THE ALLEVIATION OF INFORMATION POVERTY IN A SELECTED SMALL-SCALE FARMING COMMUNITY IN KWAZULU-NATAL

By

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DECLARATION

I, the undersigned, Nombuso Phamela Zondi declare that this dissertation is a presentation of my original work and has not been submitted for the award of any degree to this university or any other university. Where contributions of other authors are involved, proper referencing is made in the text.

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DEDICATION

This dissertation is dedicated to my wonderful mother, whose incredible hard work and unconditional love has brought me to this point in my life, and to my father, whose presence and love I still feel even though he is no longer with us.

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LIST OF ABBREVIATIONS

ABET: Adult Basic Education and Training.

DUT: Durban University of Technology

FAO: Food and Agriculture Organization

FG: Focus group

ICT: Information and Communications Technology

IDP: Integrated Development Plan

IFLA: International Federation of Library Associations and Institutions

IP: Information Poverty

IPT: Information Poverty Theory

KZN: KwaZulu-Natal

LIS: Library and Information Science

PCs: Personal Computers

SA: South Africa

UNESCO: United Nations Educational, Scientific and Cultural Organization

ABSTRACT

Information is crucial to human development, yet crucial as it is, rural communities are experiencing information poverty. It is recognized that rural South Africans who survive on the main through farming are confronted by information poverty as a significant barrier to their development. Access to information has been identified as one of the most significant barriers confronting rural small-scale farmers. The problem of information poverty in rural small-scale farming communities is a critical issue that must be addressed if a country desires to develop. This study therefore examined the alleviation information poverty in a selected small-scale farming community in Kwazulu-Natal. The objectives of the study were to establish the information needs of the selected small-scale farmers, determine factors that influence information poverty for the selected small-scale farmers, ascertain whether the selected small-scale farmers are information poor in accordance with Chatman's (1996) information poverty theory and to determine the strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty.The study was guided by Elfreda Chatman's (1996) Theory of Information Poverty which views information poverty, as situations in which people are hesitant to disclose or seek for assistance for needed information because they feel isolated. An interpretive paradigm employing qualitative research in an exploratory research design was adopted. The population targeted was rural small-scale farmers of ward thirteen in Swayimane, KwaZulu-Natal. In the absence of a sampling frame, the study employed purposive and convenience sampling methods. Data yielded from three focus groups was analysed using thematic analysis. The study found that small-scale farmers' information needs were chiefly crop soil requirements, market information, and guidance on livestock production and maintenance. Furthermore, adult education, ICTs, and library services were important needs for both young and older members of the community. The findings indicate that the information poverty faced by rural small-scale farmers is influenced by several factors. Among the factors were low family income brought by a lack of employment opportunities, rural small-scale farmers' isolation from essential services, a lack of government intervention, and small-scale farmers' cultural beliefs deemed to be backward. The findings showed that rural small-

scale farmers distrust information they receive from outsiders, which is consistent with Chatman's theory of Information Poverty that individuals who are information poor mistrust outsiders. The findings, however, contradict Chatman's claims that information-poor people are averse to sharing their needs with outsiders. The study revealed that rural small-scale farmers rely heavily on agricultural advisors, seasoned farmers, radio, and word of mouth for information. With regards to the strategies needed by small-scale farmers to address information poverty, the study found that government intervention, easy access to the internet, and an increase in the number of agricultural advisors were crucial. The study recommends increasing the number of agricultural advisors to provide small-scale farmers with more immediate support; establishing a library facility to offer library services to fill information gaps; adding more agricultural programs on radio and television to cover a wide range of small- scale farmers informational needs; offering ABET programs to reduce illiteracy among rural small-scale farmers; development of commercial centers in rural farming communities to improve rural small-scale farmer access to markets; government intervention in educating rural small-scale farmers on modern agricultural practices and on methods of obtaining agricultural information.

CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This chapter introduces the study and provides the conceptual and contextual backgrounds. The research problem investigated was stated. The aim, objectives and research questions were formulated followed by the rationale for conducting the study. The chapter then proceeded to delimit the study. Thereafter, an indicative review of literature and research methodology were provided. The outline of the thesis was then presented. The chapter concluded with a summary.

1.2 Conceptual background to information poverty

In attempting to conceptualize information poverty, it was necessary to first discuss the role of information in the development of individuals and communities, as information poverty is the root cause of community development failure. Information plays a critical role in the development of individuals and communities (Ndinde 2014; Omeluzor, Oyovwe-Tinuoye and Emeka-Ukwu 2017; UNESCO 2020). It is in this regard that UNESCO (2020) boldly claims that "information is power", while Ndinde (2014) asserts that information is needed to develop people through education, to prevail in business, to advance their social experience and to take responsibility for their day-to-day lives. For Omeluzor, Oyovwe-Tinuoye and Emeka-Ukwu (2017) information is indispensable for the functioning of a true democracy.

People need information to understand their surroundings, engage ideas, and motivate their actions (McKeown 2016). Gordon (2020) claims that increased access to information allows people to make better decisions about their health and well-being, raises awareness of economic and social opportunities, and empowers marginalized groups to comprehend their legal rights. Information is recognized as critical in allowing all people, including the most disadvantaged and excluded individuals, to claim their full range of rights and entitlements (Haider, Mcloughlin and Scott 2011). UNESCO (2020) supports

the claims, noting that informed citizens can make informed decisions, such as voting. Haider, Mcloughlin and Scott (2011) claim that only when citizens understand how they are governed can they hold their governments accountable for their decisions and actions. Chawinga and Zozie (2016) contend that individuals who have access to high-quality information are better able to solve their problems because they are more confident and educated about their issues.

Lack of access to information could debilitate people to make informed choices about their lives and livelihoods (Marais, Quayle and Burns 2017). Citizens are unable to engage with governments and determine the extent to which governments carry out their public office duties effectively and efficiently unless they have access to accurate and timely information (Marais, Quayle and Burns 2017; Mpahlo 2020). Grossman (2020) claims that productivity diminishes when people believe they lack the information or expertise they require. People tend to avoid circumstances in which they may be viewed as deficient in knowledge, comprehension, or expertise (Grossman 2020). According to UNESCO (2020) individuals will not be able to elevate themselves out of poverty until they are given the tools to do so. In this regard, individuals require access to knowledge in order to empower themselves and have control over the decisions that affect their lives (UNESCO 2020).

One of the pressing issues confronting the world today is information poverty, which has a significant impact on the economy, culture, and sociopolitical development (Marcella and Chowdhury 2020). There are numerous definitions of information poverty and what all definitions have in common is that they all emphasize that information poverty is the result of a lack of access to critical information. The most widely accepted definition of information poverty is that of Britz (2004), who describes information poverty as a state in which people or groups lack the necessary knowledge, skills, or resources to get, interpret, and effectively use information in a given setting. Similarly, McKeown (2016) defines IP as a situation in which individuals are unable to access information due to interrelated, cultural, educational, and economic factors. Marcella and Chowdhury (2020)

define information poverty as no entrance to needed information for survival and development.

Elfreda Chatman coined the term "information poverty" to define the marginalized social groups, the "information poor," who are unable to meet critical information needs (Wheeler, Dillahunt and Rieh 2017). According to Chen, Liu and Yang (2011) information poverty is the result of an increasing disparity between those who have easy access to a large amount of information and those who are unsure where to find for or how to use information in their everyday lives. Haider and Bawden (2006) note that information poverty is caused by a combination of factors, including a lack of knowledge and skills in many areas of library and information science as well as inadequate librarianship and library services.

A multitude of concepts in literature are synonymous and/or related to information poverty including, information inequality, information divide, information gap and others (Yu 2006). Moreover, information poverty is multidimensional concept that is influenced by information literacy, information systems, information preference, information operations, information and communication technology, and other factors (Mou and Xu 2020). There are three types of information poverty, according to Marcella and Chowdhury (2020): misinformation, or disinformation; a lack of ability to use data and information to make informed decisions; and a lack of ability to generate information and participate in the enlightenment of society.

Information poverty tends to manifest in marginalized areas such rural areas presenting itself in a variety of ways and is primarily reflected in the following aspects (Britz 2004; Chen, Liu and Yang 2011). Rural areas, unlike affluent areas such as cities, have few pieces of software and device to collect, process, and share information, and the communications system is inadequate (Chen, Liu and Yang 2011). According to Chen, Liu and Yang (2011) lack of access to resources is one of the reasons why most people in rural areas have low education and are underdeveloped, which is detrimental to their ability to learn and process information.

In South Africa, many of the poorest households are living in rural areas in which public services and infrastructure are least developed (Arndt, Davies and Thurlow 2018). Chisango and Lesame (2017) state that in South Africa, apartheid-era telecommunications infrastructure favored white and urban areas, leaving rural areas poorly connected in terms of information and communication technology. Kamba (2009) also asserts that in the post-apartheid era, the provision of information has and is still a challenge in South Africa. Post-apartheid South Africa remains marked by a broad divide in living standards and quality of life between rural and urban areas (Casale and Posel 2010).

Many South Africans, especially rural people, still live under conditions of information poverty (Yu 2006; Strand and Britz 2018). Sikhakhane, Lubbe and Klopper (2005) state that people in urban communities have better access to information services that can be used to access information, but people in rural areas often lack access because of scarce resources. Rural areas in South Africa are isolated from practically all types of services; as a result, residents will have to travel to urban areas to obtain necessary services (Seretse *et al.* 2018). Rural homes are scattered, and it is impossible to have a center where people can access information (Féret and Chartier 2020). Poor networking and infrastructure is a major challenge and is barrier to growth of rural areas (Féret and Chartier 2020; ABNewswire 2021). The remoteness of these areas also leads to isolation and consequently curriculum structuring, and planning are often neglected (News Centre 2018).

The lack of access to information and ICTs in rural areas is an obstacle to human development at the individual and community level (Bomah 2014). Lack of access to information implies that individuals living in rural areas face challenges in pursuing several aspects of their development including their education and being involved with the wonderful things society has to offer (Du Plessis and Mestry 2019). Kumar and Singh (2012) state that the adoption of ICTs in rural development has been slow, due to a lack of ICT infrastructure in rural areas, a lack of ICT awareness among agency officials working in rural areas, and language obstacles. According to Rao (2009) ordinary people

do not have access to the internet or computers because they are prohibitively expensive, and computers and connectivity are not commonly available in rural areas.

Rural people need a wide range of information in all aspects of life in order to break free from the cycle of poverty (Van der Walt 2021). Abubakar and Magaji (2019) state that farmers of all types, including subsistence and small-scale farmers, medium-scale farmers, and large-scale commercial farmers, require information about new developments in the agricultural business sector. If information is made available, rural small-scale farmers will be more efficient and able to earn enough money to succeed and enjoy better living conditions (Sitali and Mulauzi 2010).

One of the biggest obstacles to agricultural growth has been highlighted as the lack of access to agricultural information by small-scale farmers in the majority of developing countries, despite the fact that information dissemination is an essential tool for supporting national development (Osikabor, Oladele and Ogunlade 2011). Van der Walt (2021) also claims one of the major barriers to Africa's small-scale farmers is access to information, particularly information and data on yields, access to technological advances and market opportunities, and a lack of infrastructure.

Despite the fact that research institutions and government agencies have a wealth of data information, African countries have not paid enough attention to disseminating information and knowledge about modern farming technique and the majority of small-scale farmers are only aware of a limited amount of information (Lwoga, Ngulube and Stilwell 2010). Odini (2014) asserts that rural small-scale farmers have farming information needs and require a variety of information sources to make decisions in their farming activities daily; however, these needs are not being met. Small-scale farmers are lagging behind on access to technology, when compared to their counterparts in commercial farms (Mutero, Munapo and Seaketso 2016). Rural small-scale farmers are unable to market their crops through agricultural market chains due to a lack of information, knowledge, and technology; as a result, small-scale farmers may not make a lot of money because they sell to their neighbors at lower prices (Hlatshwayo 2018).

1.3 Contextual background to information poverty

The broader context of this study was information poverty in rural small-scale farming communities in South Africa. The study site was Swayimane in the province of KwaZulu-Nata. Swayimane is part of the UMshwati Local Municipality located about 65 kilometers east of Pietermaritzburg, consisting of 95% Black Africans constitute from a population of approximately 106 374 and has an especially high dependence ratio of (61%) (Statistics SA 2011). Settlements are made up of 39.5 % farms, 48.5 % traditional settlements, and 11.9 % urban areas (Statistics SA 2011).

Swayimane, like most rural areas, has a traditional authority, and while the community has adopted modern ways of life to some extent, it is one of those areas where traditional customs are still observed (Martin and Mbambo 2011). According to Cebisa and Stander (2011) there are few job opportunities in this area and many people must travel to neighboring towns to find work. The clinic is over six kilometers away, a difficult walk for the elderly; learners in high school have no choice but to walk 8 kilometers to school (Cebisa and Stander 2011). Although a small van is available for scholar transportation, some parents are unable to afford it (Ngubane 2021). The roads are in disrepair, and transportation is also an issue in this community, as a taxi can only come if there are six or more people (Ngubane 2021).

Swayimane is still underdeveloped, and infrastructure progress is gradual as such the community is impoverished and lacks access to other basic services (UMshwathi Municipality 2022). According to Statistics SA (2011), UMshwati sanitary infrastructure is severely lacking, with only 21% of homes having access to a flush toilet. Although electricity is widely available with 73% of households using it for lighting, 61.3 % of households do not have access to the internet (Statistics SA 2011). Water is still scarce with services yet to reach some sub-regions and some members of society rely on rain, rivers, lakes, and tanks to survive (UMgungundlovu District Municipality 2022).

Swayimane has been described as a village of shame that is ignored by all and lacks even the most basic services; the community is rife with unemployment, drinking, and

drug use (Khoza 2012). It is one of the areas in uMgungundlovu District Municipality with poor infrastructure, high unemployment, limited access to services and communication, poor living conditions, and an overall lack of adequate services (Malomane 2019). According to KZN Top Business (2021) this community has very limited access to basic physical and social needs, as well as limited economic opportunities. The present authority structures are currently unable to provide for the urgent improvement of basic living conditions required by rural residents (KZN Top Business 2021).

Many community members in Swayimane rely on small-scale resource-poor agricultural farming for subsistence (Archer *et al.* 2010). Crop production dominates most farming systems, with small-scale farmers primarily growing maize, beans, amadumbe, sweet potato, and sugarcane (Mathebula, Kruger and Smith 2018). The farming system also incorporates animal husbandry, which is primarily utilized to prepare the land and produces limited milk from animals (Archer *et al.* 2010).

Small-scale farmers in this area face numerous challenges, including a lack of water and irrigation, increased land degradation, and financial constraints that prevent them from purchasing basic farming inputs and implements (Mkhize 2016). Small-scale farmers would have to overcome a number of obstacles, such as a shortage of resources like land, seeds, fertilizers, tractors, and chemicals, and financial support, as well as a lack of institutional and governmental support (Chitja and Botha 2020). Such constraints significantly affect the volume of crop production as some small-scale farmers produce less crops, particularly those that are not marketable, and as a result of these challenges, farmers' food security is jeopardized (Mkhize 2016; Chitja and Botha 2020).

1.4 Statement of the research problem

Access to and application of information is viewed as critical not only for farmers' financial success, but also for encouraging sustainable agricultural expansion (Babu *et al.* 2012). In recent decades, the value of information has increased significantly as agricultural systems in emerging nations have become more knowledge demanding (Zimu-Biyela, Van der Walt and Dube 2020). According to Odini (2014) farmers in other parts of the

world now have access to a wide range of information sources, however, there is little evidence that rural small-scale farmers making effective use of the increased availability of information sources.

In developing countries, the main barriers to small-scale farmers' access to information are a lack of availability, reliability, a lack of understanding of relevant information sources, and late distribution of information (Babu *et al.* 2012). According to a study conducted by Lemke and Jansen van Rensburg (2014) in North West, rural small-scale farmers revealed that they lack crucial information about their rights and related legislation, partially due to their illiteracy and lack of access to legal resources. Jallow *et al.* (2017) state that many small-scale farmers' risks are exacerbated by a lack of information about pesticide hazards, farmers' perceptions and attitudes about pesticide exposure risk, and a lack of education and knowledge.

Empowering small-scale farmers entails not only access to technology and land, but also access to information, so that farmers can make better decisions and understand their market and how to best meet its needs (Van der Walt 2021). Mbagwu, Benson and Onuoha (2018) argues that small-scale farmers must be given access to the right information at the right time so that they can apply it in production and increase farm productivity (Mbagwu, Benson and Onuoha 2018).

As stated in the background, most rural small-scale farmers continue to lack access to information resources due to a variety of factors including a lack of internet access and infrastructure. Furthermore, farmers' legal rights to information are unprotected, potentially exacerbating rural information poverty (Chen, Liu and Yang 2011). It is abundantly clear that small-scale farmers remain in a state of information poverty. As a result, providing information products and services to small-scale farmers should become an important part of the country's growth strategy. In view of the above, this study investigated alleviation of information poverty in a selected small-scale farming community in Kwazulu-Natal.

1.5 Aim of the study

The aim of the study was to examine the alleviation of information poverty in a selected small-scale farming community in Kwazulu-Natal.

1.6 Objectives of the study

The objectives of the study were to:

- Establish the information needs of the selected small-scale farmers.
- Determine factors that influence information poverty for the selected small-scale farmers.
- Ascertain whether the selected small-scale farmers are information poor in accordance with Chatman's theory of information poverty.
- Determine the strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty

1.7 Research questions

The study was guided by the following research questions:

- What are the information needs of the selected small-scale farmers?
- Which factors contribute to information poverty for the selected small-scale farmers?
- Can the selected small-scale farmers be described as information poor in accordance with Chatman's theory of information poverty?
- What strategies are needed and employed by the selected small-scale farmers to address information needs with the aim of alleviating information poverty?

1.8 Rationale of the study

This study has the potential to add to the body of knowledge by providing empirical evidence on the experiences of small-scale farming communities confronted with information poverty. The study can help to raise awareness of and provide insights into

strategies that can be implemented to alleviate information poverty in farming communities. This study is significant because it aims to ensure that information poverty is more than just a discussion topic, but also has an action plan that should be implemented to improve peoples' lives.

1.9 Delimitations and limitations of the study

Although the literature suggests that information poverty exists in a variety of marginalized communities, this study focuses solely on small-scale farming communities. In South Africa, there are many small-scale farming communities, but this study focused on ward 13 in Swayimane, KwaZulu Natal.

Focusing on small-scale farmers in ward 13 in Swayimane limited the ability to generalize the study's finding to other wards and rural areas in KwaZulu-Natal with potentially different conditions. However, it is hoped that future studies will be conducted to address this limitation in the future.

