Unstructured ***Interview*** / Focus Groups; Document Analysis; Observation	
		Instruments	Specific data collection tools such as questionnaires***; Interview Questions*** (open-ended and close-ended questions)	
		Participants / Units of Analysis	Specific criteria are set depending on the selected methodology and design: • A small group of participants/focus groups are selected for interviews; • A large sample size is selected for surveys	
		Analysis	How data is processed to make sense of them so that the research questions can be answered	

Table 1.1 Summary of key terminologies used in the research adapted from Twining (2017:7)

The philosophical underpinning of this study was pointed out as being a relativist ontology and an interpretivist epistemology as the research believed that there are multiple realities, realities were constructed by the meaning that people gave to it in their cultural settings and people's opinions and perspectives were valued.

The philosophical assumptions influenced the methodology adopted in this research. This involved the choice of research design, research approach, research strategy, data collection methods, and instruments used for data collection. The research approach adopted for this study was qualitative research and the overarching strategy for collecting data was a case study.

The data collection method was a semi-structured interview and the instrumentation used was open-ended interview questions which served as a guide to the interviewer (researcher). Documentation and the analysis thereof were also used as a method of collecting data.

A multiple case study was selected as a qualitative strategy and the rationale behind the choice of the different case studies and participants was stated. Table 3.2 shows a summary of the key terminologies discussed in this chapter and underlines the selected approaches.

CHAPTER 4

OVERVIEW OF CASE STUDIES

4.1. Introduction

This chapter provides a detailed description of the case selected for this study. It consists of three main sections. The first section discusses the reasons for the selection of the case, and the second and third sections provide a detailed overview of the case study in terms of its history and organisational and operational structure.

4.2. Selection of Case Studies

The selection of the case was based on the researcher's aims and objectives to understand the factors which impact social enterprises' service delivery to communities. This case fits what is classified as a social enterprise described in Chapter 3. Also, it was accessible to the researcher and is in the Cape Flats of the Western Cape of South Africa. After submitting the research proposal to the Faculty of Informatics and Design at Cape Peninsula University of Technology, consent letters were obtained from the organisation where the research would be conducted, and the CPUT gave ethical clearance for the commencement of data collection.

In terms of privacy, the name of the organisation taking part in this study was hidden and given a pseudonym. The name of the organisation in this study was referred to as *Well Grow Social Enterprise (WGSE)*. The data was collected using semi-structured interviews, as described in Chapter 3.

4.2.1. What is WGSE?

WGSE is a non-profit micro-farming organisation based in Cape Town, South Africa. Its mission is to combat poverty by growing food sustainably using organic methods, both at home and in community gardens. Also, WGSE supports farmers in production planning, soil infrastructure, harvest planning, and seed access. WGSE aims to provide basic human necessities for indigent persons, from survival to commercial farmer development.

WGSE's core business is to empower the disadvantaged through urban agriculture and environmental programmes and projects. The goal is to combat poverty by

growing food sustainably using organic methods, both at home and in community gardens, and to provide support to farmers in production planning, soil infrastructure, planning harvests, and access to seeds.

Its core business is implemented through four pillars:

1. Providing training and extension services to small-scale farmers.
2. Providing access to affordable seeds, seedlings, and manure for production.
3. Providing support around capital infrastructure, such as irrigation and manure for soil building, depending on available funding.
4. Providing access to the market to allow farmers to sell surplus vegetables.

In addition to these four pillars, WGSE also provides organisation-building and administrative support. The core business is implemented through a strategy, policy and systems, oversight, and disclosure. The field team is the core of what they do, and they have been very committed through the years, putting a lot of pressure on the team.

WGSE’s target areas are the Cape Flats, including Khayelitsha, Nyanga, Philippi, Browns Farm, Crossroads, and Gugulethu, which are ecologically sensitive sand dune areas that contain some of the most threatened floral species within the unique Cape Floral Kingdom, a World Heritage Biome. The target group lives in vast informal settlements, often referred to as townships of Cape Town, where over a million people live, mostly in shacks and matchbox houses. Approximately 40% of its people are unemployed. The majority speak isiXhosa and are migrants from the Eastern Cape – the former apartheid homelands. The beneficiaries of WGSE are predominantly women (63%), followed by men (37%). The youth forms 20% of the total beneficiaries.

4.2.2. Organisational Structure

The organisation is governed by a board of directors, which includes a chairperson, managing director, secretary and public officer, treasurer, and additional members. The board is responsible for providing strategy, policy, and systems oversight.

The core of WGSE's work is carried out by its staff, who are organised into a field team responsible for training and providing extension services to small-scale farmers,

providing access to affordable seeds, seedlings, and manure for production, support around capital infrastructure, such as irrigation and manure for soil building, and access to the market to allow farmers to sell surplus vegetables. Farmers are supported by a group of sixteen staff and volunteers through training and access to affordable resources. In addition to the field team, WGSE has an administrative team that provides organisation building and administrative support. The managing director leads the team, with support from a field programme manager and other staff members. Overall, the organisational structure is designed to support WGSE's core business of empowering the disadvantaged through urban agriculture and environmental programmes and projects.

4.2.3. Core Business

The organisation aims to tackle poverty through sustainable agricultural practices within the local community gardens and home gardens. Local farmers at the community and home gardens are supported through training, including production planning, harvest planning and understanding soil infrastructure. The core functions of WGSE include:

i) the provision of training to small-scale farmers.
ii) the provision of farming resources such as seeds, seedlings, and manure.
iii) capital infrastructure support; and access to the market for selling their surplus products.

4.2.4. Garden Centres

At the heart of WGSE's activities are the garden centres where training takes place and people can buy resources such as seeds, seedlings, manure, and tools. The garden centres also produce vegetables for sale to the community. They have demonstration gardens that serve as an example of what can be achieved. The membership drive is held in March each year and has been well received by both home and community gardens.

WGSE provides training and extension services to small-scale farmers through their field team. They also provide access to affordable seeds, seedlings, and manure for production, support around capital infrastructure such as irrigation and manure for soil building, and access to the market to allow farmers to sell surplus vegetables. They

also provide training to community members in areas such as Langa, where they learn how to grow their vegetables and improve their food security.

Overall, WGSE garden centres, training, and special projects are designed to support their core business of empowering the disadvantaged through urban agriculture and environmental programmes and projects.

The Garden Centres provide the following services to the community:

i. Accessible urban agricultural resources. The resources sold to urban gardeners at subsidised low costs include seed and seedlings, manure, and garden tools as well as organic pest control remedies.
ii. Serve as a demonstration garden and advice centre. The garden centre showcases vegetable plots where community gardeners can view how to lay out their gardens. Container planting as well as compost heaps serves as examples to home and community gardeners.
iii. Give training workshops. Various training courses are offered at the garden centre. These include 3-day urban organic food garden workshops which teach both theory and practical components.

4.2.5. Marketing and Sales

In 2008, WGSE launched a marketing project through a sister organisation. Through this project, local farmers were provided with market access where they could sell their surplus veggies. Initially, the farmers provided veggies to the school community, and this grew to other organisations buying from the township farmers which created sustainability for the community gardens.

The excess produce is sold on behalf of the farmers in the form of scheme boxes, which allows farmers to sell vegetables in a direct, friendly, and personal way to consumers. In this way, farmers benefit from secure and fair income and consumers benefit from locally produced fresh organic vegetables which are reasonably priced.
The marketing and sales project guarantees the purchase of vegetables grown by WGSE farmers. In this way, the farmers can focus on skills development while ensuring quality vegetables. The result of this project is income security for urban farmers as well as the availability of healthy vegetables for families.

In conclusion, the aims and objectives of WGSE are to combat poverty by providing sustainable food growing and ensuring food security through organic farming. These aims and objectives are implemented through activities and programmes which are well supported by the various managers, staff members, fieldworkers, volunteers, and facilities, as described in the sections above.

4.3. Summary

This chapter gave an overview of the organisation that was selected as a case study for this research. It presented a history of the case study, its organisational and operational structure, and how it supports the local communities through its services. The fieldwork was conducted at the various sites of the case study to collect the data for the study. The next chapter presents the data analysis which was done with the Technology Acceptance Model (TAM).