Given that there was no complete list of small-scale farmers (sampling frame) in Swayimane, deciding on the number of people to participate in the study was difficult (sample size), as a result, non-probability sampling methods were employed. The researcher had intended to conduct individual interviews, but because rural dwellers are accustomed to working in groups and did not have the time to wait for individual interviews due to work and family obligations, the researcher had to hold all the focus groups on the same day at different times.

Given the literacy issues among rural small-scale farmers (Lemke and Jansen van Rensburg 2014), the researcher had to translate the letter of information, consent form, and interview schedule from English into IsiZulu, a language understood by small-scale farmers. This was done to ensure that those who can read can do so and understand, and that those who cannot, can have the researcher read to them and understand.

1.10 Literature review

This section provides a brief overview of the literature; a detailed review will be provided in chapter two. Literature was gathered using various sources including books, scholarly journals, theses and dissertations, conference proceedings, reports, and government publications. In terms of the themes addressed by the researcher when reviewing the literature, these included conceptualizing information poverty, identifying of information needs of small-scale farmers, exploring factors that influence information poverty among small-scale farmers, discussing of the theory of information poverty by Elfreda Chatman (1996) and the identifying of strategies employed and needed by small-scale farmers to meet information needs with the aim of alleviating information poverty.

According to the literature, information poverty is a worldwide problem (Britz 2006; Sun *et al.* 2009; Marcella and Chowdhury 2020).   Sun *et al.* (2009) state that with the development of ICT, information poverty has become a common problem worldwide and needs to be addressed. Britz (2006) argues that societies have lacked not only raw materials, but also the information required to meet their basic needs, skills, and abilities. Because rural informatization is comparatively backward in terms of infrastructure and economy, rural people in particular are in a state of information poverty as they lack the capacity to access and use crucial information in order to meet their needs (He, Li and Cai 2015; Strand and Britz 2018). Small-scale farmers are among the rural dwellers whose informational needs are not met and who continue to persevere in the face of unfavorable conditions (Goodwin and Gouldthorpe 2013; Mpandeli and Maponya 2014).

It is said that small-scale farmers need a wide range of information (Phiri, Chipeta and Chawinga 2019b). Seeds, fertilizer, agricultural credit, irrigation, disease, pest management, market, weather forecasts, and other top topics are among those on which smallscale farmers frequently seek information (Bachhav 2012; Omoregbee and Banmeke 2014). Older farmers have a greater need for information about agricultural professional assistance and training, while younger farmers are more concerned with information about non-agricultural occupation skills and training, entrepreneurship, continuing education, and investment financing (Chen and Lu 2020).

Small-scale farmers experience information poverty, which prevents their needs from being met (Gebru, Yared and Gebremichael 2017). Information poverty is primarily caused by a lack of access to important information (Gebremichael and Jackson 2006; McKeown 2016; Mia 2020). Factors such as low income of small-scale farmers, poor information infrastructure and low cultural quality of the majority of small-scale farmers contribute to information poverty, as all these factors constitute a barrier to accessing information for small-scale farmers (Chen, Liu and Yang 2011; Phiri, Chipeta and Chawinga 2019a).

Small-scale farmers use a variety of strategies to gain access to information in an effort to reduce information poverty (Lwoga, Ngulube and Stilwell 2010; Raungpaka and Savetpanuvong 2017). Seeking information from local elites, village leaders, family members, word of mouth, extension agents, and so on are common strategies used by small-scale farmers (Lwoga, Ngulube and Stilwell 2010; Raungpaka and Savetpanuvong 2017; Zimu-Biyela, Van der Walt and Dube 2020). It has been discovered that the small-scale farmers' available strategies and information sources do not meet their needs and limit their ability to seek information (Bhagat, Nain and Narda 2004; Toringepi 2016; Rahman, Ara and Khan 2020). As a result, academics proposed that the establishment of libraries, ICT connectivity and infrastructure, education, and other similar initiatives can help alleviate the information poverty experienced by small-scale farmers (Britz 2006; McKeown 2016; Chisango and Lesame 2017; Makaula 2021).

1.11 Theoretical Framework

Elfreda Chatman's theory of information poverty was used as the theoretical framework for this study. Elfreda Chatman's theory of information poverty was chosen specifically because it is frequently reviewed by academics when researching information poverty. It was also chosen because it explains why the research problem under study exists, and it explains the factors that contribute to information poverty as well as community behaviors that lead to an information-impoverished world.

Chatman's goal was to identify other factors that contribute to information poverty based on the user's lived experience (Dankasa 2017). Chatman (2000) states ndividuals live in an information-poor world when concerns and problems arise, and when information that could be useful is recognized but ignored. When describing the information poor, Chatman (1996) asserts that information poor people are averse to approaching others in their typical social settings for crucial information, preventing or obstructing the access to potential sources of assistance. According to Chatman (1996) cited in Hasler and Ruthven (2011) people commonly avoid revealing individual information needs due to the possible negative impact on their lives, and societal expectations dictate the types of information that may or may not be sought, as a result, despite the fact that help is available, people view themselves as lacking in information sources.

Chatman (1996) highlighted the significance of the insider/outsider factor in information research. How knowledge is gathered, applied, and characterized depends on whether one is an insider or an outsider (Dankasa 2017). According to Chatman (1996), those who perceive themselves as insiders believe that they share the same norms and beliefs and have a comparable view of the world. Insiders frequently keep information from those who do not have these characteristics since they perceive them as outsiders and don't understand their way of life, as a result, privileged information is hidden from outsiders in a protected and secretive manner (Chatman 1996).

Though social barriers contribute significantly to information poverty, as explained in Chatman (1996)'s theory of information poverty, the current study aims to identify other, if any, causes or influences of information poverty that, if not identified, may impede the alleviation of information poverty. The study will also look into whether the current study's small-scale farmers exhibit the characteristics of an information-poor society.

1.12   Research methodology

Philosophically, the study is interpretivist. For this study, a qualitative approach and an exploratory research design were used. Target population consisted of rural small-scale farmers in ward 13, Swayimane. Due to the lack of a clearly defined sampling frame,

purposive and convenience sampling methods were used to ensure that participants were chosen appropriately. In total, 26 farmers participated in the study. An interview schedule was used to collect data. Recorded data obtained from focus group discussions were transcribed, coded, and the data was then analyzed to identify themes, which were then discussed in relation to the literature. Respondent validation enhanced the validity of the current study, and reliability was ensured by pretesting the instrument.

The ethical requirements of the Durban University of Technology were adhered to. The researcher obtained ethical clearance from the DUT Faculty Research Ethics Committee and the Institutional Research Ethics Committee. Prior to the focus group discussions, participants were given informed consent forms to obtain small-scale farmers' permission to participate in the study and give them the option to either participate voluntarily or refuse participation. Additionally, letter of information was distributed that clearly stated the purpose, nature, and terms of participation in the study. The informed consent and letter of information were explained in detail, providing a thorough understanding of the of the significance of the study. A detailed description of the research methodology will be provided in chapter three.

1.13   Outline of the study

The study has six chapters as highlighted below:

Chapter one- introduction and background to the study

This chapter introduces the study and providing the conceptual and contextual backgrounds**.** It also discussed the study's research problem, research objectives, rationale, and limitations. This chapter further provided an overview of the literature review and briefly described the methodology used.

Chapter two- literature review

The second chapter contains a literature review that discusses the relevant literature relating to information poverty in rural small-scale farming communities.

Chapter three- research methodology

This section describes the study's research methodology. The research paradigm, design, approach, population, and sampling methods are all discussed. Data collection methods, data analysis, ethical considerations, and validity and reliability are all covered.

Chapter four- analysis and discussion of findings

This chapter analyses and discusses the findings in relation to the study objectives.

Chapter six- summary, conclusion, and recommendations

The final chapter offers a summary, conclusion, and recommendations based on the findings, as well as suggestions for future research.

1.14   Summary of the chapter

This chapter introduced and provided the conceptual and contextual backgrounds. It elaborated on the problem statement, the research objectives, and the research questions. The rationale of the study, as well as the study's delimitations and limitations were also presented. This was followed by an indicative literature. The research methodology adopted by the study was briefly introduced and finally the outline of the thesis was presented. A detailed literature review follows chapter two.

CHAPTER TWO
THEORETICAL FRAMEWORK: CHATMAN'S THEORY OF INFORMATION POVERTY AND REVIEW OF LITERATURE

2.1 Introduction

The previous chapter introduced and provided the study background. This chapter reviews literature on the alleviation of information poverty. The review of literature is arranged in accordance with the study's research objectives. The chapter begins by discussion of theoretical framework adopted theory by the study. The chapter then moves on to conceptualizing information poverty and identifies of information needs of small-scale farmers. Thereafter, factors that influence information poverty among small- scale farmers are identified. The chapter then defines the information poor in accordance with Chatman's theory of information poverty. Strategies employed and needed by small-scale farmers to meet information needs with the aim of reducing information poverty are also discussed. The last section of the review identifies gaps in the literature, ending with a chapter summary.

2.2 Chatman's Theory of Information Poverty

The theoretical framework is the first thing that academic supervisors consider and having the appropriate theoretical framework aids in their understanding of the research problem (PhD Assistance 2019). The structure and vision of a study are unclear without a theoretical framework, much like a house cannot be built without a plan. A research plan that includes a theoretical framework, on the other hand, enables the dissertation study to be strong and structured, with a seamless flow from one chapter to the next (Osanloo and Grant 2016). All researchers need to make the underlying theory more precisely defined. It can also enable researchers to take into account their own limitations and other theories that differ from their point of view (PhD Assistance 2019).

The Elfreda Chatman's theory of information poverty served as the theoretical framework for this study (Chatman 1996). Elfreda Chatman's theory of information poverty was

chosen specifically because it is frequently reviewed by academics when researching information poverty. It was also chosen because it explains why the research problem under study exists, and it explains the factors that contribute to information poverty as well as community behaviors that lead to an information-impoverished world.

In order to explain what she was observing, Chatman began her work by using notions and conceptual frameworks from other fields (Thompson 2009). Later publications are built upon the earlier theory, bringing many smaller theories together under a single, large theoretical concept (Thompson 2009). Chatman developed a number of theories to investigate the information behavior of marginalized groups (Zhu and Liao 2020). Burnett *et al.* (2006) states that Chatman developed numerous middle-range theories, including Information Poverty, Life in the Round, and Normative Behavior, studying a variety of groups, including the impoverished, older individuals, female convicts in maximum security prisons, and janitors.

Life in the Round, one of Chatman's theories, is based on her research on women in prison (Chatman 1996). According to Chatman's theory of "life in the round," people may live their lives in circles and their quest for information may be influenced by the social norms and worldviews that members of a group hold dear (Chatman 1999). According to Chatman's normative behavior theory, information is never a neutral value within a small world and is never a good or service imposed from outside. Instead, it is always a part of the world's particulars, and as such, it is given significance by the world's standards and values (Madaki and Suleiman 2021).

Chatman's theory of information poverty describes the information world of poor individuals across different communities throughout the United States (Chatman 1996). Through several ethnographic research, Chatman investigated the information behavior of specialized communities (Hasler, Ruthven and Buchanan 2014). Chatman examined the information behavior of specialized populations and built on her previous work on information in relation to poor groups by developing her theory using sociological concepts such as insider or outsider and social norms (Chatman 1996). Chatman (1996) conducted three studies with low-income janitors, older women in retirement

communities, and women participating in an employment scheme. In her research, Chatman (1996) used ethnographic and sociological methods and theories, such as social network theory, gratification theory, diffusion theory, opinion leadership theory, and alienation theory.

Chatman chose to examine information from the perspective of a small group of people she identified as information poor (Thompson 2009). Chatman (1996) states that people in these groups would not disclose their needs or share information that would put them at a disadvantage or make them appear less capable of coping than others. Due of issues of fear, mistrust, and irrelevance, this type of information and information needs were frequently hidden. Chatman (1996) observes that their self-protective behavior stemmed from their status as outsiders. Participants in Chatman's study kept information hidden and used deception even when sharing that information could help them obtain resources that could help them improve their situation. Subjects considered whether they could trust any information they received and analyzed the risk that could be encountered if they decided to share information with outsiders, and they evaluated whether they would be provided with resources with any actual relevance to their situation as they saw it (Chatman 1996).

After analyzing the findings of her studies, Chatman developed her "Theory of Information Poverty," which she outlined in "The Impoverished Life-World of Outsiders" (Chatman 1996). Chatman (1996) claims that members of the small-world setting do not use potentially useful information due to social barriers. Chatman's theory of information poverty describes a condition in which people are unwilling to approach others in their usual social settings for much-needed information, thereby preventing obstructing potential sources of assistance from being reached (Hasler, Ruthven and Buchanan 2014). Chatman (1996) states that people are information poor when they perceive a scarcity of information resources that speak to their world view, are suspicious of information from outsiders, and engage in deception to maintain control over their daily lives. This creates a privilege divide in which insiders claim privileged access to certain types of knowledge. That is, only insiders have a true understanding of the social and

information worlds of others. In terms of community studies, Chatman's distinction between insiders and outsiders is based on the fact that, from a normative, dominant perspective, the stigmatized are outsiders in the sense that they are marginalized, typically with less access to information resources and technology.

Chatman's "Theory of Information Poverty" is founded on four anomalous concepts discovered through an examination of her previous theoretical applications: deception, risk-taking, secrecy, and situational relevance (Chatman 1996).
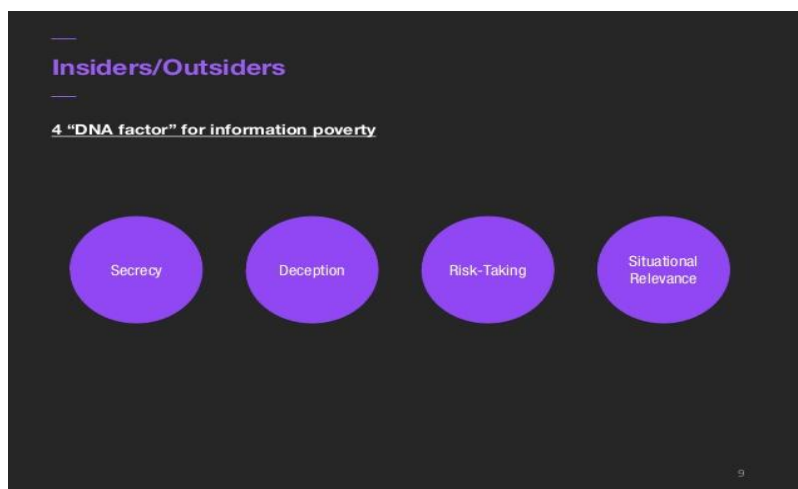
Figure 2.1 Concepts of information poverty (Chatman 1996)

According to Chatman (1996), social barriers to information use include "secrecy and deception" brought on by mistrust of others' motivations or capacity to share helpful information; membership in a social group that restricts members of the community from seeking information from outside the group; and small-world group members who disregard information that conflicts with their beliefs (Musa 2015). According to Chatman, information poverty refers to situations in which people are reluctant to approach others for information they need or to share information with them because they feel isolated, distrust their surroundings, or want to appear normal (Musa 2015). That is, those who lack information will hide a need for information rather than run the risk of a potential

negative impact on their lives, and as a result, even though assistance might have been available, their information remains unsatisfied (Bronstein 2014).

Based on these four concepts Chatman delivered six propositions that constitute her "Theory of Information Poverty" and "describe an impoverished information world" (Chatman 1996).

1. A lack of access to information is linked to social class. As a result, outsiders who deny privileged access to information have an impact on the state of information poverty.
2. Information poverty is partially associated with class distinction.
3. Information poverty is characterized by self-protective behavioral patterns used in response to social norms.
4. Secrecy and deception are both self-protective mechanisms that stem from a mistrust of other people's willingness or ability to provide useful information.
5. A decision to risk exposing our actual problems is frequently avoided because the negative consequences are perceived to outweigh the benefits.
6. The information worlds of the poor will be selectively introduced to new information. One factor influencing this process is the relevance of that information in response to daily problems and concerns.

Other studies that have used information poverty as a framework for research have also targeted specific groups. The current study has observed a gab in studies that used Chatman's theory of information poverty as their theoretical framework: many of these studies focused on websites and online groups that people use, rather than on the individuals who use them. Making verification of their findings nearly impossible.

Hasler, Ruthven and Buchanan (2014) conducted a qualitative content analysis of 200 posts across internet groups on how people in information poverty use online newsgroups and discussion groups. The study developed an understanding into what people talk about online and noted topics around which they actively sought critical information. Health information requirements, particularly mental health information needs, were

especially common (Hasler, Ruthven and Buchanan 2014). Due to the qualitative analysis, the study's findings were based on an analysis of 200 posts, which prevents the findings from being generalizable. Second, because the study only looked at textual content analysis of messages posted to newsgroups and discussion groups, it cannot verify the interpretations with the posters themselves.

Davda and Buchanan (2022) investigated the possibility of information poverty among children from 5 main schools in the United Kingdom. The study's findings revealed the existence of self-protective information behaviors and unfulfilled information needs among children, both of which are characteristics of an information-poor state (Davda and Buchanan 2022). The profile of the study sample limits the generalizability of the study because, despite coming from a variety of schools and socio-cultural backgrounds, the majority of participating children were of white ethnicity, accounting for 96 % of Scottish population. The majority of adults were also of white ethnicity and predominantly female.

Using a sample of 9300 messages posted to Sipulitori, a Finnish dark web site, Haasio, Harviainen and Savolainen (2020) examined the nature of context-sensitive information needs by focusing on the articulations of need for Di normative information among drug users. According to the study's findings, approximately 72% of drug-related information need topics dealt with the utilization, availability, and cost of narcotics, and that drug-related information requirements are usually triggered by physiological factors, owing to the importance of physical addiction on drugs (Haasio, Harviainen and Savolainen 2020). The study was limited in that it concentrated on a specific group of people. As a result, the findings cannot be applied to the motivators for seeking disnormative information on other topics.

Khalid *et al.* (2022) examined the navigability, usability, and credibility of health-wellness resource websites using 1453 SPO websites identified. The findings of Khalid *et al.* (2022) 's study revealed that immigrants continue to look for information on the web, and that immigrant SPOs' websites are important in improving immigrants' health literacy and health-wellness. The study's applicability is limited because immigrant populations, needs, and supports, as well as healthcare systems, differ significantly across nations.

There have been few studies conducted to determine the validity of Chatman's theory (Shepperd 2013). Although Chatman (1996)'s theory of information poverty states that social obstacles play a crucial role in information poverty, the current study intended to find out if there are any further causes or influences of information poverty that, if not found, may prevent the alleviation of information poverty. The study also looked into whether the current study's small-scale farmers exhibit the characteristics of an information-poor society. The six propositions of information poverty were used in the current study to determine whether the selected small-scale farmers are information poor according to Chatman's theory of information poverty. Furthermore, data analysis for each of the study objectives was further discussed in relation to Chatman's proposition.

2.3 Conceptualizing information poverty

Information poverty is comprised of two terms namely, 'information' and 'poverty' both of which play an important role in shaping modern society and determining equitable access to basic services (Haider and Bawden 2006; Son 2013). It is critical to first discuss and have a clear understanding of what 'information' and 'poverty' are, as well as the relationship between the two terms, in order to understand information poverty (Britz 2006; Marcella and Chowdhury 2020). Below is an attempt to conceptualize 'information' and 'poverty'.

2.3.1 Information

Information is a powerful tool for empowerment because it removes ignorance and allows a person to be enlightened and courageous (Nicholase-Ere 2017). The value of information in any society, community, or organization cannot be overstated because it is required at all stages of life (Idiegbeyan-ose and Akpoghome 2009). It is a valuable resource that every person, literate or not, requires; it is the driving force behind modern society and a significant contributor to the growth of individuals and communities (Moore 2007; Islam and Hoq 2010). According to Idiegbeyan-ose and Akpoghome (2009) information is extremely useful in decision making because its availability allows individuals, groups, or organizations to make rational decisions while reducing their level

of uncertainty. It is a critical tool for addressing societal challenges for long-term development (Garaba and Mohammed 2019).

Information is a unique source of economic, social, political, and cultural freedom advancement as well as a source of knowledge (Barja and Gigler 2007). Access to and use of information and communications are necessary preconditions for development because information affects every aspect of life (Barja and Gigler 2007). In support of the above claim, Alewine and Canada (2017) state that problems such as poverty, hunger, war, oppression, intolerance, and diseases can be alleviated through information. Alewine and Canada (2017) go on to say that if air, food, and water are essential for basic survival, information is essential for almost everything else, including safety, enrichment, entertainment, comfort, and progress. As a result, in this increasingly information-dependent age, a lack of information could undoubtedly have serious, if not potentially fatal, consequences for the individual (Sani *et al.* 2014)

It is recognized that information may empower the underprivileged to take advantage of opportunities and lessen their susceptibility to market forces (Narayan 2000; Nwagwu 2015). The effective adoption of agricultural inputs, market decision-making, and scientific method adoption can all be aided by the dissemination of relevant information to communities (Nwagwu 2015). It is regarded as a vital resource and commodity for development, as well as a basic need that contributes to daily success, including farming activities (Odini 2014).

2.3.2 Poverty

Poverty is a state of being in which the majority of people do not have enough resources to meet their basic survival needs (Britz 2006). Food and Agriculture Organization (FAO) (2005) defines poverty as the inability to achieve a socially acceptable standard of living. It exists everywhere, in countries and communities, among able-bodied and physically challenged people (Tella *et al.* 2017). Poverty manifests itself in a number of ways, including a lack of adequate income and productive resources to ensure long-term

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survival, as well as a lack of participation in decision-making, whether civil, social, or cultural (Gabriels and Horn 2014).

Poverty is known to be a rural phenomenon regardless of developments (Seretse *et al.* 2018). According to the United Nations (2021) poverty is still primarily a rural issue. Rural areas are home to 80 percent of the poor, and their poverty is exacerbated by a lack of government service and infrastructure, and social protection (United Nations 2021). This is also supported by Kharas *et al.* (2020) who assert that rural poverty is frequently caused by a lack of access to markets, education, and quality infrastructure, employment opportunities, health, and financial products. According to Lister (2021) fighting poverty is crucial, and the best way to combat inequality is to build a knowledge-based society. Lister (2021) believes that information is power, particularly because people cannot rise out of poverty unless they are given the opportunity to do so.

The link between information access and the global goal of poverty eradication appears to be self-evident as people require information in order to make decisions and exert control over the decisions that affect their lives (Lister 2021). People who do not have the money to purchase internet connections or hardware, do not have resources to develop the skills required to use information, and do not have the motivation to go further will be victims of poverty (IFLA 2018).

2.3.3 Information poverty

Information poverty, a new form of poverty, has emerged as a global issue (Sun *et al.* 2009). The existence of a large segment of society known as the "information poor," "information have-nots," "information deprived," "information underprivileged," or other similar terms has become an increasingly unsettling issue for the information society (Yu 2010). Information poverty is a multifaceted problem that can be thought of as a spectrum or continuum ranging from abundant information access and comprehension to limited or no access and comprehension (McKeown 2016). There are numerous definitions of information poverty, and they differ in significant ways. The emphasis in most definitions

of information poverty is on the fact that information poverty is caused by a lack of access to critical information.

2.3.3.1   Definitions of information poverty

In general, information poverty is defined as a situation in which people in a given context lack adequate and equal access to quality information in sufficient quantities (Shen 2013). Britz (2004)'s definition of information poverty appears to be the one most commonly used \by academics when discussing information poverty. Britz (2004) defines information poverty as a predicament in which individuals and groups in a specific context lack the necessary skills, abilities, or material resources to obtain efficient access to information, interpret it, and apply it effectively. McKeown (2016) notes that the term 'information poverty' refers to a scarcity of information that is essential for citizens' ability to participate effectively in society and make informed life decisions. Marcella and Chowdhury (2020) defines information poverty as a lack of access to critical information for survival and development.

Information poor society is defined as users of information who are in a depressed state as a result of social inequity, inability to define their information needs, and a lack of ICT and knowledge about how to use such technology and information resources (Cruz-Cunha, Miranda and Goncalves 2013). According to Strand (2016) information poverty encompasses not only a lack of physical and technological access to information, but also the ability of individuals to obtain, share, produce, and effectively use information.

2.3.3.2   Conception of information poverty

The term "information poverty" was coined by Elfreda Chatman to describe a marginalized social group and the information poor who are unable to meet critical information needs (Wheeler, Dillahunt and Rieh 2017). Chatman (1996)'s theory of information poverty characterizes situations in which people are reluctant to approach others in their usual social environments for much-needed information, thereby concealing their information needs from potential sources of assistance (Hasler, Ruthven

and Buchanan 2014). Chatman (1996) define information poverty as the refusal to seek information from people in one's usual social environment, as well as the use of secrecy and deception to conceal information needs from those who might be able to help (Chatman 1996).

2.3.3.3   Causes of information poverty

In an internet-based society, having too much or too little information can lead to information poverty (McKeown 2016).   Britz (2006) states that information poverty manifests itself in the absence of libraries. Mia (2020) argues that information poverty is caused by unequal access to information. It is caused by social inequity, the inability of users to define their information needs, a lack of ICT and knowledge about how to use such technology and information resources, and a lack of ICT and knowledge about how to use such technology and information resources (Cruz-Cunha, Miranda and Goncalves 2013). According to Gebremichael and Jackson (2006) many people believe that the underlying causes of information poverty are information illiteracy, insufficient resources, governmental censorship and regulation, developed information policies or a lack thereof, and information infrastructures.

Information poverty is a result of a lack of access to emerging ICT, a general lack of information infrastructure, the ability to manipulate and use information, and basic educational and cultural barriers (Gebremichael and Jackson 2006). Gibson and Martin (2019) also note that information poverty is primarily caused by a lack of resources, both technical and educational. McKeown (2016) argues that financial, information awareness, educational, attitudinal, intellectual, cultural, and institutional factors all contribute to information poverty. Similar to this, Yu (2006) contends that information poverty is influenced by social inequalities, community social and cultural information norms, and personal factors such as cognitive ability.   Information poverty, according to McKeown (2016), is the result of social, political, economic, cultural, personal, historical, educational and cognitive factors. While studying the role of public libraries in the alleviation of information inequality and poverty in KwaZulu-Natal, Strand (2016) discovered several factors that contribute to information poverty including a lack of value placed in libraries

for development, a library shortage, a lack of information-use skills, and a lack of ICTs and related sources. Figure 2.1 below represent the factors influencing information poverty.

Figure 2.2 Factors influencing information poverty

In this model, 'information poverty' is shaped by economic inequalities, cultural information norms, and personal factors (Yu 2006).

2.3.3.4   Factors influencing information poverty

Individual characteristics such as cognitive ability, constructed social and cultural information norms, and political and economic factors at the societal scale that determine the "information haves and have nots" shape information poverty (Cinnamon 2020). McKeown (2016) states that the inability to afford internet access and unemployment are two economic factors that influence information poverty. The unemployed with limited resources, may be at risk of information poverty because they may be unable to afford a computer or connectivity because their limited funds are being prioritized elsewhere (McKeown 2016). Furthermore, information poverty is linked to political inequality because it is perceived that some people are at a disadvantage because they lack the

ability to access and use information (Marcella and Chowdhury 2020). People will not be able to meet their basic human needs unless they have access to information about resources such as food, water, and shelter (Britz 2006).

Though information poverty is not unique to rural areas, research indicates that it is becoming more common there (Sun *et al.* 2009; Chen, Liu and Yang 2011). The digital divide between villages and towns is enormous, stifling agricultural development, rural progress, and farmer income (Sun *et al.* 2009). Rural dwellers are frequently overlooked in terms of access to essential information that could improve their lives; this situation is extremely critical in a large number of villages in low and middle income countries (Mia 2020).

2.3.4 Rural information poverty

People living in poor communities particularly in developing countries are frequently denied access to information that could help them improve their lives (Islam and Ahmed 2012). Hoq (2014) states that rural areas and the people who live in them face various forms of discrimination all over the world, with this being especially evident in developing countries. Rural dwellers are unaware of the importance of information in fostering growth and development (Mansoor and Kamba 2010). Moore (2007) claims that wealthy and powerful urban residents have numerous opportunities to access multiple sources of information, whereas poor rural residents are frequently overlooked in terms of access to vital information that could improve their lives.

Rural people are in a state of information poverty, which means they lack the ability to access and use critical information in order to meet their needs (Strand and Britz 2018). In rural communities, information poverty means that, in comparison to urban areas, the level of rural informatization is relatively backward in terms of infrastructure and economy (He, Li and Cai 2015). Rural areas are characterized by their isolated locations and geographically restricted localities and limitations in accessing and delivering relevant information are among several factors that impede efficiency and effectiveness in accessing and delivering necessary information (Nkebukwa 2018). According to Chen,

Liu and Yang (2011) there is a lack of software and hardware in rural areas for gathering, processing, and disseminating information, and the information network system is not perfect, so rural governments face significant challenges in integrating information resources in various sectors and building a unified information platform.

The extent of internet development in rural and urban areas varies greatly, particularly in rural areas, indicating that rural areas remain in the status of information poverty (Chen, Liu and Yang 2011). According to Asenso-Okyere and Mekonnen (2012), while the use of ICTs in extension provides several key benefits over traditional media, ICT projects also present several challenges, including a lack of accessible telecommunication infrastructure in many rural and remote areas. According to Enterprise Community Partners (2019) opportunity is out of reach for many individuals and families in rural areas and families with lower incomes are more likely to live in single-family homes. Broadband internet access is still unavailable in some rural areas and many residents do not have access to public transportation and must travel long distances to obtain services (Enterprise Community Partners 2019).

2.3.5 Small-scale farming communities

In many developing countries, agriculture is the primary source of income for the majority of poor people who live in rural areas (Onifade, Abdulraheem and Olarinwa 2021). Though agriculture production remains the primary source of income for the majority of rural families in developing countries (Onifade, Abdulraheem and Olarinwa 2021), small-scale farmers in South Africa have persevered in the face of unfavorable conditions (Mpandeli and Maponya 2014). Many small-scale farmers express frustrations with information access, such as a lack of or difficulty locating the desired information, accessing information in a timely manner being a significant challenge, and this results in beneficial opportunities being missed (Goodwin and Gouldthorpe 2013).

Rural small-scale farmers are frequently unaware that they lack information, possibly because they are unaware that there is information available that could be very useful to them (Sani *et al.* 2014). The farmers believe that they have no need for information, and

even when structures and facilities are in place, it is critical that rural farmers' information needs are properly understood (Mbagwu, Benson and Onuoha 2018). In Fidelugwuowo (2021) study of rural farmers' knowledge and skills for accessing agricultural information in South-East Nigeria, the findings revealed that the rural farmers' knowledge and skills were below average due to limited access to agricultural information, particularly in highly technical areas such as ICT.

Despite the fact that the internet is increasingly being used for opportunity delivery and communication, a sizable proportion of the rural population faces issues such as poor internet connectivity, affordability, or skills and confidence in using it (Pye and Evans 2009). Most rural farm households have insufficient internet service, which could be because the cost is extremely expensive, there is no perceived need for their farm business, or farm households simply lack familiarity with the subject (Briggeman and Whitacre 2010). In an Ethiopian study of information sources and information seeking behavior of smallholder farmers conducted by Gebru, Yared and Gebremichael (2017), the study found that low rural electrification, a lack of money to purchase ICTs equipment and pay service fees, poor information packaging, and a low level of smallholder farmers' skill all hampered farmers' information seeking behavior. Singh, Kumar and Singh (2015) also reported some issues in rural small-scale communities, such as rural farmers' lack of access to ICT services, a lack of basic skills in using ICT equipment in agriculture, and the government's inability to provide farmers with sufficient ICT knowledge.

2.4 Information needs of rural small-scale communities

Several developing countries have reported on the existence of information needs among rural small-scale farmers (Phiri, Chipeta and Chawinga 2019b). Chen and Lu (2020) state that during the transformation process, farmers require a variety of information, including social welfare, rights and interests, education, culture, and life. To put it another way, farmers' information needs are no longer limited to agricultural information alone, but also include information about work and education, among other things (Chen and Lu 2020). The provision of information to small-scale farmers is critical because it can significantly

improve their performance; however, it is necessary to first understand their information needs. (Zimu-Biyela, Van der Walt and Dube 2020).

Agricultural information needs

Farmers in rural areas have expressed a need for information, and it is necessary to provide this information in order to meet these desires (Mbagwu, Benson and Onuoha 2018). Appropriate and scientifically researched information on small-scale farming is required to overcome some of the barriers to good farming techniques (Yusuf, Masika and Ighodaro 2013). Farmers require a variety of agricultural marketing information, including credit information, storage information, packaging information, and market information (Onifade, Abdulraheem and Olarinwa 2021). Weather predictions, availability of credit, and professional guidance on crop health are other items of interest to rural farmers(Mbagwu, Benson and Onuoha 2018). According to Islam and Ahmed (2012), the information required by rural small-scale farmers includes where to obtain farm inputs and implements such as fertilizers, pesticides, herbicides, improved variety seeds, tractors, and so on for free or at a heavily subsidized rate. These findings are consistent with those of other studies on rural small-scale farmers' information needs (Bachhav 2012; Omoregbee and Banmeke 2014).

Self-actualization information needs

In terms of self-actualization information needs, older farmers are more particularly worried with agricultural professional assistance and training information, whereas younger farmers are more concerned with non-agricultural occupational skills and training information, entrepreneurship information, continuing education information, and investment financing information (Chen and Lu 2020). Goodwin and Gouldthorpe (2013) discovered that younger participants desired electronic or online information, whereas older participants tend to prefer print information.

Market information

Small-scale farmers in South Africa in general are geographically dispersed and distant to markets and therefore reaching the markets can be difficult (Matoti, Vink and Bienabe 2007). Lack of market information is regarded as a major challenge in the livestock sector, particularly among rural small-scale farmers in South Africa, where it has been positively associated and significantly related to their likelihood of selling livestock (Nwafor, Ogundeji and van der Westhuizen 2020). The findings of a study conducted by Mpandeli and Maponya (2014) on the constraints and challenges facing small-scale farmers in Limpopo Province, South Africa revealed that more than 70% of the farmers complained about a lack of market access and market information

Technology

Poor small-scale farmers face challenges in adopting technological advances, and they may be excluded from trade due to limited access to resources, markets, and information (Raungpaka and Savetpanuvong 2017). There is a wealth of agricultural information available on the internet, but the large percentage of it does not reach underprivileged farmers on time, and in some instances does not reach these farmers at all (Lamptey, Sambo and Hassan 2017). The lack of technological and market information has been cited as the primary cause of African agriculture's low productivity (Asenso-Okyere and Mekonnen 2012).

The majority of the small-scale farmers' information needs reported and discussed by many scholars are related to agriculture. There is very little literature on small-scale farmers' information needs, particularly those necessary for survival that are not related to their line of work. The current study sought to address this gap by examining the information needs of small-scale farmers, including those unrelated to their line of work.

2.5 Factors influencing information poverty among small-scale farmers

As previously revealed by literature in 2.3.3, economic, political, personal, and other factors influence information poverty. All of these factors contribute to the most critical

issue, which is a lack of access to critical information, resulting in information poverty (Gebremichael and Jackson 2006; McKeown 2016; Mia 2020).

Economic factors

Farmers' low income, poor information infrastructure, and the low cultural quality of the majority of farmers all contribute to information poverty (Chen, Liu and Yang 2011). Rural small-scale farmers do not have easy access to information due to a lack of funds, as well as language barriers. Though efforts are being made to make information available to farmers in rural areas, it is also acknowledged that this information falls short of meeting the information needs of the vast majority of rural small-scale farmers (Phiri, Chipeta and Chawinga 2019a). Thuo and Njoroge (2018) found that while young small-scale farmers have a positive attitude toward seeking agricultural information, access to information is hampered by personal factors such as lack of exposure, lack of confidence, illiteracy, lack of resources, and technical barriers.

Political factors

Despite the fact that government resources are directed toward improving agricultural information, the provision of information and access to agricultural information by small-scale farmers in rural communities is neglected (Odini 2014). The information infrastructure is not distributed evenly within and between countries, as a result, some farming communities have a high level of knowledge while others have a low level of knowledge (Mtega, Ngoepe and Dube 2016). According to Lamptey, Sambo and Hassan (2017) one of the major challenges of information dissemination is a lack of technological expertise. The lack of ICT infrastructure makes it difficult to meet the information needs of rural farmers in developing countries through information systems (Lamptey, Sambo and Hassan 2017). Without ICT infrastructures such as strong network connectivity and internet service providers, connecting rural farmers and providing them with internet-based information is difficult (Mbagwu, Benson and Onuoha 2018).