CHAPTER 5

DATA ANALYSIS

5.1. Introduction

This study aimed to develop a framework that can guide social enterprises and community members in integrating mobile devices to disseminate and access information about service delivery to communities. Based on the aim, data were collected as discussed in Chapters 1 and 3. The data were analysed using the Technology Acceptance Model (TAM) as a lens, as presented in this chapter.

The chapter is organised into four main sections. The first section is the introduction. An overview of the chapter is presented in the second section. The data analysis is presented in the third section using the four tenets of TAM, as shown in Figure 5.1. The chapter concludes with a summary.

5.2. Data Analysis Overview

As discussed in Chapter 3, data were collected from two different groups, an organisation and a community in the Western Cape province of South Africa, as shown in Figure 5.1. The organisation is a social enterprise (SE), which provides services to communities using various means such as technology. A comprehensive review of SE is presented in Chapter 2. Data were gathered by conducting semi-structured interviews with participants from two different settings (SE and Community), which are categorised as cases in the context of this study.

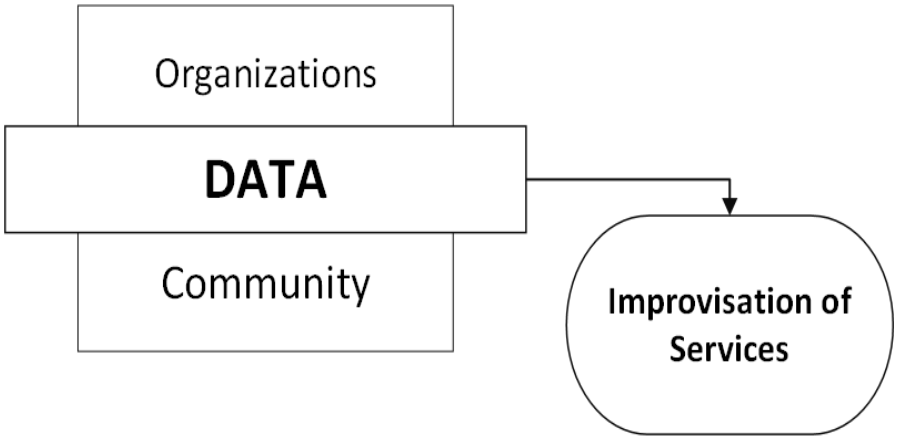

Figure 5.6 Data Categorization

The data were analysed and guided by TAM as a lens. In employing TAM, the main tenets of the theory, namely perceived usefulness (PU), perceived ease of use (PEOU), behavioural intention (BI), and actual use (AU), as shown in Figure 5.2, were followed.

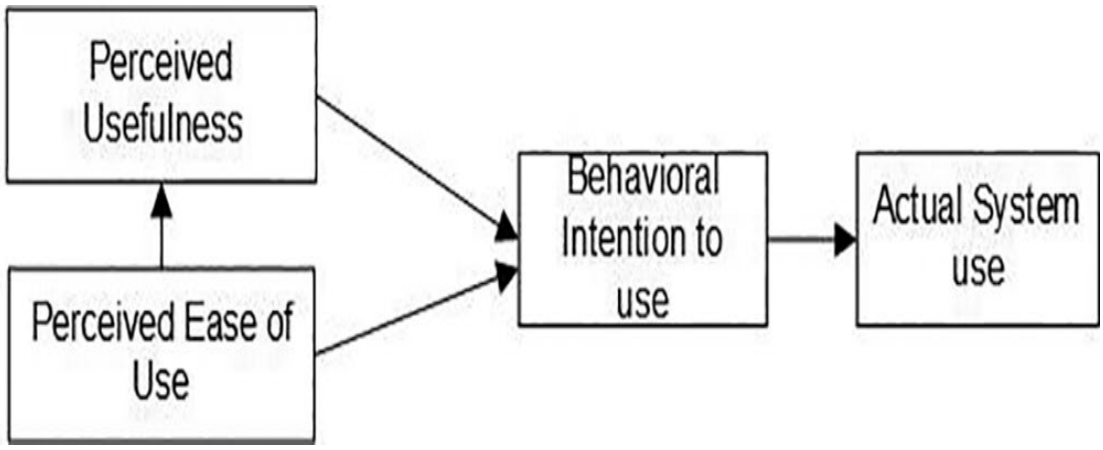

Figure 5.2 Technology Acceptance Model (Davis, 1989)

The data were coded for analysis, including ease of readability and clarifications. As discussed in Chapter 3, each interview with a participant formed a document. Each document is assigned a code name to avoid disclosing participants' identities. A format was adopted and used to reference the text from the data.

For the SE, an example of the referencing format is **ACSE01,12:232.** For the community, **COM01,12,232** is an example of the referencing format. This represents the following:

- **ACSE** refers to the name of the social enterprise (eg. Assist Community Social Enterprise)
- **COM** refers to the community that receives services from the SE,
- **01** refers to the number allocated to the **participant at the organisation or community**,
- **12** refers to the **page number** in the data document which is the transcribed interviews.
- **232** refers to the **line number** in the data document.

TAM was applied as a lens to examine and understand the factors that influence the services which social enterprises provide to communities in South Africa and to understand how the use of mobile devices can facilitate and ease access to information and service distribution. Thus, the tenets of PU, PEOU, BI, and AU were followed to examine how the social enterprise employs mobile technology in providing services as well as how the community uses the technology to receive the services.

5.3. Data Analysis

The data analysis was split into two units, as shown in Figure 5.1. The first unit consists of data obtained from the SE. The second unit is the data gathered from the community members. The findings from both units were combined to achieve the study's objectives, as presented in Chapter 1 and revisited in Chapter 3.

5.3.1 Perceived usefulness

In Tam, perceived usefulness (PU) is the degree to which a person believes that the technology can be useful to help accomplish a certain task (Davis, 1989). At ACSE, mobile phones were perceived as useful even before they were used to serve the community. One of the participants highlights the importance of using mobile phones to share information as follows:

> "*We share information via email. If the Mayor resigns on Thursday, I will send that via email. If there is a new policy or document where I think others can make submissions, this is emailed or sent via WhatsApp, a call, or text. This information is important for our partners"* (ACSE01,4,183).

The perception is influenced by various factors from both technical (technology) and nontechnical perspectives. From a technical perspective, perceived usefulness is influenced by both the physical aspects of a mobile device and the device's software features. For example, older people are used to the older type of mobile phones. Older mobile devices are more straightforward, and navigating to the functionalities makes them useful. One participant noted that some community members find older mobile phones useful for what they want to accomplish.

> *"We have also had some projects where they provide farmers with mobile phones, which has also been very helpful because not all the*

farmers got smartphones. Accessibility to adequate devices is also important. Some people do have smartphones, but the older versions do not work as well" (WGSE,17,1065).

From a non-technical perspective, people find mobile devices useful because of the ease they bring to their daily tasks. Both the community and those who provide a service communicate with each other by sending SMSes. Farmers can send an SMS with a list of their produce to retailers. It also establishes relationships between the farmers as food producers and retailers as distributors. This reality is demonstrated in the input from one of the participants:

"We also engage with farmers through SMS. We also have an SMS database, and we use an SMS portal to distribute bulk SMSes when needed" (WGSE,01,875).

Technical and non-technical factors influence people's perception of the usefulness of technology because they relate to the experience a user might have with the particular technology. A technical factor like the user interface of an application or the available options in the application might influence a person's perception of the usefulness of the application. A non-technical factor like software training or user support on the application could also affect how people perceive a system to be useful or not. This is still an assumption because a particular technical or non-technical factor might not influence some people.

From a technical standpoint, features and functions embedded in mobile devices are acclaimed to be useful for the services the SE provides to society. For example, using an application called Kobo helps the SE to collect information about the community's farming activities. *Kobo is an internationally developed open-source software. It focuses on humanitarian crisis management, such as floods, fire disasters and food shortages.* According to one of the participants:

"The organisation needs to coordinate resources for humanitarian purposes if there's a tsunami. It is available for anybody to use, and our team uses it extensively when they are out in the field. They can collect data without the need for connectivity" (WGSE17,21-22,972).

Another example of the usefulness of a technical feature involves communication. A group of people is formed. Within the group, the WhatsApp application is used to disseminate information for important events such as training. Additionally, the application is important in two ways. First, it allows sending bulk messages. Secondly, it is cost-effective for both the senders (service providers) and recipients. Thus, all recipients receive useful information pertaining to your services.