Information and communication technology

Services are often lacking in small-scale farming, especially when it comes to new ICTs due to not only to the scarcity of digital content, but also to hardware and software limitations, connectivity costs and reliability, and a lack of ICT skills (Ajani and Agwu 2012). Furthermore, even when information centers are available, they are under-resourced in terms of best materials and personnel capable of handling the farmers' information needs professionally (Folitse *et al.* 2018). ICT skills, internet access, and physical computer services all influence the use of ICT tools as a source of information (Mwombe *et al.* 2014).

Literacy

Simple literacy, at its most fundamental level, continues to be a major problem for many people, especially those who are poor (Marcella and Chowdhury 2020). Some socially vulnerable groups fall into the category of information poverty because they are easily eliminated by the information society due to a lack of basic internet literacy (Mou and Xu 2020). Individual literacy has an impact on information poverty, claim Zhang and Yang (2023), because those who are illiterate and/or information-poor lack the motivation or skills to access new information. Furthermore, their access to information is limited by their frequent feelings of social alienation and low self-esteem (Zhang and Yang 2023).

Information poverty is influenced by a variety of factors, as the literature suggests. The objective of the current study was to use what the literature has revealed about factors that influence information poverty to determine what factors influence information poverty in the selected small-scale farming community. It is a question of determining if the informational poverty of the selected small-scale farmers is influenced by the same factors and/or if there are other factors than those revealed by the literature which can hinder the alleviation of information poverty if not noted.

2.6 The information poor as described by Chatman's theory of information poverty

Chatman defined the information poor as people who believe they have no access to sources that lack information can assist them (Chatman 1996). Elfreda Chatman asserts people who feel lacking in informational resources that speak to their worldview, are wary of information from other sources, and deceive people to feel in control of their daily lives. (Lingel and Boyd 2013). These acts may give the impression that people who reside in small communities have informational hurdles as a result of social stigma, which could lead to feelings of alienation, a lack of social support, and mistrust of other people (Savolainen 2009).

Chatman (1996) describes the information poor as people who are unable to meet critical information needs due to a limited social network. According to Chatman (1996) cited in Wheeler, Dillahunt and Rieh (2017) people who are information poor perceive a restrictive set of "normal" information needs, established by their social networks. They are afraid to defy these, as it would betray a failure to conform or to cope, which prevents them from requesting help for many problems from within their social networks (Wheeler, Dillahunt and Rieh 2017). Consequently, the information poor operate exclusively in small social networks that lack pertinent information and expertise.

A recurring theme in Chatman's research on the lives of information-poor people was the lack of opportunities to communicate with people outside their social circle (Wheeler, Dillahunt and Rieh 2017). According Chatman (1996) cited in Henrichsen (2022) the lack of information resources that support the information-poor worldview is due to their skepticism of information from outside sources, as well as their willingness to operate in deception and secrecy in order to maintain their point of view and sense of control.

Chatman's theory of information poverty demonstrates that the information poor are perceived as lacking in information because they do not trust outsiders and the information they receive, and they also use deception and secrecy to protect themselves from outsiders. The current study aimed to use Chatman's findings to determine whether

the selected small-scale farmers are information poor in accordance with Chatman's theory and/or whether the information poor have other characteristics or traits and behaviors other than those listed by Chatman that contribute to their information poverty.

2.7 Strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty

The sources available to farmers limit their ability to search for information(Rahman, Ara and Khan 2020). Research on the information sources often used by information seekers, particularly in developing countries' rural areas reveal small -scale farmers seek to obtain knowledge and information from informal sources such as local elites, peers, village leaders, and so on, rather than formal sources (Lwoga, Ngulube and Stilwell 2010; Raungpaka and Savetpanuvong 2017). When studying the information needs of women subsistence farmers in a village in KwaZulu-Natal Province, Zimu-Biyela, Van der Walt and Dube (2020) discovered that word of mouth and gatherings were the most commonly used methods of information exchange, and some respondents indicated that even their farming knowledge and experience was transferred to them by their grandparents and parents via word of mouth and gatherings.

Small-scale farmers typically seek information from successful colleagues in farming groups or the community enterprise, and seeing that others are succeeding with tangible production piques farmers' interest in learning more and applying it to their own crop areas (Raungpaka and Savetpanuvong 2017). People with good memories are essential for transferring information, so the death of an experienced colleague may result in the loss of valuable information (Meyer 2005). Meyer (2005) further states that unless farmers from different communities communicate, information shared in one community will be inaccessible to farmers from other communities.

The majority of small-scale farmers who have access to information rely on friends, family members, and other farmers for market information (Khapayi and Celliers 2016). Adetimehin, Okunlola and Owolabi (2018) found that small-scale farmers enlist the help of family members, other farmers, extension agents, and social media platforms when

they need information. The findings were similar to those of Abubakar and Magaji (2019), who discovered that small-scale farmers learned a lot about agriculture by asking questions, having verbal conversations, and working with extension agents.

According to Chen and Lu (2020) the majority of research indicates that farmers' information access channels are primarily interactions and television and other mass media due to farmers' habits, cultures, and practicality factors. Small-scale farmers typically seek information from social groups, veteran farmers, government-endorsed agriculture workers, input retailers, input company representatives, NGOs, and television and radio programs (Rahman, Ara and Khan 2020).

Literature makes it clear that small-scale farmers are used to getting information from peers, word of mouth, television, and radio. The objective of the current study was to ascertain if the selected small-scale farmers use the same strategies or if they employ alternative methods to combat information poverty. The study also seeks to determine the extent to which these strategies assist small-scale farmers in meeting their information needs, as well as small-scale farmers' perceptions of their "ideal information world," in order to identify strategies that could be implemented to help alleviate information poverty for the selected small-scale farming community. According to the literature, the strategies discussed below, if implemented, can help to alleviate information poverty:

Libraries

McKeown (2016) states that knowing the variables that contribute to information poverty can assist organizations like libraries and schools better address it. Mia (2020) emphasizes that rural libraries can help to alleviate information poverty and promote global development by providing rural people with appropriate access to information, skill set, facilities, and comprehension.

Libraries can and should take the lead in combating information poverty (Britz 2006). Libraries are best suited to addressing information poverty as they provide free access to the right information, assist users in understanding their information needs and have

physical spaces with furniture and ICT infrastructure (Strand and Britz 2018). Online agricultural counseling and consulting services for rural farmers in developing nations should be provided by librarians and information scientists (Mbagwu, Benson and Onuoha 2018). Community libraries could be used to assist in gathering relevant agricultural information from the internet (Obidike 2011). Libraries can also assist with educational development, meeting places, and other services such as disaster risk management information (Zimu-Biyela, Van der Walt and Dube 2020).

Government

Government information programs, policies, and systems influence people's ability to interact with information and information systems (Marcella and Chowdhury 2020). Governments and rural development organizations can use ICT channels to promote agricultural information, technologies, and developments (Makaula 2021). Haruna and Baba (2017) argue that the government should focus on fast broadband particularly in rural areas, to address the issue of using the internet in agriculture development. In a study conducted in Ethiopia by Gebru, Yared and Gebremichael (2017) on the sources of information and information seeking behavior of small-scale farmers, the study recommended that government and nongovernmental institutions work together to improve rural electrification in an effective and efficient manner. Furthermore, repackaging agricultural information into easy and concise language and promoting ICTs help small-scale farmers overcome barriers to finding relevant information.

Information and communication Technologies (ICTs)

Connectivity is critical in rural development, as it contributes to the delivery of e-services that can overcome the poor access to infrastructure and services that plagues many rural areas (Chisango and Lesame 2017). The availability of ICTs can aid agricultural growth by providing farmers with access timely information that will allow them to make educated and relevant decisions (Makaula 2021). The use of these ICTs helps in the establishment of an adequate link between research, extension, and farmers, resulting in effective communication among stakeholders (Ajani and Agwu 2012).

Mass media

La Ferrara (2016) makes the case that the media has the power to spread not only political information but also values and behavioral norms that have a significant impact on development outcomes. Ihechu (2019) concurs, pointing out that broadcasting is the most effective form of mass communication because it overcomes traditional barriers such as geography and language, which is especially important for communicating with an audience largely illiterate and disadvantaged. Ihechu (2019) asserts that radio and television can promote development easily due to the characteristics of broadcasting.

Local information needs, for example, could be met by a well-organized extension system that uses both contemporary and traditional modes of communication, such as radio, television, and cell phones, whereas global information needs require broadband connections (Bhagat, Nain and Narda 2004; Toringepi 2016; Rahman, Ara and Khan 2020). Television stations and radio booster should be established to broadcast educational agricultural programs in native languages, and libraries should provide relevant information materials in local languages to rural farmers (Emmanuel 2012).

Literacy

Access to developed information infrastructure, ICTs, and the Internet do not guarantee information access and use; for example, if a person is illiterate or information illiterate, access to developed information infrastructure is of no use to them (Britz 2006). According to Mbagwu, Benson and Onuoha (2018) it is also critical to hold ICT literacy classes for rural farmers in order to fully equip them to capitalize on the potentials of internet-based information services. McKeown (2016) supports these claims, stating that access to information, ICT infrastructure, and the Internet are still not enough to overcome information poverty; people must also be capable and willing to access information.

Training

Rural farmers require training workshops, lectures, and education programs, among other things, to keep their knowledge and skills about how to access information up to date

(Fidelugwuowo 2021). In a study conducted by Zimu-Biyela, Van der Walt and Dube (2020) to assess information needs of women subsistence farmers in a village in KwaZulu-Natal Province, the study found that the big challenge was a low level of literacy skills and education. Zimu-Biyela, Van der Walt and Dube (2020) then suggested implementation of libraries which help provide educational development, training spaces and additional needed services.

2.8 Gaps in the literature

The review literature reveals that information poverty is a global problem that has been a focus of Information Science for many years. Indication that information poverty particularly within rural communities exists recurs in the literature. It is clear that rural dwellers are still information poor and rural communities continue to suffer from lack of access to critical information. The findings of this review reveal a significant gap in the existing literature on important aspects relevant to the current research. As a result, previous studies on information poverty cannot be considered robust or complete.

Very little is written using the concept of information poverty. Many studies were carried out using a wide range of terminologies, which may give the impression that the literature is limited. Terminologies include information needs, information inequality, the digital divide, and a lack of information, among others. More research using the concept of information poverty, such as this one, is needed to ensure that the correct phenomenon is being studied.

Most of the research conducted in rural small-scale farming communities focuses solely on the small-scale farmers' agricultural needs. In studying these needs, they overlook the fact that rural small-scale farmers require personal information in order to be successful in their agricultural work. Furthermore, studies have been conducted that focus primarily on the needs of small-scale farming communities without investigating strategies for alleviating the existing information poverty.

According to literature, significant portions of the studies were conducted in developing countries, while others were conducted in developed countries, with only a few studies coming from South Africa. There is still a scarcity of rigorous research focusing on the information poverty that exists in rural small-scale communities in South Africa. As a result, it is critical that the current study be carried out in order to uncover new insights and fill this void.

2.9 Summary of the chapter

This chapter reviewed literature on the alleviation of information poverty. The chapter began discussion of theoretical framework adopted theory by the study. The chapter moved on to conceptualize information poverty and identified information needs of small-scale farmers. Thereafter, factors that influence information poverty among small-scale farmers were identified. The chapter then defined the information poor in accordance with Chatman's theory of information poverty. Strategies employed and needed by small-scale farmers to meet information needs with the aim of alleviating information poverty were also discussed. Finally, the gaps in the literature review were identified and discussed. The research methodology employed in this study is described in the following chapter.

CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This previous chapter discussed the literature relevant to the current study. This chapter presents the research methodology adopted by the study. The chapter begins by discussing the research paradigm, approach and presents the research design used in this study. Next, the population, sampling procedures, data collection method, instrument and procedures followed are discussed. The chapter then discusses the study's ethical considerations, as well as the validity and reliability, and describes the data analysis. The chapter is concluded with a summary.

3.2 Research methodology

The term research methodology often used interchangeably with research method (Given 2008). Research methodology is concerned with the general laws and principles of organizing the research activity and selecting an efficient research technique (Novikov and Novikov 2013). Patel and Patel (2019) state that research methodology is a method for solving the research problem in a systematic manner that can be thought of as a science that investigates how research is carried out. In there, we look at the various steps that a researcher takes when studying a research problem, as well as the reasoning behind them (Patel and Patel 2019). These strategies guide the decisions that researchers make regarding sampling, data collection, and analysis (Lapan, Quartaroli and Riemer 2012).

3.3 Research paradigm

Paradigms are philosophical assumptions that serve as frameworks for researchers (Lapan, Quartaroli and Riemer 2012). The research paradigm is based on the assumption that social reality is shaped by human interaction and personal situations, rather than being singular or objective, and that it is best studied in its socio-historic context by attempting to reconcile the interpretations of its various participants (Bhattacherjee 2012).

DeCarlo (2018) defines paradigms as a way of framing what we know, what we can learn, and how we can learn it. In social science, there are three main types of research paradigms: interpretivism, positivism, and critical paradigm (Pickard 2013; DeCarlo 2018).

The interpretivism paradigm was employed in this study because it enables in-depth analysis of social practices and aims to understand rather than explain the social reality of the context being studied (Mafame 2019). According to Creswell (2007), interpretivism researchers tend to gain a deeper understanding of their specific situation and its challenges rather than attempting to generalize the results to the entire population. Interpretivism is a research paradigm associated with qualitative research that encourages researchers to investigate the meaning behind human behavior, interactions, and society (Pulla and Carter 2018). Interpretivists argue that if we want to understand social action, we must look into the motivations and meanings that that action has for people (Ibrahim 2014). Interpretive researchers believe that the only way to access reality is through social constructions such as language, consciousness, shared meanings, and instruments (Dudovskiy 2016).

Interpretive research highlights the role of humans as social actors, in which researchers gather understanding by entering the social worlds of research subjects in order to better understand the phenomena being studied from their subjective, caring, and compassionate perspectives (Holden and Lynch 2004). The main objective of interpretivist research is to interpret and understand meanings in individual behavior rather than predict and generalize causes and effects (Hudson and Ozanne 1988; Edirisingha 2012). Quinn (2019) agreed, stating that the goal of interpretivist research is to gain a rich understanding of reality by obtaining and comprehending participants' social constructions of that reality. As a result, this paradigm enabled the research to see the world through the lens and experiences of the respondents.

3.4 Research approach

Research approach is a plan and procedure that covers everything from broad assumptions to data collection, analysis, and interpretation (Creswell and Clark 2018). According to Creswell (2014), a research approach is a strategy or proposal for carrying out research that incorporates philosophy, research designs, and specific methods. The use of research approaches in research varies from one researcher to the next, depending on the investigator's preference and the specifics of the subject under investigation (Kankam 2020). The researcher anticipates the type of data required to answer the research question based on whether the data is numerical, textual, or both numerical and textual (Williams 2007). There are three research approaches to consider when pursuing a research project: quantitative, qualitative, and mixed methods (Williams 2007; Grover 2015).

A qualitative research approach was used in this study because it helps to clarify and interpret the intentions and meanings that underlie human interaction. It was chosen because of its capacity to look into, describe, and produce thorough findings on the subject at hand. Thompson (2015) claims that an interpretivist approach to social research would be far more qualitative, employing techniques such as interviews or observation. Because the current study was based on the interpretive paradigm, the logical approach was qualitative.

Qualitative researchers, according to Taylor, Bogdan and DeVault (2016), empathize and identify with the people they study to understand how those people see things. It is more concerned with the individual's personal experiences with the issue under consideration (Habib, Maryam and Pathik 2014). This approach was chosen because it allowed respondents to freely disclose their thoughts, feelings, and experiences, allowing the researcher to follow up on answers given by respondents in instantaneously, generating meaningful discussion to obtain as much information as possible to aid in the identification of strategies for alleviating information poverty.

Qualitative research is a research method that emphasizes words over numbers in data collection and analysis (Bryman 2016). This method is essentially used to understand people's perspectives, notions, or experiences through interview sessions, focus groups, case studies, and analysis of relevant literature (Thattamparambil 2020). Teherani *et al.* (2015) state that qualitative research is the systematic investigation of social phenomena in natural settings. Fewer people participate in the study because attitudes, behavior, and experiences are important, and interactions with participants take longer (Dawson 2009)

There are some advantages to using qualitative research approaches and methods (Rahman 2017). Qualitative research approach generates a dense description of participants' feelings, opinions, and experiences, as well as interprets the meanings of their actions (Denzin 1989). Gaille (2018) states that because qualitative research is based on open-ended questions, it asks the questions with only specific answers, allowing respondents to be themselves during data collection, and as a result, researchers can investigate methodologies more accurately.

One of the disadvantages of using this qualitative approach is that the time it takes to gather and analyze data can be unpredictable, as it can take several months, years, or decades to complete a research study if there is a large amount of data to review (Regoli 2019). Interpretations of the same data can vary significantly because the researcher selects what is important and what is not in data analysis (Bhandari 2020). Down (2018) states that qualitative studies are not easily generalizable to the general population and bias, whether conscious or unconscious, can influence the researcher's conclusions.

3.5   Research design

Research designs are types of inquiry used in qualitative, quantitative, and mixed methods approaches that give specific instructions for the research design's procedures (Creswell 2014). It is the process of selecting a research technique and creating a blueprint or plan for data collection, measurement, and analysis to answer a research question (Novikov and Novikov 2013; Sekaran and Bougie 2016). Sekaran and Bougie (2003) define research design as a structure for determining how to gather data, analyze

and interpret it, and eventually provide a solution to problems. A research design is the established procedure for collecting and analyzing data in a way that aims to combine relevance to the research purpose with procedure economy; thus, a study design is the decision about what, where, when, how much, and by what means to conduct a research study (Kothari 2004). There are many different types of research designs, including exploratory research designs, descriptive research designs, experimental designs, causal research designs, longitudinal and cross-sectional designs, and so on (Ansari *et al.* 2022).

The exploratory design was used in this study, allowing the researchers to gain a thorough understanding of the issues of information poverty faced by small-scale farmers. According to Thakur (2012), exploratory research is used to gain insights into the general nature of the problem. According to Blog (2019), exploratory research is typically conducted to gain a better understanding of the existing problem. It is carried out to investigate the causes of a problem and aids in the precise definition of the problem, the gathering of information on the problem, and the identification and generation of alternative courses of action (Shinde 2015).

3.6 Target population

The population refers to the entire group of people or objects of researcher is interested to study and hopes to draw conclusions (Sekaran and Bougie 2016). According to Degu and Yigzaw (2006) decisions about the study population must be made early in the planning process, and the population under consideration should be clearly and explicitly defined in terms of place, time, and other relevant criteria. Daniel (2011) also contends that it is critical to clearly define the target population before making sampling decisions, as an ambiguously defined target population may result in population specification bias due to a poor fit between the definition of the target population and the actual population studied.

In the current study, the target population was small-scale farmers in ward 13, Swayimane, KwaZulu-Natal. This area was chosen specifically because its residents are marginalized. This population lives in outlying areas with few government facilities and

services. There are also very few transportation options in this community to get them to these services.

3.7 Sampling procedures

In an ideal world, one would study the entire population, however, this is usually not possible, so one must settle for a sample (Strydom *et al.* 2014). Strydom *et al.* (2014) state that researchers reduce the size of our accessible population to make it more manageable. This process is known as sampling, and it is defined as the process of selecting individuals, objects, or events to represent the entire population (Sekaran and Bougie 2016). According to Leavy (2017) sampling is the process of selecting a subset of a larger population of individual cases. If a sample captures the entire population, it is called a census (Blair and Blair 2014).

There are two types of samples in general: probability samples and nonprobability samples (Santoro *et al.* 2016). Probability sampling is a sampling method that assigns each member of the population a known, nonzero probability of being chosen (Daniel 2011). Nonprobability sampling method does not give some members of the population a chance to be included in the sample (Blair and Blair 2014). The common types of probability sampling methods are simple random sampling, stratified, systematic and cluster sampling (Daniel 2011). There are four major types of nonprobability sample designs: convenience sampling, purposive sampling, quota sampling, and snowball sampling (Daniel 2011; Plowright 2011).

In this study, non-probability sampling was used to select the sample that met the set selection criteria. Because there was no complete list of small-scale farmers (sampling frame) in Swayimane, it was necessary to employ non-probability sampling methods (Nishishiba, Jones and Kraner 2014). According to Daniel (2011) in non-probability sampling, the researcher may continue to sample until additional elements no longer provide new information; that is, until "data saturation," "theoretical saturation," or "informational redundancy" occurs, or until the social network being studied is exhausted.

Within the non-probability sampling group, purposive and convenience sampling were employed. Purposive sampling was used with the goal of gathering people who could provide the most detailed and informative answers to the research questions. The researcher used her judgment to select a small-scale farmer who the researcher believed met the inclusive criteria and would be able to answer the research questions. According to Nishishiba, Jones and Kraner (2014) the researcher selects the sample by concentrating on particular population categories of interest, allowing the researcher to draw attention to particular issues and possibly being useful for gathering information on exceptional or extreme cases.

Purposive sampling is a technique in which the researcher makes decisions about the people to be included in the sample based on a variety of criteria, such as expert knowledge of the research problem or ability and willingness to take part in the study (Jupp 2006). One key purpose is to ensure that all criteria of relevance are included (O'Reilly 2009).

Making generalizations about a sample is generally easier with purposive sampling than with other sampling methods (Glen 2021). The researcher can pinpoint participants who are most likely to provide in-depth information that is pertinent to the questions of the study (Jupp 2006). Although the term "judgmental sample" is occasionally used to describe purposive sampling, which is a misleading because there is no intended bias in purposive sampling; however, due to a lack of random sampling, purposive sampling is sometimes susceptible to selection bias and error (Jupp 2006; Glen 2021).

The initial study sampling methods were the non-probability purposive and snowball sampling methods. The researcher intended to ask the purposively selected participant to recommend another rural resident who is involved in small-scale farming and then repeat the process with that recommended resident until the saturation was reached. However, on the day of data collection, the researcher discovered that most Ward 13 small-scale farmers had already gathered and been recruited by the one small-scale farmer that had been purposefully chosen by the researcher. As a result of this

circumstance, the researcher used the convenience sampling method to sample the population that had already agreed to participate in the study.

A convenience sample allows access to participants who are nearby (Plowright 2011). It is a sampling technique that involves gathering samples that are easily accessible and near a location (Edgar and Manz 2017). There is no set procedure for obtaining respondents in convenience sampling; instead, it may be as simple as asking people in the street, a public place, or a workplace (Kempf-Leonard 2004) .

In situations where time is a constraint, many researchers choose this method for quick data collection as it is easy, swift, and economical unlike some other methods of data collection (LaMorte 2016). Some experts hold the view that a lack of credibility is a major disadvantage of convenience sampling (David 2021). Sampling error, and possibility of lack representation of the population make it harder for the researchers to generalize the results of their study to the population as whole (Glen 2021).

3.8 Data collection method

When considering data collection, it is helpful to distinguish between two types of data: quantitative and qualitative (Sapsford and Jupp 2006; Salkind 2011). Nishishiba, Jones and Kraner (2014) state that quantitative data is data in the form of numbers and attributes defined in terms of magnitude, using numbers, are also considered quantitative data, while qualitative data is the data that is not numerical in nature. Words or text are typically used to capture information in qualitative research (Nishishiba, Jones and Kraner 2014). Qualitative data contain detailed, descriptive information gleaned from in-depth interviews, focus groups, group interviews, and diaries (Stuart, Maynard and Rouncefield 2015).

In this study, data was collected using qualitative data collection method. The researcher used this method of data collection to collect detailed descriptions and feelings of small-scale farmers when interviewing them about the issue of information poverty (Durdella 2019). Flick (2018) states qualitative data collection entails the selection and creation of

linguistic or visual material for the analysis and comprehension of phenomena, individual and group experiences, and the associated meaning-making processes. According to Farquhar (2012), there are several common techniques for gathering qualitative data. These include face-to-face, phone, and online interviews, focus groups, participant observation, diaries, meeting minutes, internal reports, and so on.

In this study, qualitative data was collected using focus group discussions with small-scale farmers. Focus group discussions are a common qualitative method for gaining a thorough understanding of problems, with data obtained from a carefully selected group of people (Nyumba *et al.* 2018). Participants in focus groups are free to comment on and elaborate on the responses of their fellow group members and due to the synergistic effect of the group, details or ideas that might not have been learned through individual interviews may come to light (Stewart, Shamdasani and Rook 2007; Billups 2021). According to Al-Ababneh (2018) when conducting focus group discussions, a researcher asks a series of open-ended questions about a particular subject to produce qualitative data as it is a productive method for gathering information about specific opinions or attitudes because it involves a sizable population within the same group.

Due to the large number of participants and to save time as many of the farmers had other commitments, the researcher deemed it appropriate to divide the 26 participants into three focus groups. The focus group discussions allowed the researcher to gather more detailed insights while saving time. Stewart, Shamdasani and Rook (2007) state that focus group interviews are most frequently used to provide a thorough examination of a subject that is little understood. Focus groups foster open communication among individuals and rely on the dynamic interaction between participants to produce data that is impossible to gather using other techniques, such as one-on-one interviewing (Lavrakas 2008).

Two focus groups had nine members each, and one group had eight members. According to Heath (2013) focus groups typically have between 5 and 15 participants, a moderator, and frequently a moderator's assistant. Stewart, Shamdasani and Rook (2007) assert that focus group interview typically consists of 8 to 12 people discussing a specific topic while

being supervised by a moderator who promotes interaction to ensure the conversation stays on topic.

Before the focus discussions began, the researcher introduced herself and described the agenda for the discussion. This aided in the early development of trust and openness. The questioning of respondents started with general questions and then moved on to more sensitive questions. Stewart, Shamdasani and Rook (2007) propose organizing questions from the most general to the most specific when facilitating focus group discussion. The group discussions took place at different times throughout the day and lasted approximately 1h to 1h30. According to Billups (2021) focus group sessions are intended to emphasize consistent questioning across groups and last 60 to 90 minutes. The length of each focus group was determined by the level of participation in each question posed. Focus group discussions were held in isiZulu, the language of the participants. All focus group discussions were recorded and then later transcribed.

The use of focus group discussions was critical for this study, especially given the literacy issues associated with small-scale farmers. Participants were not required to read or write anything as all discussions were facilitated by the researcher, and researcher was also available to answer any questions that arose during the discussion. One of the most significant advantages of focus groups is that they may be one of the few research instruments for collecting data from children or people who are illiterate (Stewart, Shamdasani and Rook 2007; Billups 2021).

The focus group discussion did present a challenge, however, as some of the participants dominated the discussions, and the study had other participants who would either keep quiet, agree or add to others' responses, suggesting that responses are shared among group members. Billups (2021) focus groups might not allow for enough depth in emotional responses. In some groups, domineering or disruptive individuals may also hijack the conversation, in which case the moderator must carefully regulate and reroute the conversation (Barbour 2007; Krueger and Casey 2015).

3.9 Data collection Instrument

Data collection instruments are tools chosen and used by researchers to collect data in order to make activities more systematic and easier (Cohen, Manion and Morrison 2007). Tests, questionnaires, inventories, interview schedules or guides, rating scales, survey plans, and any other forms used to collect information are examples of data-collection instruments (Legal Information Institute 2022).

In this study, the researcher used a semi-structured interview schedule as a data collection tool. The researcher used semi-structured interview questions to enable a somewhat structured interview, while also gathering new data and exploring participants' thoughts, feelings and beliefs about the topic. According to Smithson (2008), the purpose of the semi-structured focus group interview guide is to cover the subjects covered by the research topic while allowing for some latitude to allow for related subjects to come up in this context. Whenever the questions are formulated, the goal is to get well-thought-out, comprehensive answers (Herrman 2017).

According to Stewart, Shamdasani and Rook (2007) general, unstructured questions should be asked early in the interview schedule, while more specific questions, which may suggest specific answers to more general questions, should be asked near the end. Morgan and Hoffman (2018) state that researchers can employ a variety of strategies when developing an interview guide, each of which will have a different impact on how participants will interact with the collected data. Utilizing less structured interviews as an alternative can result in a bubbling of a variety of potentially unexpected responses (Morgan and Hoffman 2018). Even though the questions should be open-ended, the prompts are crucial because they serve as a checklist for the researcher to bring up issues that are not spontaneously mentioned (Barbour 2007).

In this study, the semi-structured interview guide questions were prepared before data collection and were divided into two sections. The first section of the interview schedule was used to collect demographic data from the participants. The second section was created specifically to collect answers to the research questions in accordance with the

research objective of the study. Three to four questions were developed for each objective to ensure that the specific research objective was addressed completely. Open-ended questions were used to generate data from participants. The research questions were written in English and then translated into IsiZulu, the respondents' native language. The translation was completed by the researcher, who is proficient in both IsiZulu and English.

3.10 Administration of research instruments (data collection procedures)

To obtain a list of small-scale farmers in Swayimane, the study made numerous attempts to get in touch with local small-scale cooperatives. After many unsuccessful attempts, the researcher finally managed to get in touch with the chairperson of one of the Swayimane cooperatives, but the chairperson said that it was not going to be possible to provide the list as they were very busy with other cooperative commitments they had.

The researcher then contacted the agricultural advisor who works closely with rural small-scale farmers in Swayimane, who said that it is impossible to obtain the list of small-scale farmers because they themselves do not know the total number of small-scale farmers in Swayimane. With the help of the agricultural advisor, the researcher then contacted a small-scale farmer who, according to the advisor, met the criteria for inclusion in the study. An appointment was made with the small-scale farmer for the researcher to visit them in their home for the aim of pre testing the interview schedule.

After pretesting the instrument, the date for data collection was set and an appointment was made with the participant. The plan was that once the researcher interviewed the purposively selected participant, the researcher would use snowball sampling and ask the participant to recommend another resident involved in small-scale farming and then repeat the process with recommended resident until the theoretical saturation is reached, however, when the researcher arrived, she discovered that the purposively chosen participant had already recruited other small-scale farmers in ward 13 to take part in the study. The rural small-scale farmers had gathered in a park close to the home of the chosen farmer.

26 small-scale farmers agreed to take part in the study, and due to the greater number of participants, individual interviews were impossible as the farmers noted that they would not be able to wait for individual interviews as they had other engagements they needed to attend to. On site the researcher made the decision to conduct focus group discussions. The researcher then randomly grouped the small-scale farmers into groups of 9, 9 and 8, which constituted a total of 3 focus groups. Focus group discussions took place at various times throughout the day, from 11:15 a.m. to 4:30 p.m. Each group discussion lasted approximately 1h to 1h30.

Before starting the focus group discussions, the researcher issued the letter of information that described the purpose of the study and explained the ethical issues guiding the focus group discussions. Participants also received a consent form requesting their consent before starting the discussion. These two documents were written in English and translated into isiZulu, the language of the participants. Although they are written in IsiZulu, the researcher decided to go over the documents with the focus groups to make sure everything was clearly explained and well understood. Finally, the researcher distributed the interview schedule translated into IsiZulu and the focus group discussion began. Focus group discussions were recorded and later transcribed.

3.11   Ethical considerations

When conducting a study it is important to take ethical issues into consideration, especially from the perspective of your respondents, and if there is a possibility of harm, either psychologically or otherwise, the researcher must detail the procedure in place to deal with it (Kumar 2011). According to Polonsky and Waller (2019), research ethics go beyond simply filling out paperwork; it also has to do with how research is conducted in a way that does not cause harm and how information about the results is communicated and interpreted from data collected. The individual's decision to participate in the project, as well as the freedom to leave at any time, must be made voluntarily (Bhandari 2021). Furthermore, genuine voluntary participation necessitates an understanding of the scope of the research, such as what it entails, potential risks, and how the data will be used (Adams 2020). The ethical issues must be made clear, and the emphasis and definition

of "benefit" must be shifted from an unjustified reward to specific outcomes that result in improvements and modifications to oppressive social relationships (Fawcett and Pockett 2015b).

In the present study, the ethical requirements of the Durban University of Technology were strictly adhered to. The researcher received ethical clearance from the DUT Faculty Research Ethics Committee and the Institutional Research Ethics Committee to conduct the study. According to Fawcett and Pockett (2015a) institutions such as universities research ethics committees are responsible for ensuring the ethical integrity of research studies. Boncz (2015) contends that it is an important ethical requirement that research conducted on people be approved by an ethics committee.

Prior to the start of the focus group discussions, participants were asked to sign and return consent forms after carefully reading and understanding them. The consent forms were written in IsiZulu, a language spoken by rural small-scale farmers in Swayimane. Connaway and Radford (2017) state that consent is required when data is collected from research participants through any form of communication, interaction, or intervention or when data about participants is collected.

All participants were given a letter of information that clearly stated the purpose of the study, the nature of the study, the risks and benefits of the study. The letter of information described the terms of their participation, including the assurance of respondents' anonymity, and the use of their right to withdraw or withhold information during any stage of the focus group discussion if they felt any information was sensitive or they did not feel free to respond. Participants were entitled to confidentiality of the information. To protect the participants' anonymity, the study did not ask for any information that could be used to identify them. Instead of their actual names and addresses, each study participant was assigned a number to maintain confidentiality. Dube, Mhlongo and Ngulube (2014) state that anonymity safeguards participants' privacy by concealing their identities and preventing stigma. The concept of confidentiality is underpinned by the principle of respect for privacy, which encourages participants to express radical or extreme views (Dube, Mhlongo and Ngulube 2014).

The researcher was open, honest, and transparent about the nature of voluntary participation in the study. Respect was maintained by being culturally sensitive and using language participants felt comfortable with. Participants had the option of allowing or disallowing the use of a voice recorder. All participants were over the age of 18 and had no mental impairment. Meeting these criteria qualified them as participants in this study. Participants were assured that written and recorded data will be to destroyed after five years from the date of publication of this study and will be stored in a secure location where only the researcher and supervisor have access to them. The Open University (2022) asserts that data must be kept secure and not disclosed to unauthorized parties, and it must be handled and stored with extreme caution when it contains personal or sensitive information. Participants were neither promised a reward nor threatened with punishment if they chose not to participate.

3.12   Validity and reliability

Reliability and validity are terms that describe the precision with which a method, technique, or test measures something and are used to evaluate research quality (Middleton 2019). According to Mohajan (2017) reliability and validity are the two key criteria to consider when assessing any measurement tool or technique for high-quality research. The findings of qualitative research are often criticized for being little more than a collection of the researchers' personal opinions subject to researcher bias, lacking adequate justification of the methods used, and being opaque in the analytical processes (Noble and Smith 2015). Bashir, Afzal and Azeem (2008) state that there are various perspectives on validity; some argue that the concept is inconsistent with qualitative research and therefore should be abandoned, while others argue that efforts should be made to ensure validity in order to give the results credibility.

The validity of a study determines whether it truly measures what it was designed to measure or how accurate the research findings are (Bashir, Afzal and Azeem 2008). Leung (2015) state that validity in qualitative research refers to the appropriateness of the tools, processes, and data. Brink (1993) states that a valid study should demonstrate what exists, and a valid instrument or measure should actually measure what it is

supposed to measure. Validation, according to Henning, Van Rensburg and Smit (2004), entails constantly checking, questioning, and theoretically interpreting the results.

In this study, validity was improved by respondent's validation. According to Thakur and Chetty (2020) respondent validation entails testing the preliminary findings with the participants to determine whether the findings remain valid. The researcher asked participants to verify the data analysis and interpretations, ensuring that the descriptions of the findings about the respondents' realities matched what the participants projected and that the results were recognized as authentic

To ensure the validity of this study, focus group discussions were recorded during data collection and focus group discussion tapes are available that can be used to confirm the study findings. During discussions and focus group data, the researcher further ensured validity by refraining from using their own perceptions and opinions but collected and analyzed the results based on the data provided by the participants without the researcher's influence. According to Cypress (2017) one potential threat to validity is bias, which is frequently an issue because qualitative research is open and less structured because it is exploratory, as a result, it is critical that researchers are aware of their own perceptions and opinions, as these may taint their research findings and conclusions.

Reliability is the degree to which a study, test, or any measuring procedure consistently produces the same result over time (Saunders and Lewis 2018). If the same result can be repeatedly obtained by applying the same techniques under the same circumstances, the measurement is thought to be reliable (Middleton 2019). Robson (2002) states that in order to conduct reliable qualitative research, researchers must be meticulous, careful, and honest.

To increase the study's reliability, the researcher conducted a pretest before with one small-scale farmer using an approved interview schedule. The goal of this pretest was to see if the interview schedule had any shortcomings that could be addressed before the actual interview. The study's reliability was further increased by having an expert other than the researcher analyses the data.

3.13   Trustworthiness

The degree of confidence in the data, interpretation, and methods used to ensure the quality of a study is referred to as study's trustworthiness or rigor (Polit and Beck 2014). Amankwaa (2016) states that researchers must specify the protocols and practices required in each study for it to be considered by readers. Producing high-quality research that accurately captures participants' experiences in context is the goal associated with trustworthiness (Bailey 2018). Credibility, dependability, confirmability, and transferability are all criteria for determining trustworthiness (Forero *et al.* 2018; Nyirenda *et al.* 2020).