> *"If people come here for the 3-day basic training course, they will leave their cell numbers with us, and we will create a WhatsApp group for that group of attendees. We would also create their WhatsApp groups. Every group that comes here also creates its own WhatsApp group, where they would share information" (WGSE18,31,1355).*

Community members likewise perceive technical features like WhatsApp messaging to be useful. Information about upcoming training does reach community members through those who have attended training and, in turn, spread the message by 'word of mouth' to others in the community. These 'words of mouth' make other community members think that the use of mobile devices and WhatsApp applications will be useful to them in the context of accessing vital information about SE services.

> *"When we announce the next training course to these groups, they will inform their neighbours or friends of the training course that will take place and that it would be interesting for them to attend. That is how the information about the training is shared" (WGSE18,31,1359).*

However, the WhatsApp application cannot be downloaded or used with all types of mobile devices (phones). Currently, the application can only be used with smartphones. Due to its perceived usefulness, some community members who are not interested or cannot avoid a mobile device make a plan to acquire one. This adds a financial burden to some members of the community.

From a non-technical perspective, both service providers (SE) and some community members perceive mobile device use as useful. The SE perception was that it fosters inclusion by allowing them to connect with more community members. However, the SE was not aware of the community members' access to mobile devices with WhatsApp applications. Also, the SE does lack evidence of community members who

are literate enough to read and write using mobile devices. This makes the choice of language or translator important. Therefore, language impacts the usefulness of mobile technology in providing a service to the community. One of the participants shares their view as follows:

> *"..it's a very active WhatsApp group where they share. We don't curate that in any way. They share posts, and it becomes like a community sharing ideas and tips around farming" (WGSE17,17,789).*

Also, training positively impacts the community and the perceived usefulness of mobile devices. Community members would not have known about the training offered by the SE. The announced training also allowed home gardeners to improve their gardening skills. However, the factors that primarily influence the perceived usefulness of mobile devices are language and access to the devices. Some community members miss out on some services because of either of these factors, as explained above.

5.3.2 Perceived Ease of Use (PEOU)

The perceived ease of use has to do with whether someone believes that using technology for some activity is easy to use for that purpose (Davis, 1989). Technical or non-technical functions or needs often influence users' perceptions of whether a technology is easy to use. Users would regard a system (technology) as easy to use if the features are easily accessible and allow the user to perform the required task. This is an assumption if the technology has not been used or tried by the user. Thus, in the context of TAM, PEOU is about people perceiving whether a technology is easy to use or not even before using the system. This perception could be influenced by system features that have been communicated to them.

PEOU can be observed in the aspect of communication within SE organisations. Communication at ACSE occurs mostly by sending and receiving emails, which is important for the organisation's operations. For staff members, it is thus important to always check their emails for critical information and respond promptly. Being able to access emails and other communication channels using their smartphones becomes an important capability for work efficiency. However, some people who have not used a mobile phone for email purposes do not perceive it to be easy to use. One of the participants pointed out as follows:

“I receive information that is communicated to me via emails, which I access through my cellular phone when I am in the field“ (ACSE,01,173).

The ability to easily navigate to mobile device features creates a perception that the system is easy to use. If a person perceives the use of certain device features as easy to use, it creates a sense that their work-related tasks can be accomplished with ease. If this is the case with email features being easily assessable, it could lead to improved work performance of tasks that involve sending and receiving emails.

The organisation’s fieldworkers also express their dependency on mobile phones and the features that allow them to capture important data while doing fieldwork (such as checking if farmers need help with their gardens). Tasks like capturing pictures while doing fieldwork are made easy with smartphones and the necessary software that allows them to edit and store images for reporting purposes. This was a perception that smartphones do offer camera features that would enhance the ability to capture pictures and thus help perform critical work-related functions. One participant explained as follows:

“I use my mobile phone to capture pictures and recordings and share this with community leaders in various WhatsApp groups” (ACSE,01,165)

Not having access to mobile phone features to take pictures and store them, such as taking images makes the task of providing a service to farmers and reporting on their progress very difficult. This was an assumption that such a technology could ease farmers' tasks. To assist their workers, WGSE provided their staff with the necessary devices and capabilities to provide a service to the community and report on their activities. The provision of the devices and the features have pointed out the necessity of easy-to-use technology for accomplishing work-related tasks, which was also a perception. This is only a perception because some might have other ways to accomplish a task that might not require a technological device. One of the participants briefly explained:

“On mobile phones - all my staff have been provided with mobile phones to have and download the Kobo app. We have been using that

for the last two years" (WGSE,17,1060).

Farmers and community members also find it difficult to provide images of their crops for either requiring assistance from the SE or selling their crops. This is caused by two things. Firstly, some farmers perceived that mobile devices could not be used for the dissemination of such information. The second aspect is that those who perceived the capability of mobile devices had the type of devices that did not have the required features. To compensate for this, they send their produce list using the short message service (SMS) function. For many of the farmers, this is a preferred way of making contact with retailers and other buyers of their crops. The reasons for this choice are that they do not have smartphones with WhatsApp capabilities and also because they find older devices easy to use. This was an assumption because the view was not tested. The assumption could be attributed to a lack of knowledge about the devices. According to one of the participants:

"Some farmers prefer using SMS services for communication. The SMSes are mainly for us to distribute information" (WGSE,17,887).

Despite the challenges that both SE and community members experience, they still find a way of making their current mobile device features work in their favour. This was not the case for all members because some continued to perceive the use of mobile devices for such tasks was not as easy as claimed. This could be attributed to a lack of knowledge (or illiteracy) about the devices. Also, some people seem to be intimidated by the sophistication of the technological devices. A factor that stands out when it comes to providing a service to the community is the ability to communicate and do so using the necessary technology.

Notwithstanding this vital need for communication, there were positive and negative perceptions about using technology. Both service providers and community members improvise using what they have at their disposal. Those who do not find it easy to use their mobile devices optimally miss out on important information being shared by the SE as a service provider.

The implication for missing out on important information is that community members might not find the help they need with the gardening projects. Although information

about training and gardening tips is shared via WhatsApp, those who perceive the system as not easy to use will not have access to this information. As a result, they lack the necessary knowledge for gardening, leading to them not growing the crops they expect. Furthermore, food security and lack of nutrition remain problems in the community. Community gardeners hoping to supplement their income through the sale of their produce would also face the consequence of not being unable to access gardening information.

5.3.3 Behavioural Intention

In TAM, behavioural intention (BI) is the degree to which a person is ready to carry out a particular behaviour (Alambaigi & Ahangari, 2015). When individuals or groups of people are presented with new technology, they reach a point where they develop an intention to use or not to use the technology. Such a point of intentionality (BI) is influenced by certain factors. Some of the factors could be access, know-how (knowledge), affordability or both. Additionally, affordability is influenced by the scale of preference. One of the participants briefly explained as follows:

> *"I think I will google for information, but right now I do not have a mobile phone. When I have it, I will search and access the information via Google" (COM,12,265).*

From an organisation and a community perspective, behavioural intentions are influenced by both technical and non-technical factors. From a community perspective, technical factors include the physical aspects of a mobile phone, which some community members were not accustomed to. As such, they lacked knowledge of the technology. Consequently, these groups of community members show no intention to use WhatsApp applications for communication purposes, whether receiving or sending messages (information). This is attributable to being accustomed to the older model mobile phones, which did not have or could not use WhatsApp applications. They, therefore, prefer to receive and send messages using the SMS application. As one of the participants stated:

> *"My mobile phone cannot use WhatsApp because it is not a smartphone. " (COM, 11, 187).*

Although, in many instances, older people received services from SE, their knowledge

of the technical aspects of mobile phones was limited. However, this group of older people in the community intended to use mobile phones. This is evident as they continued to request help from younger family members who were more knowledgeable about the use of smartphones. The community's interest in using the technology is because of the service they receive from SE, like gardening tips, information about upcoming training and information on how they can sell their produce. One of the community members shared their experience as follows:

> *Less than half of our people are not that comfortable to use with WhatsApp. I'd say it might be 30% of people. They get help from either another farmer or a younger family member. (WGSE,17,821)*