Credibility

Credibility, authenticity and plausibility of results are all indicators of credibility (Lincoln and Guba 1985; Miles and Huberman 1994). Bailey (2018) states that a believable render is one that seems accurate in light of the research you have done, as opposed to one in which you "got the right answer, therefore, determining credibility is highly dependent on the procedures you employ, and others need to be aware of this in order to assess your research. In this chapter an in-depth detail about the methodology used is provided, from explain the nature of the study, to data was collected and analyze, and how the study conclusions were derived from the data

When a researcher devotes enough time to conducting research with participants in order to better understand participants, their credibility is confirmed (Du Plooy-Cilliers, Davis and Bezuidenhout 2014; Khanyile 2021). The researcher purposefully and conveniently sampled people based on the characteristics that qualified them for participation in the study. The researcher also spent a significant amount of time in the study area, pretesting and interviewing the small-scale farmers herself, in order to gain a better understanding of the participants.

Dependability

Dependability is the extent to which research procedures are documented, enabling a third party to monitor, audit, and evaluate the research process (Sandelowski 1986; Polit

and Beck 2006; Streubert 2007). During the gathering of data for this study, all focus group discussions were recorded and later transcribed. Records and transcriptions from the study are kept in a safe place as evidence that the data was collected, analyzed, and that the results match what participants stated.

Confirmability

The goal of confirmability is to show that the data and conclusion reached of the findings were clearly derived from the data and are not the product of the researcher's imagination (Korstjens and Moser 2018). Confirmability is the researcher's objectivity in interpreting results; results that are devoid of bias, including the social-desirability bias that may be present because researchers create and use the tools (Nyirenda *et al.* 2020). The researcher recorded focus group discussions during data collection discussion to ensure that her personal beliefs or views did not skew the results of these interviews. The researcher had to listen to the recording and review the notes several times to ensure that the transcripts accurately captured the participants' responses and feelings and were not influenced by the researcher's feelings, opinions, or imagination. This ensured that the results accurately reflected the only views of the participants.

Transferability

The extent to which findings from qualitative research can be applied to different situations or settings with different respondents (Forero *et al.* 2018; Korstjens and Moser 2018). It has been argued that transferability in qualitative research may minimize the significance of context (Nyirenda *et al.* 2020). The findings and conclusions of the study apply only to small-scale farmers in Swayimane as they are likely to have similar contextual experiences as the study participants. As a result, the results cannot be generalized to other small-scale farmers whose contexts may differ from those of Swayimane's small-scale farmers.

3.14 Data analysis

Data analysis describes the procedures used to extract meaning and comprehension from the numerous data sets that may be gathered throughout the action research project in order to serve as a foundation for future action and theory development (Coghlan and Brydon-Miller 2014). It is the process of examining results to discover any connections between ideas, constructions, or variables, to identify patterns or trends, or to identify underlying themes in the data (Baxter, Hughes and Tight 2010). The process of data analysis allows researchers to create understandable accounts of our data and aids in answering the question (Leavy 2017). The two main methods for data analysis are qualitative data analysis techniques and quantitative data analysis techniques (Maryville University 2022).

Qualitative data analysis is a search for general statements about relationships and underlying themes (Gibson and Brown 2009). The most common form of qualitative data used in analysis is text; this can either be a transcription from interviews or field notes from ethnographic work or other kinds of documents (Gibbs 2018).

In the current study, thematic analysis was used to analyze the qualitative data gathered from the focus group discussions. Thematic analysis is a method for systematically identifying, organizing, and providing insight into meaning patterns (themes) within qualitative data. It enables the researcher to perceive and interpret collective or shared meanings and experiences (Braun and Clarke 2012; Maguire and Delahunt 2017). According to Maguire and Delahunt (2017) the goal of a thematic analysis is to identify themes, or patterns in data that are important or interesting, and then use these themes to address the research or say something about an issue. Maguire and Delahunt (2017) further state a good thematic analysis does more than just summarize data; it interprets and makes sense of it.

The data was organized into themes based on their similarities, in order to make sense of them in relation to the existing literature. The results were presented in accordance with the research objectives. Each main theme under each objective was discussed in

detail, with appropriate verbatim quotes used to illustrate findings. This was followed by a discussion of the results in relation to the existing literature.

3.15   Summary of the chapter

This chapter presented the research methodology adopted by the study. The chapter began with a discussion of the research paradigm, approach, and research design used in this study. The population, sampling procedures, data collection method, instrument and procedures followed were discussed. Following that, the chapter discussed the study's ethical considerations, as well as its validity and reliability. Finally, the method of data analysis was described. The findings of the study are analyzed and discussed in the following chapter.

CHAPTER FOUR
PRESENTATION OF DATA, ANALYSIS AND INTERPRETATION

4.1 Introduction

The preceding chapter described the research methodology that was used in this study. This chapter analyses and discusses the findings. The chapter begins with reports on response rate of the participants. The following section of the chapter discusses the procedures followed for data analysis. Next, the chapter presents the profiles of the participants in the focus group discussions. The chapter then analyzes the data against the objective of the study, which were to establish the information needs of the selected small-scale farmers, determine factors that influence information poverty for the selected small-scale farmers, ascertain whether the selected small-scale farmers are information poor in accordance with Chatman's information poverty theory and determine the strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty. The chapter ends with a chapter summary.

4.2 Response rate

Response rate refers to the percentage of eligible participants who enrol and actually participate in a study (Govoni 2004; Boslaugh 2008). The calculation of participant response rate was critical for this study because response rates are frequently used to assess data quality (Lavrakas 2008; Krishnamurty 2018). According to Garner (2017) the response rate is calculated by dividing the number of respondents by the number of people invited to respond. The study lacked a sampling frame because the population size was not known, which made it impossible for the researcher to calculate the response rate because there was no sample size. In the end, 26 small-scale farmers took part in the study.

4.3 Procedures followed for the analysis of data

This section describes the procedures followed for the analysis of data. Qualitative data obtained through focus group discussion were analyzed using thematic analysis. Gavin (2008) defines thematic analysis as the method of clarifying the structures and interpretations that the participants represent in a text. Thematic analysis is a systematic approach to the analysis of qualitative data that entails the identification of culturally significant themes or patterns, the coding and classification of data, typically textual data, according to themes; and the interpretation of the resulting thematic structures by looking for similarities, relationships, general patterns, theoretical constructs, or explanatory principles (Mills, Durepos and Wiebe 2010; Hawkins 2017).

A thematic analysis was performed in this study using a six-phase guide. Literature has identified the six-phase guide as a very useful framework for conducting thematic analysis (Hawkins 2017; Maguire and Delahunt 2017; Terry *et al.* 2017). The six phase guide as described by Hawkins (2017), Maguire and Delahunt (2017) and Terry *et al.* (2017) is as follows: The first step in thematic analysis is to become acquainted with the data by reading and rereading the transcripts. The second phase entails writing codes that will assist the researcher in becoming more immersed in the data and laying the groundwork for the analysis. As the coding process progresses, the researcher will most likely discover patterns and similarities in the data. The themes created by the researcher at this point resemble rough drafts of a text because they are flexible, changeable, and unfixed. The fourth phase involves reviewing potential themes. The themes are defined and named in the fifth phase, which is followed by the sixth and final phase, which consists of producing the report.

In this study, data from the tape-recorded focus group discussions were transcribed and written down in IsiZulu. During this process, the researcher repeatedly compared the transcribed data with the tape-recorded data to ensure that the participants' descriptions and statements were exactly as they were on the audio tape, unaltered. The researcher then translated the qualitative data from IsiZulu into English.

After the qualitative data was translated, the researcher repeatedly read and reviewed the recordings as well as the textual data to determine contextual meaning, identifying text passages linked by a common idea to form themes. This allowed the researcher to understand the information provided by the respondents and to identify the themes that emerged in all their answers. Subsequently, the transcribed encoded data was compressed together to generate central themes. The researcher checked all coded data classified as themes to make sure it actually matches the data, exists in the data and if themes are missing, ensuring that all themes are accurate and complete.

The presentation and analysis of the results were carried out in relation to the objectives of the study, by presenting and discussing the questions posed to answer the particular objective. Themes that emerged for each question were presented, including the inclusion of literal quotes from respondents. Each theme that emerged was discussed in light of relevant literature and previous findings, in which they either confirmed or contracted existing literature.

Certain factors identified during data collection were taken into consideration in the analysis of the results. These factors made it impossible to include quantities in the responses because small-scale farmers tended to answer in the plural, using the pronoun "we" rather than "me" or "I," which suggested that their answers were shared by everyone in the group. This made it impossible to get different answers from the other participants since when the researcher asks the same question to others once one participant has given an answer, in all focus groups, members would seem to share the views and perception of that person, making it hard to get any more answers. Focus groups are not intended to combine individual interviews into a single interview (Morgan 1997; Morgan and Krueger 1998). Vicsek (2010) also indicates that during a focus group analysis, if the analyzer wishes, he can make statements about quantity (with or without numbers), but in general it is not fruitful to focus on these because the data collection is non-individual and standardized, therefore, the responses in these studies are discussed as being shared by the whole group.

4.4 Profiling the focus group participants

In this section the demographic profile of rural small-scale farmers in Swayimane, KwaZulu-Natal is presented. According to Hammer (2011) a thorough description of participants is crucial as it allows readers and researchers to determine to whom research findings generalize and allows for comparisons to be made across replications of studies. It offers the data required for secondary data analysis and research synthesis (Connelly 2013). These inquiries give context to the study data that has been gathered, enabling researchers to describe participants and improve data analysis (Dobosh 2017).

It was important for the present study to enquire on internet and computer experience to determine the extent to which computer and internet experience influences information poverty, as the existing literature has identified factors such as digital information literacy and information communication technologies as influencing information poverty (Arpad and Laszlo 2017; Mihaly 2017). Dobosh (2017) states that, while demographic surveys typically focus on age, gender, race, ethnicity, level of education, and occupation, researchers can also cover any other basic characteristics that they deem important for the study.

The demographic profile of respondents is presented in Table 4.1 below, comprising of information on age, gender, level of education, marital status, employment status, household income and dependents. In terms of computer and internet experience, the study focused on computer use, device ownership, internet accessibility, and computer literacy.

Table 4.1 Demographic profile of respondents

Demographic profile of respondents											
Participant	**Age**	**Gender**	**Marital status**	**Education**	**Employment**	**Household Income**	**Dependents of the income**	**Computer use**	**Computer device ownership**	**Internet accessibility**	**Computer literacy**
Focus group 1 (FG1)											
Participant 1	65 and older	Female	Widowed	Completed technical training	Pensioner	R5000-R10000	2	Computer use	Computer	No access	Computer literate
Participant 2	55-64	Female	Married	Completed technical training	Unemployed	R1000-R5000	3	Computer use	Smart phone	Accessible	Computer illiterate
Participant 3	55-64	Female	Married	Completed High School Level	Unemployed	R1000-R5000	5	Non computer use	smart phone	No access	Computer illiterate
Participant 4	45-54	Female	Married	No Schooling	Unemployed	R1000-R5000	9	Non computer use	Smart phone	No access	Computer illiterate
Participant 5	45-54	Female	Married	Some High School Level	Unemployed	R5000-R10000	6	Computer use	Smart phone	No access	Computer illiterate
Participant 6	55-64	Male	Married	No Schooling	Unemployed	R1000-R5000	7	Non computer use	None	No access	Computer illiterate
Participant 7	65 and older	Male	Married	Completed High School Level	Pensioner	R1000-R5000	3	Non computer use	None	No access	Computer illiterate
Participant 8	55-64	Male	Married	Completed High School Level	Unemployed	R1000-R5000	3	Non computer use	None	No access	Computer illiterate

Participant 9	55-64	Female	Single	No Schooling	Unemployed	R1000-R5000	6	Non computer use	None	No access	Computer illiterate

Focus group 2 (FG2)											
Participant 1	55-64	Female	Married	No Schooling	Unemployed	R10000-R15000	18	Non computer use	None	No access	Computer illiterate
Participant 2	45-54	Female	Married	Some High School Level	Unemployed	No income	2	Non computer use	None	No access	Computer illiterate
Participant 3	18-24	Female	Single	Completed High School Level	Unemployed	Below R1000	6	Non computer use	Smart phone	No access	Computer illiterate
Participant 4	55-64	Female	Single	No Schooling	Unemployed	R1000-R5000	5	Non computer use	None	No access	Computer illiterate
Participant 5	45-54	Female	Married	No Schooling	Unemployed	Below R1000	5	Non computer use	None	No access	Computer illiterate
Participant 6	65 and older	Female	Single	No Schooling	Pensioner	R1000-R5000	2	Non computer use	None	No access	Computer illiterate
Participant 7	45-54	Male	Married	No Schooling	Unemployed	Below R1000	3	Non computer use	None	No access	Computer illiterate
Participant 8	35-44	Male	Married	Some Primary School Level	Unemployed	R1000-R5000	5	Computer use	None	No access	Computer illiterate
Participant 9	55-64	Female	Single	No Schooling	Unemployed	No income	7	Non computer use	None	No access	Computer illiterate

Focus group 3 (FG3)											

Participant 1	45-54	Female	Single	Some Primary School Level	Unemployed	R10000-R15000	3	Non-computer use	None	No access	Computer illiterate
Participant 2	45-54	Female	Married	No schooling	Unemployed	Below R1000	4	Non-computer use	None	No access	Computer illiterate
Participant 3	55-64	Female	Single	No Schooling	Unemployed	Below R1000	3	Non-computer use	None	No access	Computer illiterate
Participant 4	18-24	Female	Single	Completed High School Level	Unemployed	No income	3	Computer use	Smart phone	Accessible	Computer literate
Participant 5	18-24	Female	Single	Completed High School Level	Unemployed	R1000-R5000	3	Computer use	Smart phone	Accessible	Computer illiterate
Participant 6	25-34	Male	Married	Some High School Level	Unemployed	No income	3	Computer use	Smart phone	Accessible	Computer literate
Participant 7	55-64	Male	Married	No Schooling	Unemployed	No income	4	Non-computer use	None	No access	Computer illiterate
Participant 8	55-64	Female	Married	No Schooling	Unemployed	No income	5	Non-computer use	None	No access	Computer illiterate

As shown in Table 4.1 above:

With regards to age, out of 26 respondents, 11 were between 55 and 64 years old. The majority of respondents were followed by 7 whose age ranged between 40 and 54 years. 3 respondents were 65 and over, 3 others were between 18 and 24 years old. The least represented ages were the 25-34 and 35-44 age groups with only 1 respondent each. This shows that the majority of respondents were older, which is supported by Arslan (2019) in the Rural Development Report 2019, who states that the average age of an African small-scale farmer is 45 and 60. The findings of this study are also consistent with those of Botiabane *et al.* (2017) who found that many small-scale farmers between the ages of 45 and 66 still engaged in small-scale agriculture in the study area.

In terms of gender, female participants outnumbered male in the study, accounting for 19 out of 26 respondents. The study had only 7 male respondents. These results indicate that the study area has more women involved in small-scale farming than men, which is confirmed by the findings of Botiabane *et al.* (2017), which revealed that women stay in the areas to practice agriculture in order to take care of their households in terms of food and tillage, whereas men go to urban areas to work in order to reduce poverty. This, however, contrasts with the study by Zantsi, Greyling and Vink (2019) which found that 66% of smallholder farmers in the study area were male with an average age of 58.

On marital status issues, more than half (16) of the 26 respondents were married, followed by only 9 single and 1 widowed. These results indicate that there is a higher number of married small-scale farmers in the study area, which contrasts the results of Kom *et al.* (2020) which showed that around 48% small-scale farmers were single, 17% were married, 17% divorced, indicating that there is a higher level of unmarried households in the study area. Nonetheless, the findings of this study are consistent with the findings of Agbugba, Christian and Obi (2020), who found that the majority (69%) of small-scale farmers in the study area were married.

As for formal education, out of 26 respondents, almost half (12) respondents have no education. Followed by nearly a quarter of all respondents (6) who have completed

high school. Then there are as few as 4 people with a high school level. Only 3 of respondents said they had completed a trade/technical/vocational training, while the remaining 2 have some level of primary education. These results indicate that there are many respondents who have no formal education, which is consistent with the findings of Kom *et al.* (2020) which revealed that respondents without formal education made up 51% of the population in the area study. Such a low level of education has a negative impact on agricultural production (Ninh 2021). Tamako, Thamaga-Chitja and Mudhara (2022) contend that because they lack access to formal education, small-scale farmers in rural areas may be less inclined and motivated to learn more about agriculture. Similarly, Thamaga-Chitja and Tamako (2017) argue that a small-scale farmer's ability to learn new farming methods is constrained by their inability to read and write (see also 4.5.1, 4.5.2 and 4.6.4).

In the question of employment status, 23 out of 26 respondents were unemployed. Only 3 respondents indicated that they are pensioners. The findings show that there is a high unemployment rate in Swayimane. Although the effects of unemployment have rarely been analyzed in previous studies, Lécole (2020) indicates that small-scale farmers rely heavily on family work to make ends meet in an often low cash flow situation. Hlatshwayo *et al.* (2021) noted that high rural unemployment can lead young people to leave rural areas in search of better opportunities in cities, which explains the findings of this study that older people are more likely to be involved in small-scale farming than younger people (see also 4.6.1 and 4.6.3).

In terms of monthly household income, almost half (11) out of 26 respondents have an income between R1,000 and R5,000. Followed by nearly a quarter (6) of respondents have no monthly income. 5 respondents indicated that monthly household income is less than R1000. Only 2 participants with household monthly family income between R5000-R10000.

With account of dependents, 38% of respondents indicated that their household income only ranges from R1000 to R5000, supporting 3-5 people per household. 23% of these farmers reported having no income while supporting 2- 7 people and 19% reported having a monthly household income of less than R1,000 while supporting between 3 and 9 people.

These results indicate that the most farmers do not make enough money to support their large families and to help improve small-scale agricultural production. Kom *et al.* (2020) state that household income has a significant influence on the purchase of improved seed varieties and improved crop varieties. These findings are supported by The World Bank (2016), which estimates that roughly 500 million small-scale farming households make up a significant portion of the world's poor who subsist on less than $2 per day (see also 4.2.2 and 4.6.1).

Almost three-quarters of respondents (19) indicated that they had never used computers in their life, and only 7 indicated that they had used computers. It is clear from the findings that there are many small-scale farmers do not use computers. The results are confirmed by the findings of of Kabane (2020) who reported that small-scale farmers suffer from lack of computer use and avoid technology due to cost and lack of knowledge on computer use in agriculture.

When it comes to computer devices ownership, the majority (17) out of 26 of respondents do not own any computer device. Only 8 respondents own smartphones that they also use as computers, and 1 of participants stated that they own computers. The results demonstrate that a greater number of respondents do not own any computing device, which is consistent with the findings of other studies which have revealed that most respondents do not have a computer in their household (Nwafor, Ogundeji and van der Westhuizen 2020). Similar to this study, Misaki (2019) found that less than a quarter of respondents in the study owned a smartphone. (See also section 4.5.2)

Regarding internet accessibility, 22 out of the 26 respondents do not have access to the internet, while a very small number, 4 respondents access the internet from home or neighborhood. These results are in line with the findings of Darus *et al.* (2021), who discovered that due to poor internet accessibility, the majority of small-scale farmers are unable to use the internet and reap its benefits. This supports the assertions of United Nations (2010) and The World Bank (2016) that many small-scale African farmers face significant challenges due to a relatively low share of internet accessibility compared to their developed counterparts (see also 4.6.4).

In terms of computer literacy, more than three-quarters of respondents (23) indicated that they were computer illiterate, while only 3 respondents indicated that they were able to use computers. These findings are consistent with those of Uleanya, Oki and Manappattukunnel Lukose (2021), who discovered that many rural small-scale farmers are computer illiterate. According to the study conducted by Barroga (2019), the biggest obstacles to ICT use among rural small-scale farmers are a lack of education and poor computer literacy. Similar findings were made by Van Greunen and Fosu (2022), who discovered that small-scale farmers' lack of computer skills and internet access could be an impediment to ICT adoption (see also 4.5.2 and 4.6.4).

4.5 Establish the information needs of the selected small-scale farmers

The first objective was to establish the information needs of the selected small-scale farmers. Determining information needs was crucial to this study, as knowing the information needs of rural small-scale farmers can help design appropriate programs, policies and innovations to address access to those information needs (Isenjia 2020). Furthermore, poor agricultural production is linked to farmers' poor use of information sources and a lack of a clear understanding of farmers' information needs (Harande 2009; Abubakar and Magaji 2019). To better understand the information needs of the participants, the research question was divided into two forms. Respondents were first asked to discuss their information needs as rural small-scale farmers, and then to discuss any other information needs they have as rural dwellers, aside from agricultural information.

4.5.1 Rural small-scale farmers' information needs

The data analysis on understanding the information needs of the Swayimane rural small-scale farming community revealed the following themes:

Soil requirements and crop health

Participants of FG1, FG2 and FG3 stated that their most important information need as small-scale farmers was soil requirements and crop health. They indicated that there are many crops they would also like to grow but cannot because they lack information about the amount of nutrients in the soil. They also said that they take soil

samples for testing, but when the test reports come back, they are unable to read the language the reports are in.

"Our information need is to understand the soil's requirements. We take soil samples to be tested, but we are unable to read the reports they send us after testing the soil because we cannot read English. We end up missing out on what is truly needed, namely what nutrients are in the soil." - Participant 6: FG1

"We are mentally puzzled when it comes to information. Even when we are sleeping, we think about our information needs because it is only by having information that you can know and be able to live. We have many ideas that we never get around to realizing due to a lack of information. When you go to other places, you will notice that they have planted tomatoes, but when you look around Swayimane, you will notice that no one has planted tomatoes because we do not have anyone to test the soil and provide us with information about planting tomatoes. I mean, fruits are a part of life, but it makes me sad when I walk by a house that doesn't even have a lemon. This is the type of information we require so that even if we are planting oranges, we will understand how you do it. Our limited knowledge only goes so far in assisting us. You, college students are better because you are giving us insights as those of us who never went to school are still in the dark. Even the soil is taken for inspection, but we cannot read the documents. We do not know who can save us from the problem we are in; because this is a large field, you can see it, but it is the knowledge we do not have" - Participant 7: FG3

"It's very difficult because sometimes when you are starting a field for yourself, you do not know what to do when you see your plants dying, and you end up not knowing if it is going to bear fruit. Even if you want to have at least something to eat at home, you cannot because you do not know how to proceed. This is the type of information that farmers desperately require." -Participant 9: FG2

"I have also planted sugarcane and corn; all I need to know in the fields is how to plant them properly, as well as how to plant cabbage." -Participant 4: FG2

The results indicate that information on soil requirements and crop health is crucial for rural small-scale farmers in Swayimane. These findings have also been observed in studies by (Nagarkar 2009; Lwoga, Ngulube and Stilwell 2010; Raungpaka and Savetpanuvong 2017; Rahman, Ara and Khan 2020). Lwoga, Ngulube and Stilwell (2010) found that the information needs of rural small-scale farmers included soil classification and fertility, irrigation practices, cultural practices, and environmental conservation. Similar findings were obtained by, Nagarkar (2009) who discovered that farmers required information on crop management, including soil testing. Raungpaka and Savetpanuvong (2017) clarified that while farmers are relatively less susceptible to problems during the cultivation and harvesting phases, their level of vulnerability increases during tasks such as soil management, crop tending and irrigation maintenance. Rahman, Ara and Khan (2020) also argues that small-scale farmers frequently fail to produce satisfactory yields due to factors like the absence of efficient monocrops and irreversible soil degradation.

The inability of small-scale farmers to read laboratory test reports supports an earlier study finding of the study that the majority of rural small-scale farmers in the current study have no formal education. The inability to read and write has been mentioned in the literature as limiting small-scale farmers' opportunities to acquire new farming methods (Thamaga-Chitja and Tamako 2017). In the study by Chavva and Smith (2012), rural small-scale farmers reported that, while they could sign their names, they could not read or write. Similarly, in the study by Jallow *et al.* (2017), more than 70% of small-scale farmers were unable to follow instructions on pesticide labels because they were unable to read and understand the meaning of the labels, which were written in English. This suggests that literacy issues are a common problem for small-scale farmers, which has a detrimental effect on their productivity.

Livestock production

A participant in FG2 mentioned information related to livestock farming. The participant explained that they are struggling to keep their livestock farming business afloat, and that inflation is complicating matters. The participant stated that she needs information specifically on how to maintain and grow their livestock farming operations.

"The information I need is for livestock. Since I am raising white chickens for sale, how should I proceed if I want to move forward. Because I try, but sometimes I get bogged down by rising food prices and give up. I would like to know how to obtain information that will assist me in moving forward." - Participant 4: FG2

These findings of the study are consistent with those of other studies (Emmanuel 2012; Phiri, Chipeta and Chawinga 2019b; Nwafor, van der Westhuizen and Ogundeji 2020). Phiri, Chipeta and Chawinga (2019b) discovered that crop husbandry was the most important information need of rural small-scale farmers. Emmanuel (2012) also found that other small-scale farmers need livestock information such as breeds, feeds, animal diseases and fattening period when investigating information needs and information-seeking behavior of rural farmers in Okpokwu local government area. Nwafor, Ogundeji and van der Westhuizen (2020) contend that the lack of market information has been identified as a major challenge in the livestock sector, especially among rural small-scale farmers in South Africa.

Professional guidance

Participants in FG1 and FG2 expressed a need for professional advice on farming practices and crop health. The participants mention that they farm using traditional methods and want to know if they are doing the right thing or if there is anything they can do better.

"We grow a variety of crops, including that comes out in trucks and food for consumption at home, such as beans and potatoes. I open the line in the field and place fertilizers before planting whatever I am planting, such as potatoes and beans. Now I want to know if I am doing everything correctly or if there is another way I can do better. This is the information I require, and I wish to find it one day." -Participant 9: FG1

"I have also planted sugarcane and corn; all I need to know in the fields is how to plant them properly, as well as how to plant cabbage." -Participant 4: FG2

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Although this finding is not common in most studies, as small-scale farmers are assumed to receive expert advice from small-scale agricultural advisors, similar results are found in studies by other researchers (Mbagwu, Benson and Onuoha 2018; Ndimbwa, Mwantimwa and Ndumbaro 2022). Mbagwu, Benson and Onuoha (2018) found that some items of interest to rural farmers include professional advice on crop health. The results of the study by Ndimbwa, Mwantimwa and Ndumbaro (2022) also showed the need for additional information on weather forecasts and professional guidance to keep crops healthy. Denison *et al.* (2016) also noted the absence of agricultural advice in the 2016 Water Research Commission report. According to this report by Denison *et al.* (2016), extension agents do not visit villages to advise rural small-scale farmers on best cultivation practices.

4.5.2 Information needs aside from agricultural information.

Participants were asked to identify any other information needs they had outside of agriculture. Respondents provided the following responses:

Library

FG1 and FG3 participants expressed a desire for information on how to establish a library in their community. The small-scale farmers stated that most of their problems could actually be solved by having a library in the community. They further explained that the library can not only benefit children in the community who have lost hope for a bright future, but it can also benefit them as adults. The following narratives were shared by participants:

> *"The information I require is how we can establish a library in our area because I believe the library can assist us."*- Participant 3: FG3

Follow-up question: How do you believe the library will assist you?

> *"We have grandchildren studying; they will go to the library, get computers and everything they need. I am also an adult; maybe it can help me somehow. For*

example, it can help with reading and learning new skills such as sewing and other tasks commonly associated with older people." -Participant 3: FG3

"Some of the needs in this area are for those kids who finish school and do not know what they are going to do. Some children do not even finish school. We require community centers such as library to keep the kids occupied. We also need a field that will not be built and then abandoned, and we need someone to train, make the children see the need, or make them want to join so that I know they can also compete. We need something to keep the kids occupied because the only thing that keeps people occupied in this neighborhood is going to the Tavern. Our kids ultimately end up there." -Participant 1: FG1.

The results show that rural small-scale farmers have a great need for information to obtain library services for the benefit of children and adults in the community. When compared to earlier studies, this study's finding stands out as unusual. A review of literature reveals that when rural small-scale farmers are asked what their information needs are, they typically only discuss information needs related to agriculture and some information for basic survival, but no studies in the literature have revealed small-scale farmers mentioning a library as one of his information needs. Although it can be argued that libraries cannot be seen as an information need but rather as an information providing agency, this finding however indicates that small-scale farmers in Swayimane are not only aware of their information needs, but also know the agencies who can provide them with the information they need.

The results of the study on possessing a computing device are validated by the fact that respondents noted that they also needed a library to use computers, indicating that most farmers do not own computers. Garrido and Wyber (2017) reported a large number of small-scale farmers in rural areas lack basic access to computers, in part because the electricity in those areas is unstable and there is a lack of ICT education. Establishing libraries can enable shared access to computers and the internet, as the library primary components is public access and a development orientation (Yusuf, Masika and Ighodaro 2013; Shemfe 2019).

Market information

FG1 mentioned the importance of community shopping center centers. They explained that, even though they produce a large number of crops, they do not have a community center where they can sell to consumers.

> *"We do not have community development centers. Even if you have planted and reaped, one of the things we need information on is where to sell food so that the general public can find it nearby if they want to buy whatever they need. This is a critical need for us because you end up going to EMkhondeni to sell your produce, which wastes your money. Having s shopping centre around the area can lead to job opportunities because these children who end up smoking cigarettes and Woonga may be able to find work right away."* -Participant 1: FG1.

Small-scale farmers lack market related information on how establish a shopping center where they can sell their produce. These farmers explained that they end up using money they do not have to travel to markets in the city or they end up selling to neighbors where there is not much market demand. This indicates that there is a lack of market information and physical access to the market in this community. Ha, Bosch and Nguyen (2015) state that the lack of market access is due to the lack of funding opportunities, particularly given that small-scale farming is widely recognized as the type of farming practiced by poor farmers. As noted in the literature review, small-scale farmers in South Africa are typically geographically dispersed and located far from markets, making access to markets difficult (Matoti, Vink and Bienabe 2007).

The study findings support the findings of Rapsomanikis (2015) which showed that many small-scale farmers remain marginalized, with access to food markets that are inefficient.   According to the findings, most small-scale farmers sell only a portion of their output, and this portion is often small. These findings are also consistent with those of Hlatshwayo *et al.* (2021), who found that market participation and sales rates of rural smallholder farmers are hampered by a variety of factors, including socioeconomic, market, and institutional constraints. Hlatshwayo *et al.* (2021) pointed out that the factors such as level of education, household gender, household wage,

and agricultural assistance influenced small-scale farmers' market participation. Such findings confirm that this community is experiencing information poverty, as defined by Chatman (1996) as marginalized social groups, who are unable to meet critical information needs.

Education

Participants in FG1 and FG3 expressed a need to have a community school for adults. Rural small-scale farmers said they understand how receiving a basic education can benefit them. The participants explained that they wanted to get their basic education to be able to read and write. Respondents believe that it is due to a lack of education in the community that people indulge in uninformed practices that harm agricultural practices.

> *"My information need is to know who is responsible for educating the public about the importance of caring for the environment in which they live, as evidenced by the fact that some of the fields here have been burned without cause. Everyone will suffer as a result of what they did, including those of us who did not start the fire. I need information on who is responsible, the government or the King, for teaching people how to care for the land on which they live."* -Participant 6: FG1.

> *"Another thing I can say is that the lack of schools for the elderly affects us as adults. We studied but we did not finish because in our time we were tending cows and did not go to school like today. We need you to save us and get education. There were, for example, children's schools where adults could learn later in the day. The adults did well, and they began to write their names, but the schooling ended. Now, even when we receive certain documents, we have to wait for the children to come back from school so that they can read and interpret this very big English. We do not have an adult school here. We do not have a school where we can meet and study in the afternoon after we have gathered our cows and placed them in the barns. I sometimes think about how successful we would be in Swayimane if the school that was there had continued. It would be beneficial to construct a small school for the elderly so*

that we could continue to learn. It is due to a lack of information that we do not know what to do to reopen that school." - Participant 7: FG3.

The findings reveal that small-scale farmers in Swayimane require educational information. They expressed a strong desire to return to school in order to improve their living conditions. The results of the demographic profile on the level of formal education validate these answers, as nearly half of the respondents declared having no education. These findings further support Chatman (1996)'s contention that outsiders who deny access to privileged information have an impact on the state of information poverty. In this case, study participants identified a need for information, but no action was taken by outsiders to ensure that small-scale farmers' information needs were met.

This finding does not appear frequently in the literature. Although the literature shows that the majority of rural small-scale farmers are illiterate, it does not show that rural small-scale farmers want to return to school to fulfill their dreams. The finding of this study is validated by the claims of Onwubuya (2005) that highest agricultural productivity is primarily dependent on rural farmers' education in order to understand and accept complex scientific changes that are difficult for the uneducated rural farmer, therefore, rural productivity cannot improve without providing adult education. Similar to these claims, Solomon (2019) asserts that education has long been recognized as a powerful tool for shaping people's lives and making them meaningful, even in adulthood, as a result, education becomes an appropriate method for agricultural development and farmer productivity.

Computer literacy

The least mentioned theme was computer literacy, raised by FG2. The participant stated that young people are in desperate need of computer literacy. The farmer points out that they say this is one of their information needs as they realize they are young and have ambitions but lack computer skills which makes it difficult in this digital age to realize their dreams if you cannot even use a computer. The participant complained about not knowing how to use computers at a time when the world is undergoing a digital revolution.

"The need I see is computer literacy. Many young people are not computer literate. Some have even finished school, but they do not know how to use a computer, whereas computer literacy is something that is very necessary now in this day and age." - Participant 3: FG2.

This finding is explained by the study's discovery in the analysis of respondents' profile that 88% of respondents lacked computer literacy. The results of this study are also supported by Chandra and Collis (2021) who reported that small-scale farmers living in rural areas lack access to digital skills and literacy. Bonthuys (2022) also stipulates that poor infrastructure in remote areas, as well as high data costs, limit the ability of small-scale farmers to make full use of information technology, which negatively impact learning and on skills development.

4.6 Determine factors that influence information poverty for the selected small-scale farmers

The second objective was to determine factors that influence information poverty for the selected small-scale farmers. Understanding the factors that prevent people from accessing information is essential to comprehending why information poverty develops (Manteaw 2022). Svärd (2018) contends that if barriers to access to information are not addressed, some groups of the general public will continue to experience information poverty, while others will experience information overload.

Four questions were asked to fully meet this objective. The first question concerned the barriers rural small-scale farmers face when trying to access information. The second question asked respondents to indicate whether they considered themselves to be in a situation of information poverty based on the definition of information poverty. The third question asked respondents to identify the factors they believe contribute to information poverty in their community, and finally to indicate the challenges they face in locating information.

4.6.1 Information access barriers

The first question asked respondents to discuss barriers they come across in their attempts to access information. From the responses, the following themes emerged:

Money

Participants in all three focus groups mentioned money as their obstacle to accessing information. They noted that not having money prevents them from accessing sources of information and agencies where information is provided and accessible.

> *"Money is the answer to all problems. To do everything, you must have money. If I had money for unlimited data, I would be constantly on my phone."* - Participant 2: FG1

> *"My child, we live in a world that needs money to survive now. If you do not have money, you are practically a nobody."* - Participant 8: FG2.

> *"Since I do not work, it is difficult for me to go to the library in Pietermaritzburg because I do not have the money for transport. As a result, unemployment is a real problem."* - Participant 6: FG3.

The results of this study clearly indicate that money is one of the main factors contributing to the small-scale farmers' lack of access to information in Swayimane. These findings are supported by respondents' employment status results, which show that 88% of respondents were unemployed. When looking at their total family income, 38% of respondents indicated that their household income only ranges from R1000 to R5000, supporting 3-5 people per household. 23% of these farmers reported having no income and 19% reported having a monthly household income of less than R1,000 while supporting between 3 and 9 people. Such employment status and household income explain why small-scale farmers struggle to purchase data to access and search information on the internet, as well as why they lack funds to visit the library in the city.

These findings are further supported by those of Phiri, Chipeta and Chawinga (2019b), who found that the challenge of lack of mobility stems from the fact that most rural smallholder farmers lacked adequate financial means to pay travel costs in search of information. Chen and Lu (2020) discovered that high-income farmers tend to obtain information through modern media and enterprises, whereas low-income farmers are more likely to rely radio, cooperative organizations farmers and associations for

information due to lack of funds. Chen, Liu and Yang (2011) argue that rural farmers' low incomes contribute to information poverty because they are unable to pay the high costs associated with accessing information. According to Oyebamiji (2022) many farming households' incomes are insufficient to cover the otherwise expensive internet subscriptions.

Frequent power outages

Respondents from FG3 stated that frequent power outages in their rural community prevent them from accessing critical information in real time. The participants mentioned that when there is no electricity, their phone batteries die, causing them to miss important phone calls. Schoolchildren are particularly affected by the electricity outage because they are unable to complete their schoolwork in the dark. They further expressed that they sometimes traveled miles to get to the library, only to find that when they arrived there was no electricity and were forced to return home without obtaining the information they needed.