From the SE perspective, employees of the organisation showed an intention to use mobile phones to share their services and communicate with community members. This is attributed to the capability of mobile technology, which enabled them to perform their work-related functions better. Some of the functions include providing training to the community, sending information about upcoming training, and reporting on fieldwork activities to the stakeholders (community members and SE employees). The use of mobile technology made these tasks easier to provide service to the community. There is a positive intention to use technology because of the benefits that mobile technology features provide in providing services to community members (such as providing training and doing follow-ups with community gardens). One participant expressed some of the benefits as follows:

> *“We have horizontal learning platforms where we bring organisations together, and we encourage the participants of the year-long program to share learning experiences via WhatsApp group to consolidate and have access. So we found that using Whatsapp and SMS is fairly useful” (ACSE,03,571).*

Other technical factors affecting both community members and staff of SE organisations in providing and receiving services are computing network infrastructure and continued occurrences of electricity load-shedding. In South Africa, load-shedding means the scheduled interruption of electricity supply by the national power utility, Eskom. Power outages occur across different areas as determined by a predefined schedule during load-shedding. This prevents the demand for electricity from exceeding the available supply because of reduced generation capacity. (Walsh,

Theron, & Reeders, 2021). These technical factors affect network coverage. The intention to make use of technology for communication purposes is influenced by poor mobile network coverage. Consequently, there were times when staff members of SE did not have mobile network coverage and could not receive messages, some of which were important information (updates). This hampered the organisation's operations.

Another implication of load-shedding was that some employees of the SE could not be reached through telephones. This happened because cellphone towers were switched off during load-shedding, which delayed reports (documentation) and reporting about events. The staff would improvise by using their phones' offline features and upload reports or send messages when mobile coverage is restored. An employee explained as follows:

> *"When there are power outages, the cell phone towers in the leafy suburbs are stronger and last longer than those in the townships where there are many more constraints on the cellphone towers. The power outages are noticeable when I cannot get hold of team members" (WGSE,17,1008).*

Some of the non-technical factors influencing behavioural intentions from a community perspective include affordability and accessibility. Affordability, in this case, is a monetary implication. Some farmers and community members linked to SE organisations could not afford smartphones with the latest communication features. The community was categorised as a low-income earner. This could be ascribed to why smartphones were not on top in the order of priority. Many community members who received services from SE were older people who might be dependent on social security grants and, therefore, could not afford a smartphone.

Affordability refers to access to mobile devices and platforms where communication can be shared and received. For instance, many families in the community being served had no laptop (or desktop computer) where they could use email services and internet services to receive or search for important information about gardening. Although the community showed an intention to use the services of SE, not having access to the technology hindered them from benefiting from the available information related to training, gardening, and the resale of garden produce.

The challenges of affordability led some community members to improvise for themselves. Thus, some community members sourced information about gardening and other services from their local library. One participant shared his experience of self-improvisation as follows:

> *"I don't have a problem finding information because we have the library, and I am using it, which helps me a lot. I don't have a problem now because I can continue learning more using the library. There is more information at the library" (COM,11,127).*

The two main tenets of TAM, namely Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), impact a person's readiness to use a particular technology. These two perceptions influence a person or organisation's readiness or willingness to use technology for activities that could help them in their daily tasks (Almaiah et al., 2022). The readiness to use or not to use technology is aligned with the intended outcome of a task, and should the perceived PU and PEOU be favourable, a person would develop an intention to use it.

The intention is revealed when a person shows interest in knowing more about the available technology or system. This seems to follow an order. For example, community members would first enquire about the services provided by the organisation (people speaking about the service provided to the community). Secondly, when the community members have attended training sessions, they would give their mobile numbers to receive further communication (information being shared using the WhatsApp application). SE's challenge is that some community members do not engage on the platforms they enrol themselves on. When asked whether people would make use of help offered to them, the response was as follows:

> *"No, they don't do that. I'm not sure if they were doing it before. I later realised that they were doing that. We have a lot of WhatsApp groups. We encourage the farmers to post their challenges, but they don't" (WGSE, 18, 1192).*

There might be a gap between showing intention to actual improvisation by the SE or self-improvisation by community members in using mobile technology to provide or receive services. Both community members and staff of SE have shown positive intentions to use WhatsApp as a communication channel for receiving and distributing

information. The participants' responses indicated they perceived the WhatsApp application as useful and easy to use, even though some community members had mobile phones that were incompatible with the application. This means that both community members and employees of the SE were ready to use the platform should they have the appropriate device (smartphone).

5.3.4 Actual Use

In TAM there is a relationship between intention to use and actual use, as behavioural intention influences actual use (Alharbi & Drew, 2014). Also, PU and PEOU are the base determinants influencing behavioural intention and leading to actual usage behaviour (Iyamu, 2021). This means that people's perception of technology usage leads them to form a behavioural intention, which, in turn, leads to them either using or not using the technology.

The staff members of ACSE felt positive about accessing email services on their mobile phones while being away from work premises. They saw that the need for them to stay informed about what is happening in the organisation and keep up to date about their duties is greatly assisted by features provided through mobile applications. Features such as email service and messaging services were perceived as useful, which eventually led them to use the service provided by the technology. One of the participants expressed how they make use of email services for work-related activities:

> *“I receive information that is communicated to me via emails, which I access through my cellphone when I am in the field. This includes work emails and other emails” (ACSE,01,173).*

Several technical and non-technical factors influenced behavioural intention and led to actual usage. As stated by Bagozzi (2007), between the intention to act and the action, considerations take place, which include several steps that could impede or further strengthen the actual use of the technology. In the case of WGSE, workers were expected to use technology for their daily routines in recording data on how farmers and community gardens are doing. The company suggested that they use a mobile application called Kobo, which will allow them to fulfil their tasks of recording data during on-site visits.

> *" Besides using WhatsApp, there is another tool that we use which is called*

Kobo Collect which fieldworkers use to collect data from farmers while doing site visits" (WGSE,01,968).

One technical factor in this case is the mobile application feature called Kobo, which allows them to record data while on their site visits. The application has several forms which allow the workers to capture data related to farmers and their progress as well as the state of the actual community garden. The main objective of capturing data and reporting on farmers and their activities (as well as the activities of the fieldworkers themselves) is greatly assisted by the mobile application usage as determined by the company. Another technical factor is the application's ability to record data even while not having an internet connection. One of the employees explained how the technology assists them to perform their tasks, as follows:

"When you are out in the field, you fill in the form and when you're back in the office (where there is data connectivity) you upload it to the hard drive for storage. Kobo then collates the information on the back end" (WGSE,01,982).

Although technology such as Kobo enables employees to perform their tasks, at the same time, it disrupts work-related activities. For example, while on fieldwork, employees hardly get an Internet connection. As a result, the employees travel back to the office premises to complete their various tasks. This is prohibitive from both cost and time perspectives to the WGSE employees and farmers for whom the services are improvised.

Non-technical features which led to the actual usage of mobile phones to improvise services relate to the company's decision to use a particular mobile application or software to accomplish work-related tasks. In the case of WGSE, the employees adopted and used the WhatsApp application for sharing information and announcements with the stakeholders. Staff are required to use WhatsApp and are also provided with phones to do so. Preference is a non-technical factor which led to actual use and is based on WGSE's perceived usefulness of the WhatsApp application as a messaging service. According to one of the employees who experienced it:

"We use our WhatsApp groups a lot. That is where we would send a WhatsApp flyer. We don't print anything. It will just be a photograph with the date and time and the training that's happening and that we will distribute via the various

WhatsApp groups" (WGSE,01,840).

The actual usage of the WhatsApp application as a messaging service had consequences for both the SE who provided the service and the community who received the services. In WGSE improvising services, the organisation sent out information to those in their database. This includes those who attended their workshops and contact details were gathered from them. Some of the community members did not have WhatsApp-enabled phones and the SE, therefore, reverted to sending out bulk SMSes in addition to the WhatsApp messages. The SE has thus adopted another platform, called SMS Portal, for sending out SMSes to communicate important information to the community farmers. One of the participants explained as follows:

> *"We also engage with farmers through SMS. We also have an SMS database, and we use an SMS portal to distribute bulk SMSes when needed. Last year, we had our 40th anniversary and we had a huge farmer festival with over 1200 people attending" (WGSE,01,875).*

For the community, the use of multiple platforms means they receive service-related information sent by WGSE regardless of the type of mobile device they have. This translates to the actual usage of technology because the farmers and home garden owners (recipients) could access the service improvised, using their mobile devices. Further to this, the recipients participated by either responding to the messages or forwarding them to other stakeholders (friends and family members). Thus, community members benefited from information about community gardening that was sent as part of services. According to one of the beneficiaries:

> *"We have two big groups. The Khayelitsha farmer's WhatsApp group and then the Nyanga Home Gardens WhatsApp group as well as for Nyanga. People are added to these groups and they are very active, always showing what they are doing, and how they're doing it, with photographs, advice, and all kinds of things" (WGSE,01,784).*

Benefits derived from the engagement with the information using the messaging service include quality garden produce, healthy meals for families and the ability to sell accessible produce to retailers. Community farmers also had employment

opportunities through the sale of produce. This adds to income generation for the low-income earners in the communities. These are some of the benefits that show how the actual use of technology contributes to social development through improvised services.

5.4 Summary

This chapter presents the analysis of the data collected from two organisations (ACSE and WGSE) and the communities that they serve. The analysis was guided using TAM as a theoretical lens. The analysis focused on addressing the study's objectives as presented in Chapter 1 and revisited in Chapter 3. From the analysis, some crucial factors were found to influence the services of the SE to the community. The findings are presented and discussed in Chapter 7.

CHAPTER 6

INTERPRETATION OF FINDINGS

6.1. Introduction

The previous chapter presented the data analysis guided by the technology acceptance model (TAM). From the analysis, some factors influenced the use of mobile devices and technologies to improvise services for the community. The findings are interpreted to better understand why things happen in the way they do.

The chapter is organised into five main sections. The first section introduces the

chapter, followed by the second section, which provides an overview of the findings uncovered in the data analysis. The overview section briefly lists and groups the findings into two categories. These are findings related to 1) the technology devices (the technical perspective) and 2) the service delivery (the non-technical perspective). In the third section, the findings are interpreted, and the fourth section provides an integration mechanism for ease of technology use within SE service delivery. The chapter ends with a summary in the fifth section.

6.2. Overview

Subjective reasoning is employed in interpreting the findings. Primarily, the subjective approach was selected for three reasons. First, it is a qualitative study, which allows for an interpretive approach. Secondly, it enables the researcher to construct meanings socially (Maines, 2000). Thirdly, with the approach, new insights can emerge and be induced into the phenomenon being studied. Also, subjectivity leans toward interpretivism because people see things differently within their lived experiences (Iyamu, 2020).

Thus, the findings were viewed from different consequential and implicative standpoints, and meanings were constructed. In constructing the meanings, the technical and non-technical perspectives focused on how services were improvised for the communities using mobile technologies. This was geared towards two goals: to gain a deeper understanding of the contribution of SE to communities and for a better comprehension of how to use mobile devices to facilitate and enable the ease of access to information and service distribution.

6.3. Interpretation of Findings

The analysis in Chapter 5 and the emerging findings or discoveries helped the researcher to answer the research questions and achieve the objectives. Seven impact factors were highlighted during the analysis guided by TAM. These factors were categorised into technical and non-technical factors that influenced how SE and community members use technology to share important information related to service delivery. The technical factors are connectivity, network infrastructure, and capabilities. The non-technical factors include affordability (cost-effectiveness), accessibility, contextualisation, language translation, and knowledgeability. Both the technical and

non-technical factors depend on each other and are inseparable in their use to improvise services for the community.

6.3.1. Connectivity

Connectivity has been used for many years as a metaphor, to study interactions enabled by digital technologies (Aljabr, Petrakaki, & Chamakiotis, 2024; Kolb, Collins, & Lind, 2008). In the context of this study, connectivity refers to the ability to connect entities, humans, and services using technology solutions such as mobile devices to share and access information. This means that connectivity can be via mobile data or Wi-Fi. SE improvise service delivery by sharing important information using technology solutions, including WhatsApp, short message services (SMS) and electronic mail (email) applications. Connectivity in the context of this study has been highlighted as a finding because of the importance it plays in the day-to-day operation of SE in their service deliver to the communities.

Connectivity happens using mobile technology, which plays an important role in information sharing. According to Sonnad et al. (2022), organisations employ electronic systems to connect and interact with other systems. Most community members have access to a mobile device, which allows them to benefit from the services provided by SE. Those who connect to the services can share the information with others in their community either through word of mouth or by passing on WhatsApp messages. The improvisation of service using mobile technology by SE and community members reaches many in the community. People who would not have known about the services now also have access to information as it is being passed on by those who received first-hand information (through attending training).

6.3.2. Network Infrastructure

Much emphasis is placed on the impact of telecommunication network infrastructure on digital transformation and quality of services, in developing countries. The cost and quality of services provided to mobile users by internet service providers (ISP) are dependent on proper network infrastructure, which includes fibre optic cables, data centres and cell phone towers (Inusah et al., 2024; Houngbonon et al., 2023).

Within the context of this study, network infrastructure means the systems and physical

components that enable connectivity between computers and mobile devices for communication and information-sharing purposes. Network infrastructure has an impact on the quality of communication and information distribution between SE and community members who rely on mobile connectivity to access the distributed information. Network downtime is often the result of network infrastructure components that are failing or stolen such as cell phone tower batteries. Network downtime refers to the interruption of access to systems, services or applications due to hardware failure or power outage (Dzedzy & Ayyub, 2024). This is often the case during load-shedding (as explained in Chapter 5) where, during power interruptions, cell phone towers are not operational and thus impact the availability of services.

When adequate Network infrastructure is not in place, which is sometimes the case within low-income areas, people experience poor internet connectivity, as empirically revealed in this study. Poor internet or mobile connectivity negatively impacts the services provided by SE to the communities because they use mobile technology. Sometimes the cellular phone towers are affected by electricity interruption and internet or mobile connectivity is interrupted. This has an impact on the availability of information as well as the inability of fieldworkers to share or store critical information online.

6.3.3. Capabilities

Regarding sharing information and providing learning opportunities through training events, mobile technology is regarded as a crucial tool in providing quality services (Saikanth et al., 2024). The features and capabilities that mobile technology, such as smartphones, provide can potentially increase productivity in rural and urban farming communities (Tulinayo et al., 2022). Features and capabilities within messaging applications such as WhatsApp and text readers allow for quality communication between service providers and community members and between community members. The technical factor of capabilities is important in this study as it relates to what people (service providers and recipients) can do using their mobile devices, which enhances their communication and economic status.

As revealed in the study, SE often would like to improvise their services using different platforms, including face-to-face training sessions and providing one-on-one

assistance to farming communities. An extension to these services includes mobile devices, which the community can access additional resources to help them in their farming practices. It thus becomes crucial that the features and capabilities exist within the suggested mobile applications and platforms to help community members continue their development.

The enabling capabilities and features within mobile technology can result in quality communication between SEs and the communities they are serving. Sharma et al., (2021) discuss the importance of mobile capabilities in the context of providing higher data rates for improved communication. The point of higher data rates for improved communication is also emphasised by Agrawal et al. (2015) when discussing how wireless network technologies have evolved from first-generation (1G) to fifth-generation (5G) technologies. Service providers and recipients benefit when information can be accessed seamlessly using enabling capabilities These benefits include greater participation in creating new content and information (Emeana et al., 2020). The community can use social media platforms to share their experience and exchange best agricultural practices (e.g., how and where to grow crops and sell produce).

6.3.4. Accessibility

Research done by Cheng, Chien, and Lee (2021); Myovella, Karacuka and Haucap (2020), and Solomon and van Klyton (2020) shows that there is a strong relationship between access to the Internet and economic development. This relationship is ascribed to the widespread Information and Communication Technologies, devices, and platforms that have created various services, products, and processes that expose people to economic growth opportunities (Myovella, et al., 2020).

Accessibility within the context of this study refers to how information and activities are made available, reachable, and usable for those who need to benefit from the available information and services. Emeana, Trenchard and Dehnen-Schutz (2020) note the need for accessibility, including access to mobile devices and network coverage that supports the distribution of agricultural information. This means the information distributed to farmers and community members needs to be accessible so that they can benefit from it. As noted by Al-Sakran and Alsudairi (2021), this accessibility also

refers to the platforms where the information is distributed and the format in which it is shared.

Lack of access to advanced technologies such as smartphones, coupled with limited internet access, are factors that work against accessibility to important information. Mapiye et al. (2023) note these limitations while stressing the need for device capabilities to support information accessibility. Accessibility is also limited by the lack of digital literacy, which relates to the understanding and knowledge to use information presented in multiple formats on an electronic device (Pangrazio, Godhe, & Ledesma, 2020). Accessibility in the context of this study also refers to the community members' ability to navigate to content using their mobile devices (e.g., smartphones). SE should thus ensure that the information and content they share are accessible by targeting different device users.

6.3.5. Contextualisation

The distribution and accessibility of information often need to be tailored to fit the context or domain within which the users or recipients find themselves (Kaipia, et al., 2017; Roos, du Plessis, & Hoffman, 2022). To enhance the relevance of information, much must be understood about the users and the environment they find themselves in. For SE, it thus becomes important to know the community they are servicing so that they can provide contextualised and relevant information.

Context is described as the connection of cultural, spatial, and political influences, amongst other factors (De Bruin et al., 2023). SE thus improvises its services by distributing information within the context of what the community needs. Many of the community members have a farming background. This is coupled with their need to be sustainable and use the available land to their advantage, such as growing crops. Information will make sense to them when contextualised around community members' lived experiences.

Contextualised information implies that community members get value from the services that are provided to them. The information the community receives leads to productive farming and sustainable living while also addressing malnutrition. The community members become co-producers of knowledge and information because

they, understanding the context, share the information with others in similar settings.

6.3.6. Language Translation

Research shows that many factors hinder communities from benefiting from technological interventions to improve livelihood within developing countries (Alao, Usadolo, & Roelien, 2021; Mahdavi et al., 2018). Low levels of literacy and language barriers are among the factors impeding the use of technologies like the Internet and mobile devices for information sharing. Language translation is therefore important to gain maximum benefit from information distribution.

The language used by people within a specific grouping or culture carries meaning that is particular to the cultural setting. Language translation, in the context of this study, is making sure that the terminology used aligns with people's conceptualised thoughts, feelings, and behaviour as noted by Campbell and Young (2016). In their improvisation of services, SE should thus ensure that the terminology they use is understood by their target audience. The process of translation, according to Corina (2021), ensures an accurate rendering of meaning from one language (the source) to another (the target).

The SE that provides services to the farming community needs to ensure that when distributing information, it is understood and contextualised. If language translation does not take place, it can lead to a breakdown in communication-based on cultural or educational grounds. Language translation is thus important to ensure that content is correctly presented and that it becomes useful to those for whom the information is intended. This leads to greater participation and richer content creation by both the service providers and the community.

6.3.7. Knowledgeability

For many people and communities, knowledge and skill come through informal learning over many years. Knowledge, in turn, is defined as having an awareness or familiarity of something (or skills, descriptions, etc.) which have been acquired through experience, discovery, or learning (Fidelugwuowo, 2021). This means that, apart from formal learning, people have some knowledge base developed through their daily activities. This provides them with a basis for being able to search for new knowledge.

Knowledgeability within the context of this study refers to people's understanding of things and concepts within their living environment, which enables them to engage with content and processes.

For SE, the community members need to have some base knowledge and understanding of their environment and the challenges they face. For example, community members are faced with challenges like food security and unemployment. They do things that supplement their income and nutrition. Knowing the challenges they face leads them to look for ways to improve their livelihood. The improvisation of services by SE thus targets community members wishing to learn more about farming, income generation, and food security.

When the community is knowledgeable, it makes it easy for SE to provide ongoing service to the community. The community becomes appreciative of what they learn through the training provided because they can put the things learned into practice. Enhanced communication based on knowledgeability between SE and the community leads to new knowledge and understanding.

6.4. Integration Mechanism for Ease of Technology Use

The aim of this study, as explained in Chapters 1 and 3, was to develop a framework that will help with the integration of mobile technology in the operations of SE to enhance their service delivery to communities.

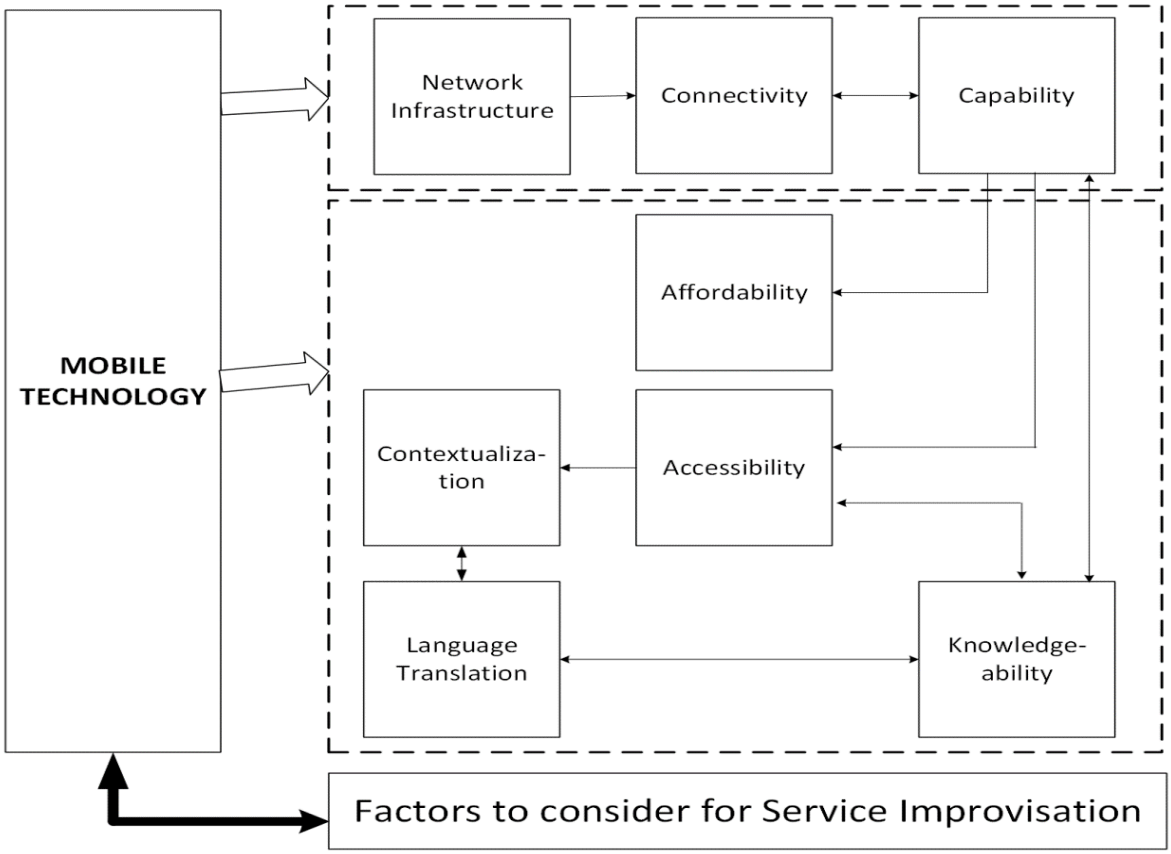

Figure 6.7 Integration mechanism for ease of technology use

The findings discussed above were divided into technical and non-technical perspectives on how SEs improvise services for communities using mobile devices. These findings provided us with the key elements that need to be addressed for SE to effectively deliver service to communities through mobile technology. These key elements form part of the framework as an integration mechanism for improvising services for communities through mobile technology. The framework also shows the relationship between the various factors and how they impact each other.

6.4.1. Network Infrastructure and Connectivity

As noted above, network infrastructure is critical for providing internet connectivity to mobile technology users. Research shows that Internet service providers (ISPs) depend on network infrastructure to provide access to many Internet subscribers (Houngbonon, et al., 2023). ICT has proven to be a key contributor to socioeconomic growth in developing countries and depends on installing proper network infrastructure. Without the infrastructure, ISPs also struggle to provide connectivity to

users and thus hinder proper communication, which needs to happen for socioeconomic growth. There is, thus, a relationship between the availability of network infrastructure and internet connectivity.

The distribution and sharing of information to the community for community development starts with properly installing network infrastructure, a function performed by telecommunication agencies, government, and regulatory bodies (Rey-Moreno & Pather, 2020). There must be a greater prioritisation of network infrastructure in areas that need internet connectivity for the distribution and sharing of information that is critical to community development.

Prioritising network infrastructure can lead to greater participation in content development and the distribution of information, which means that community members are in a better position to grow socioeconomically.

6.4.2. Device Capability and affordability

There is a link between connectivity and mobile device capability. Mobile devices are built with connectivity in mind because they have evolved into more than just a communication tool; they are tools with which people do many of their daily tasks (Hartanto et al., 2023). For many of these tasks, there is the capability to retrieve and store information online. The mobile device should thus be able to access the internet and other internet-enabled services. Mobile device capabilities, therefore, play an important role in SE's distribution and sharing of information to communities.

Another capability aspect that affects SE in their service delivery (distribution of agricultural information, amongst many other things) is the software that can be installed on mobile devices. Messaging and communication software like WhatsApp is a platform that is used by most for sharing information (Dahdal, 2020). Not all mobile devices have the latest capabilities to read content or are compatible with the latest messaging services. For example, content is sometimes distributed in Portable document format (PDF) which allows users to read the content only (and not modify it). Thus, community members must have access to mobile devices that have the required capabilities of both distributing and accessing content on their phones.

The affordability of the latest mobile devices has become a challenge for many community members seeking to use the services and information made available by SE. In addition to sending out messages and content that is only readable by smartphones, SE must also concentrate on using bulk SMS services. In this way, anyone can access the shared information. Most phones also allow users to send and receive multimedia services (MMS), which allows images to be distributed in this way. Focusing on reaching the wider community is a priority in information sharing. SE will thus use multiple channels to distribute information, including WhatsApp messaging and SMS / MMS.

6.4.3. Accessibility and Knowledgeability

Much has been written on equal access to information and how that increases economic development (Chatterjee, A., 2020.). Accessibility speaks about people's ability to access and retrieve shared information. Information being distributed should thus be accessible and in a format that can be readable by those who access the information (information must be shared in the proper formats). There is thus a link between device capability and accessibility, and both are important in information sharing.

SE needs to ensure that community members have mobile devices that can access information and that the community knows how to access the information. A person might have mobile devices with the right capacity but not know how to access the information. Knowledgeability, in this context, means that the community knows the information they need is available and knows how to access it. Not knowing about the available information and not knowing how to access the information are both limiting factors for service improvisation.

Training sessions should include the content and the means to access the information. When farmers know how to use their mobile devices to access important information, they participate more in information distribution. This can lead to the stimulation of socioeconomic growth through participation in knowledge sharing.

6.4.4. Contextualisation and Language Translation

Shared information requires relevance, specificity, and detailed background. These

are some of the characteristics of contextualised information (De Matos, et al., 2020). Without relevance, for example, little value can be extracted from the information being shared. SE must ensure that the content is valuable and that the community can engage with the content that is being shared. When the community can relate to the information being shared, it leads to greater participation and engagement.

Language translation is required for effective communication of contextualised information. In sharing information, SEs must ensure that they use familiar terms. Regional farmers might use specific terms relating to their farming practices. The language translation is thus not limited to the language but also includes the terms used. Proper translation of the information leads to greater comprehension and the improvisation done has a greater impact on the community.

6.5. Summary

This chapter provided a detailed outline of the findings and their interpretation. The findings listed were categorised into technical and non-technical factors and served as focus areas for SE to improvise services to the communities using mobile devices. The technical factors relate to tangible elements. Network Infrastructure as a factor refers to the hardware and software that establish mobile connectivity and provide access to the internet. The findings of connectivity and capability are both enablers for mobile device users to access shared information. The non-technical factors were accessibility, contextualisation, language translation, and knowledgeability. The technical and non-technical factors are linked and need to be considered when seeking to improvise services for the community.

The integration mechanism is depicted as a diagram demonstrating the framework for integrating ease of services to the community. The framework spells out the dependencies and relationships between the various factors. Network Infrastructure, for example, has a strong impact on connectivity since connecting to the Internet makes use of the hardware and software services that enable the connectivity. With an integration mechanism framework, the study sought to provide a guideline for integrating mobile technology into SEs' improvisation of services for the community. The objective of the study was the development of a framework for integrating mobile devices into the operations of SEs.

CHAPTER 7

CONCLUSION & RECOMMENDATIONS

7.1. Introduction

This is the last chapter of the thesis. The chapter presents the conclusion of this study and the recommendations for further research. As stated in Chapter 1 and subsequent chapters, this study was conducted to investigate how mobile technology can be used by social enterprises (SE
s) to improvise services for communities in Cape Town, South Africa.

This last chapter summarises each chapter of the thesis. Conclusively, the chapter evaluates the study to determine how the objectives were achieved and discusses the contributions, including the benefits of the study. Additionally, the chapter presents the limitations and areas for further studies and, thereafter, offers recommendations.

7.2. Chapter overviews

As presented in this thesis, the study consists of seven chapters, including the current chapter. Each chapter details various stages of the study. A summary of each of these chapters follows.

Chapter One

This chapter provided an overview of the research. The chapter consists of seven sections, namely: ***(1)*** Introduction to the Research Problem, ***(2)*** The Literature Review; ***(3)*** The Research Methodology and Design; ***(4)*** The Data Analysis, ***(5)*** The Research Delineation; ***(6)*** The Study Contribution and ***(7)*** The Thesis Structure. The chapter justifies why specific methods and techniques were used in carrying out this research.

The first section of this chapter introduces the research problem and states the aim and objectives of the study as well as the research questions, which are: (1) What are the factors that influence how SE uses information to provide services to communities? and (2) How can mobile devices be used to facilitate ease of access to information and service distribution to the community? The second section provides a detailed literature review of the key terms used in this study, and the third section discusses

the overview of the research methodology and design used in this study. Section four gives an overview of the data analysis and TAM used as a lens for this purpose. The delineation of the research is discussed in section five and section six states the study's contribution. Section seven outlines the structure of the research thesis.

Chapter Two

This chapter consists of a thorough presentation of the literature review done on the keywords featured in this research study. These keywords are: **1)** Information and Communication Technology (ICT); **2)** Mobile Devices; **3)** Social Enterprise; **4)** Social Structure; **5)** Improvisation of Services and **6)** Technology Acceptance Model.

The literature review on ICT covers its importance in the context of community development and IS research. The second section dealt with Mobile Devices as an ICT mode and their relevance in government-civic engagement. Mobile devices were discussed, particularly the role they play in healthcare and education services in terms of information sharing. The next section looked at Social Enterprise as a driver for socio-economic change. The newness of the concept in a South African context is highlighted, as well as its developments in a European and an American context. The section on Social Structure deals with the community as a target for social enterprise service delivery and information sharing. Improvisation of services highlighted the need for bringing about change within communities and using spontaneous means to do so. The last section of chapter two discussed TAM, highlighting its relevance within IS studies. Focus was given to the main tenets of TAM, namely, Perceived Usefulness, Perceived Ease of Use, Attitude Towards Using, and Actual Use.

Chapter Three

This chapter covered the research methodology used to carry out the study which sought to answer the research questions. Firstly, it discussed ontology and epistemology as worldviews that influence the researcher's beliefs. It continues to discuss the research approach, the research method, the research design, and the data collection techniques. The choices particular to this research are mentioned and justification is given for their selection. This involved the choice of research design, research approach, research strategy, data collection methods, and instruments data collection instruments. The research approach adopted for this study was qualitative

research and the overarching strategy for collecting data was a multiple case study.

Chapter Four

This chapter consists of three sections that present a detailed overview of the organisation used as a case study in this research. It justifies the selection of the organisation and how relevant it is to the research study. The chapter also provides an overview of the organisation's history and organisational and operational structure.

Chapter Five

This chapter presented the data analysis in four detailed sections. The first section gave an overview of the data analysis using the Technology Acceptance Model as a lens to analyse the data. It continues to describe the identified external factors that impact services delivered and how they are grouped. The chapter continues with an examination of the central tenets of TAM, namely PU, PEOU, BI, and AU. The chapter concludes with a summary.

Chapter Six

This chapter features the findings that emerged from the data analysis. These findings were subjectively interpreted, aiming to get a deeper understanding of the engagement that happens between SEs and the community using mobile technology. The findings were categorised into technical and non-technical factors, which provided SEs with different perspectives from which they can view their improvisation of service delivery to communities. The result of this chapter is a framework indicating the relationship between the various findings and their considerations for service improvisation by SEs to communities.

Chapter Seven

This Chapter concludes the research, summarising what was covered in the preceding chapters in section 7.2. Evaluation of the study under section 7.3 lists each objective, showing how these objectives were achieved. The study's contributions are discussed in section 7.4 under theoretical and practical contributions. The study’s benefits, followed by the research limitations, are covered in sections 7.5 and 7.6. The chapter concludes with recommendations, further research and conclusion.

7.3. Evaluation of the Study

This study's results helped the researcher draw conclusions, which are the answers to the research question and the outcome of the research aim. This section of the conclusion chapter helps us to evaluate the study by looking at whether the research objectives were achieved and how these objectives were achieved. The research question and aim, as formulated in Chapter 1, are as follows:

7.3.1 Research Question

“How can a framework be developed to aid the integration of mobile technology within the operations of SEs in the Western Cape to improve service delivery to communities?” The framework has been developed and is presented in Chapter 6, see Figure 1.

7.3.2 Sub-questions

The research question was broken down into two sub-questions, as presented in Chapter 1 and Chapter 3 of this study:

1. *What are the factors that influence how SEs use information to provide services to communities?*
2. *How can mobile technology be used to facilitate ease of access to information and service distribution?*

Sub-question #1

The factors that came out as findings of the study were categorised as technical and non-technical factors. The technical factors were network infrastructure, connectivity, and device capability. The non-technical factors were accessibility, affordability, contextualisation, language translation and knowledgeability. These factors were shown to influence how SE information is distributed to communities. It thus answered the question of what the factors are.

Sub-question #2

As presented in Chapter 6, the developed framework (Figure 1) shows the relationships and dependencies between the various factors. The relationships and dependencies are considerations of what must be in place to facilitate ease of access to information and service distribution.

7.3.3 Research Aim

To develop a framework that would aid social enterprises in using mobile technology in providing services to communities, in the Western Cape of South Africa. The framework presented in Chapter 6 (Figure 1) was the output of this study. The following sections list the research sub-questions and objectives, including the answers to the sub-questions, the objective outcomes and how the answers and outcomes were achieved.

7.3.4 The Research Objectives

To achieve the main aim of this research, it first had to accomplish the two objectives as presented in Chapter One. The process of achieving these objectives was to apply the selected research methods and design. This included conducting data collection through semi-structured interviews, analysing the data collected during interviews, and interpreting the findings that emerged from the data analysis. The interpretation of the findings led to a proposed solution in the form of a framework that could be applied to integrating mobile technology in service delivery by social enterprises and for distributing information particular to community development.

The research first had to achieve two main objectives to develop the framework. These objectives highlighted factors impacting social enterprise service delivery and the use of mobile technology for storing and sharing information. The objectives were:

Objective #1

The first objective was to examine and understand the factors influencing how SEs use information to provide services to communities. Through data collection, transcription and data analysis, these factors were highlighted and placed within the context of factors experienced by SEs as service providers and the community civic organisations as receivers of services. The factors that emerged were categorised as technical and non-technical factors. Three technical factors were identified: network infrastructure, connectivity, and device capacity. Five non-technical factors were also identified: affordability, accessibility, contextualisation, language translation, and knowledgeability.

Objective #2

The second objective was to investigate how mobile technologies can facilitate ease of access to information and service distribution. The achievement of this objective was significant as it would provide SEs with a way of improvising service delivery through mobile technology. The distribution and sharing of information are of particular importance as they relate to opportunities for community development and the creation of better living conditions for community members. This objective was achieved through the developed framework. The framework shows the factors obtained through objective one and illustrates their relationships and dependencies. The framework serves as a guide for integrating mobile technology into the operations of SEs to improvise their services for the communities.

7.4. Research Contribution

The research contributes theoretically, methodologically, and practically as discussed below.

7.4.1 Theoretical Contributions

This research contributes theoretically through the developed framework. The framework shows how the technical and non-technical factors are interconnected and must be viewed together. The framework further indicates the dependencies between the factors. Network Infrastructure, for example, is a determinant of Internet connectivity. Device capabilities are limited with no connectivity, which is required for information sharing.

The research further contributes by advancing the use of the Technology Acceptance Model (TAM). TAM is used as a lens for analysing the data, as presented in Chapter 5. Although TAM has been employed in several studies, this study expands its uses by applying it to data from an SE perspective. Applying TAM for the data analysis provided much insight into how TAM could be used to predict the adoption of mobile technology to be integrated into service delivery by SEs.

7.4.2 Methodological Contributions

This study contributes methodologically using TAM as a lens in a qualitative study, although TAM is also applied in quantitative studies. The contribution is specific to information sharing using mobile technology as a service improvisation. With the

application of TAM, the study contributes factors that influence how information is communicated and distributed for socioeconomic development.

7.4.3 Practical Contribution

Practically, the framework can be used to guide the development of software, an automated process for improvising services by SEs. For example, the framework can be used to guide connectivity and ensure that the shared information is accessible, contextualised, and correctly translated. Another practical contribution is that based on the framework, policies can be formulated from both SEs and communities, including the government's perspectives.

7.5. Study Benefits

This study will benefit social enterprises in their approach to distributing information for socioeconomic development, particularly through mobile technology. The benefits are listed below:

7.5.1 Information sharing through mobile technology.

The framework provides a view of the factors that need to be considered for effective information distribution and sharing. Connectivity to the internet through network infrastructure installation is a significant enablement for digital inclusion for many. The framework would help SEs to provide access to information while contextualising and translating it in a way that adds value to the recipients.

The study can help SE administrators and managers share information in a way that will benefit the local community in agricultural development while improving their economic status. The community can also contribute to content development and information sharing using mobile devices.

7.5.2 The body of knowledge

This study benefits the body of knowledge through the developed framework on both practical and theoretical levels. On a practical level, it indicates what needs to be in place and needs to be considered for information sharing through mobile devices. Theoretically, it considers elements that would help the community engage with information contextualised and translated.

The study benefits organisations using mobile technology to engage with local agriculture, community development and socioeconomic growth. The study adds to sharing information systems, ICT, mobile technology, and information-sharing research.

7.6. Limitations of the research

Along with the benefits that the study offers, there are also limitations to the study, and they are listed as follows:

1. The study only focused on service improvisation for community members doing agricultural activities in their community, such as home gardens and community gardens. Other community and socioeconomic development areas can benefit from using mobile technology for information sharing and the developed framework.

2. The platforms for information sharing and implementation of the framework are limited to mobile devices like smartphones, and the messaging applications are limited to WhatsApp, SMSes and MMSs.

3. The developed framework has not been tested, implemented, or presented to the relevant service providers or stakeholders. The study can thus not report on how the framework was viewed or received by SEs' management, field workers, administrators, IT professionals or the community that was part of the case study.

7.7. Recommendations

This section provides recommendations for how the developed framework can be operationalised. The recommendations relate to integrating mobile technology in SEs' information-sharing operations. The framework can be operationalised in the following ways:

7.7.1 Technical considerations

Organisations that want to integrate mobile technology usage into their operations can

request that telecommunication agencies and the government prioritise installing network infrastructure in areas with low internet coverage. The framework thus serves as a reference to show how proper network infrastructure installation can enhance information sharing.

7.7.2 Non-technical considerations

Organisations seeking to distribute information for their socioeconomic development can use the framework to ensure that information is contextualised and translated. Training needs to be provided on how to access the information.

7.8. Further Research

Since the framework has not been implemented, further research can study the implementation of the framework for integrating mobile technology in service implementation. Further research can include other disciplines where information is distributed for socioeconomic development.

7.9. Summary

This chapter presented the recommendations and the study's conclusion. Each chapter of the thesis has been summarised to reflect what each chapter covered. The chapter also shows how the research question and sub-questions were answered by reflecting on the study's outcomes and the developed framework. The study's benefits and limitations were listed. Recommendations are provided on how organisations can use the developed framework to integrate mobile technology into their operations. These recommendations provide both technical and non-technical considerations. Further research recommends that a study be done on the implementation of the developed integration framework,

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