> *"We have a power outage problem. Children cannot complete their homework if there is no power. If you are waiting for a call and your phone battery dies due to a power outage, you miss out on many things that could have helped you."* - Participant 3: FG3

> *"Electricity is one of the toughest challenges. If you travel from here to Pietermaritzburg looking for information, you will find that there is no electricity. Perhaps you go to the library intending to type something on the computer but return empty-handed."* -Participant 6: FG3.

The findings indicate that in some cases, access to information is impossible due to a lack of electricity. Respondents said they miss out on opportunities and/or important phone calls simply because sometimes there is no power to recharge their phone batteries. These results are consistent with other studies (Kooijman-van Dijk and Clancy 2010; Domegni and Azouma 2022; Falchetta *et al.* 2022). Lack of electricity supply hampers transformation of the livelihood profile in rural areas, as electricity supply is needed on a larger scale in agricultural processing and manufacturing

(Kooijman-van Dijk and Clancy 2010). Domegni and Azouma (2022) discovered that rural small-scale farmers have limited access to electricity, which has negative effects on their livelihoods. Falchetta *et al.* (2022) argues that inadequate access to energy is a major cause of poverty, as energy services are required at various stages of an efficient agricultural value.

Water shortages

The theme of water scarcity emerged from FG2, where the respondent pointed out that he also had a water shortage problem. The respondent explained that rural small-scale farmers suffers greatly because without water their crops die.

> *"We are experiencing a water shortage. Plants die when there is no water."* – Participant 5: FG2

Although this result does not directly address the question that was posed, the results nevertheless reveal that water productivity levels in Swayimane are extremely low and therefore a barrier to agricultural production. This confirmed the findings of Chikozho, Managa and Dabata (2020) who discovered that the majority of rural farmers do not have guaranteed access to water, which has an adverse effect on their capacity for irrigated farming and productivity. Mwale *et al.* (2021) revealed that water scarcity jeopardizes agricultural production, food security and farmers' livelihoods. Evidence from secondary and primary data from Khan (2014) demonstrates that water scarcity is negatively affecting small-scale farmers' quality of life and agricultural output. Acha (2014) also reported that while water allows year-round agricultural production to avoid food insecurity, the price of water is seen as a challenge for most irrigated crops worldwide and in South Africa.

4.6.2 Small-scale farmers' information poverty experience

Respondents were asked to discuss whether they thought they were information poor after learning about the definition of information poverty. In addition, they were asked to give the reasons why they thought they were in a situation of information poverty. All respondents indicated that they were affected by information poverty, and the following themes emerged from their answers:

Remotely disadvantaged

FG1 and FG2 participants stated that they believed they were subjected to information poverty because they are marginally disadvantaged. The respondents mentioned that they are far from the city where the information is available. The participants further mentioned that there are places like a library that they would like to visit with their children, but they cannot because these facilities are too far away from where rural small-scale farmers are.

> "*Yes, we have an information poverty problem. Everything is far away, and since the city is also far, it goes without saying that we are far away from information.*" -Participant 1: FG1.

> "*Yes, we are far from the city. We would like to do many things with the children and visit the library, but we are unable to do so due to our remote location.*" - Participant 3: FG2

> "*There is something we forgot to mention, we forgot to count the shopping center. The shopping center comes with everything people may need. Because we do not have the money for transport to PMB, you end up spending all the money you have to get to Pietermaritzburg. When the money runs out, even when you get to Pietermaritzburg, you can no longer buy the things you need. This shopping center can hold everything we need in Pietermaritzburg. Even if this mall does not have all the shops in Pietermaritzburg, that is fine, because after all, everything can't be perfect, but they must at least bring essential things for people, like food and information. In the library you can even sit down and refresh your head. It is especially sad for children who can only see the city once in college, because only seeing the city once you are old will obviously be a shock and the chances of not succeeding in this situation are very high.*"- Participant 1: FG1.

The results demonstrate that rural small-scale farmers' remote locations from government services is another factor influencing information poverty. These communities continue to travel a great distance to access services that are not

available in their area. The lack of quality services offered to rural areas is a significant barrier to rural development, and because these small-scale farmers cannot afford to travel to town to access these services, they are subject to information poverty. The findings are confirm the findings of Tire (2006), who discovered that villagers who want to learn better agricultural techniques to increase their productivity have a difficult time getting to research institutions, which are often located far away. Nkebukwa (2018) also found that information provision still isolates remote rural areas and isolation is linked to the slow growth of the rural economy, as a result of information poverty in their areas, rural people remain illiterate.

Money and data

FG1 and FG3 participants stated that they believe they are faced with information poverty because they cannot afford to buy data to access the Internet. Respondents also stated that they are sometimes unable to conduct important research such as determining where the produce they sell is most needed due to a lack of data. They ultimately sell to people in areas where the specific food demand is low.

> *"Even with the internet, it is dependent on whether there is a network or money available to purchase data.*
> *This stems from our farming challenges that we cultivate to try to earn money, but we have no market, and having no market means having no money." -* Participant 2: FG1

> *"Yes, we are in a poverty of information because when you have no money for data, you cannot find out where the potatoes you are selling are needed and go and sell them. Now you are forced to sell to people or places where there are already enough potatoes because you do not know where else to go because you lack data." -* Participant 2: FG3.

Purchasing data necessitates having enough money to purchase data plans, and with the majority of respondents' reported monthly household income, it is clear that most households are be unable to afford to purchase data to access the information they require. These findings are supported by the 2018 After Access survey conducted by

Research ICT Africa, which found that the high cost of internet-enabled devices and data is the primary factor behind 47% of South Africans' lack of internet access (Aguera *et al.* 2020). Less than 40% of farming families have access to the internet in many African nations, and data costs remain prohibitively expensive (Mehrabi *et al.* 2021). Misaki *et al.* (2018) reported that small-scale farmers face higher costs for mobile phone services, making it more difficult for them to access agricultural information. This is a result of the limited income faced by small-scale farmers in accessing agricultural information (Ndimbwa, Ndumbaro and Mwantimwa 2019).

4.6.3 Factors contributing to information poverty

Question three asked respondents to discuss what factors they felt contributed to information poverty in their community. The themes below describe the factors rural small-scale farmers mentioned.

Lack of job and development opportunities

The lack of employment and development opportunities was mentioned as one of the factors contributing to information poverty within the small-scale farming community by the FG3 respondent. Respondents believe they have less opportunities for employment and development than other communities. They said that when they travel to other communities, they discover that those cities have shopping centres, whereas their little community does not even have a single supermarket.

> *"This area suffers from information poverty because there are places where you can see that the people in the area are actually fortunate because they have job opportunities. If you go to Hammarsdale in Mpumalanga, for example, you will notice that the people there suffer less. There are shops there, and when they go to Pinetown, it is simply because they want to, but nothing is missing. Then consider Swayimane, where many children are educated but sit at home doing nothing and failing to progress. As you can see, we live in the fields, and if you want a soft drink, you have to go to the Tavern, which is very shameful; making even the place lack dignity. There is not even a Tuck-shop here. If you pass through other communities, you will notice that people are selling a variety*

of items, including tomatoes. There is evidence of progress there. In this area, we are severely lacking in information. We even talk in taxis, wondering why we never get help, wondering why the government has neglected us, because we do not even have schools for adults, and there is even a teacher who can teach us, but we do not know how to start a school."- Participant 7: FG3.

These findings are supported by demographic information of the study participants on employment rates, which showed that 88% of all respondents are unemployed, demonstrating that there are real issues of unemployment and development in the study area. In his study, Mukwedeya (2018) reported that 88.9% of youth involved in small-scale agriculture were unemployed mainly because they lack the necessary networks and tools to find a employment. Along the same lines, Simelane (2017) study found that small-scale farmers had no jobs and depended solely on farming for a living, preventing them from earning enough money because their income were below the poverty line. Mathinya *et al.* (2022) assert that many problems in agriculture are actually signs a lack of lucrative income. Mathinya *et al.* (2022) further states diversified approach to rural development is needed in rural areas of South Africa in order to create jobs.

Government leadership

A respondent from FG2 identified government leadership as one of the factors contributing to rural small-scale farmers' struggle with information poverty. The respondent said that the leadership that has been assigned to the community is fully aware of the avenues that can help address the information poverty they face, but the leaders do nothing to about it. The respondent believes that if new honorable leaders are chosen, significant changes will occur.

> *"The leadership assigned to the areas where we live contributes to the lack of information we have because they have the power to reach where the basic needs of the community are. They see the increase in poverty in society but do nothing about it. If we can find leaders with honesty and integrity, poverty will decrease. They are the ones we are concerned about, and while we recognize*

that they will not eliminate poverty entirely, they can certainly reduce it." -
Participant 5: FG2.

These findings are supported by Britz (2006) who contends people are able to make well-informed decisions that have an impact on their lives, but when the government restricts this right of access to information. Mofleh (2008) argues that a significant percentage of e-initiatives do not produce the desired results, raising serious concerns about government credibility in developing countries. Galperin and Mariscal (2007) reported that many people question the role of local governments in providing information and communication technology services, citing the government poor track record in service quality, innovation and network expansion. Arnold (2007) argues that governments only act in their own interest, disregarding the need to create public policies that meet the needs of their constituents.

Beliefs

A respondent in FG1 suggested that their beliefs are another contributing factor to information poverty. The participant mentions that they are still doing things the old-fashioned way, and whenever someone offers an innovative or cutting-edge idea, they do not trust that information they provide.

> *"Another factor contributing to the lack of information we face is our beliefs, because our beliefs are outdated. We believe that the most important thing we need to know is what happened in the past. Our beliefs do not predict what the future will bring. For example, if I need information from an educated neighbor, I hesitate because I believe these educated people no longer live in the traditional manner. So, you end criticizing the assistance they provide you, claiming that it is not how things were done in the past. We are critical of innovation. We consider anything new to be corrupt."* -Participant 7: FG1.

The findings show that rural small-scale farmers' reliance on traditional methods of doing things prevents them from obtaining the necessary information, leaving them information poor. These findings are consistent with the findings of Rahman, Ara and Khan (2020), who found that farmers have a strong culture of picking up knowledge

from others and exercising their own judgment, to the point where they are resistant to change and hesitant to adopt new ideas. Similarly, Bond *et al.* (2021) found that farmers' cultural beliefs act as a barrier to their perception of climate as a risk, and therefore this hinders their use of climate information, rather than access to it, as they do not trust information sources.

4.6.4 Information seeking challenges

The fourth question asked respondents to identify the challenges they face when searching for information. The challenges they cited are presented in the themes below.

Language and Internet skills

In FG1 and FG2, respondents indicated that they are illiterate and do not understand the language in which information is provided when searching using Google. When they search for information using Google, respondents stated that the only thing they can understand is the crops images that they see but are unable to read and understand the contents. Respondents mentioned that there are some women empowering events that they sometimes would like to attend but cannot because they lack internet skills to buy tickets online to attend these events.

> *"Google uses English and a granny like me doesn't know English. I only see cabbage photos on the internet. My issue is that I am illiterate and unable to read because I do not speak or read English." -Participant 5: FG2.*

> *"There are some things that even if you like you cannot access, like another super sport event that exists now, where all the women will come together on the 9th, and they will receive some great things. However, the people claim that tickets are available online. We have no idea what you mean when you say they are online or how to find them. The tickets are only R100, so I might be able to afford it, but I have to go online, what is that? And it all stems from the fact that we were not educated in school. We want to move with the times, as they have suggested, but we do not have anyone to help us." -Participant 4: FG1.*

The results reveal that illiterate farmers are unable to make sense of the information they retrieve online when performing a search using Google because they cannot read the language. Lack of internet skills prevent small-scale farmers from accessing essential information that could be useful to them. These results are evidenced and supported by the low level of formal education and computer literacy that rural farmers reported having. Additionally, Oyebamiji (2022) demonstrated that a person's level of education determines their level of knowledge and skill, which may affect the capacity of individual to gather and analyse information. Rahman, Ara and Khan (2020) found that farmers are more impacted when seeking agricultural information from ICT-based sources, because their general and ICT literacy skills are low so much that they are unable to use mobile services without the assistance of others.

Slow internet connection

A participant in FG3 stated that the challenge she faces when searching for information online is the extremely slow internet connection.

> *"My issue is that when I use the internet to search for information, the internet becomes extremely slow."*- Participant 4: FG3.

These results confirm the findings of the demographic profile on internet accessibility, since 85% of respondents indicated that they did not have internet access. The discovery further confirms the continuing digital divide that exists between rural and urban areas, which is fuelled by the access to broadband penetration enjoyed by urban areas (Tire 2006). Findings from Tabassum *et al.* (2019) revealed that rural small-scale farmers highlighted issues with internet connectivity. Similarly, participants in a study conducted by Kapondera and Namusanya (2017) reported that the internet is extremely slow, which has a negative impact on their productivity as they occasionally do not complete their work.

4.7 Ascertain whether the selected small-scale farmers are information poor in accordance with Chatman's information poverty theory

The third objective was to ascertain whether the selected rural small-scale farmers are information poor in accordance with Chatman's information poverty theory. This

objective was crucial for this study to validate or invalidate the theoretical hypotheses (PhD Assistance 2019). Two questions were asked to answer this objective. The first question asked participants to indicate whether or not they trusted information provided by outsiders. Second, to explain whether they disclose their information requirements.

4.7.1 Trust on the information provided by outsiders

Respondents were asked whether they trusted information provided by outsiders. This question elicited three responses from participants.

Outsider mistrust

Participants in all focus groups stated that they do not fully trust the information provided by outsiders, because in many cases when using information provided by someone outside the community, they never succeed. The small-scale farmers claimed strangers were misinforming them, and one respondent even referred to them as "animals."

> *"We can say that we trust the information that comes from outsiders. Like the advisers that we were talking about, they are not from this area, but we take the information they give us. And given that you are also from Durban, you can tell that we are paying attention to what you have to say. However, outsiders come with information that does not work for us most of the time, that makes us distrust the information they come with."* -Participant 1: FG2.

> *"It depends. They sometimes give us wrong information. Majority of the time they come to give us information, the advice they give us does not work."* -Participant 5: FG1

> *"We believe them because they have traveled a long distance to provide us with information that is critical. However, there are "animals" who come to give us incorrect information, which is a major issue."* -Participant 2: FG3

The findings show that small-scale farmers in rural Swayimane do not believe the information they get from outside sources. This is primarily due to their perception that

information from outsiders is inaccurate. They claimed that they had never been successful using information obtained from outside sources. It has also been stated earlier in the findings that small-scale farmers are also skeptical of new ideas and modern information. This confirms Chatman (1996) observation that people experiencing information poverty mistrust outsiders and seek out information that makes sense in the context of the social, cultural, and personal influences on their lives. sources of information that they prefer.

4.7.2 Information needs disclosure

Question two asked respondents if they disclosed their information needs. The following responses were provided.

Disclosure of information needs

Respondents in all focus groups indicated that they disclose their information needs to almost anyone they believe can help them, primarily ward councilors and agricultural advisors. The participants emphasized the fact that they understand that without making their information needs known, they will not be able to get the help they need. One respondent, however, stated that he did not even see the need for disclosing his information needs, because whenever he did, he was always told to search for information online, even though he lacked the skills of accessing online information. The respondent then emphasized the importance of the government resuming its ABET initiatives.

> *"We are very forthcoming about information needs. We inform farmer advisors that we lack the necessary information, just as we tell ward counsellors about our information needs. We simply inform everyone because we need assistance. How can someone assist you if you do not tell them, you require assistance?"* -Participant 2: FG1

> *"Who do we even talk to about our information needs? I hear they always tell us to go online, that there is help online, and I tell them that I do not know anything about the internet. Even when they say something is available in most areas, I tell them it is not where we are. That is why we are pleading with the*

government to reinstate ABET because when you ask a question they tell you about smartphones, that the information is available on the internet without showing or teaching you how to use it. They do not have time to explain." - Participant 9: FG1.

"I reveal my information needs to the farmer advisors because they are the ones who try to get us help." - Participant 7: FG3.

We inform everyone who comes here of the information we need, but none of them ever come back to help us." - Participant 2: FG2.

Although the conditions in which this community lives suggest that they are in a state of information poverty, the disclosure of their need for information runs counter to theory of information poverty, which defined information poverty as situations in which people are averse to sharing information or approaching others because they feel isolated. Participants stated unequivocally that the agricultural advisors and wards counsellors assigned to them are aware of their information needs because they disclose their needs to them; what they have expressed is the concern about the lack of support they have received from those whom they have disclosed their information needs.

One respondent, however, mentioned that he was reluctant to share his information needs because even when he did, he did not receive the help he needed. The respondent noted that the only response they get when asking for information is that they must search for it online, which is impossible for them because they are illiterate. This is in line with Chatman (1996) assertion that a person who is in a state of information poverty will put off asking others for help because they feel alone. It could be argued that this participant holds back on expressing their informational needs because they feel inferior to those who are literate and have access to the internet.

4.8 Determine the strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty

Research objective four aimed to determine the strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty.

4.8.1 Strategies employed by the selected small-scale farmers for the aim of alleviating information poverty

Understanding the strategies employed by farmers can indicate the extent to which these strategies are helping rural farmers and how they can be improved to address information poverty. Abubakar and Magaji (2019) understanding the sources of information used by smallholder farmers could aid in identifying appropriate sources of information, thereby increasing the productivity and economic growth.

To fully meet this objective, three questions were formulated. The first was for respondents to describe how they access information. The second question asked respondents to identify the sources of information they use for their information needs, and then indicate whether these sources are adequate to satisfy their informational needs.

4.8.1.1 Determining the way in which rural small-scale farmers access information

The participants were asked to describe the way in which they access information. The following themes emerged from the responses.

Agricultural advisors

Agricultural advisors were mentioned in all of the focus group discussions. Respondents indicated that they use the three small-scale farmer advisors assigned to them by the government to access information. Since there is no agency that provides information in Swayimane, the farmers said that farmer advisors are their closest information source. Whenever the farmers have an information need relating

to small-scale farming, they contact these small-scale agricultural advisors. Respondents also stated that working with the farmer advisors have taught them a lot and has greatly aided their development as rural small-scale farmers.

> "We cannot forget who we saw trying to help us get the information we needed. When did not know what to do when the government approached us and brought three farmer advisors from the city. They taught us things we did not know about making a living out of farming. This assistance from the farmer advisors is similar to your arrival here from the city in that you have seen where we are living but lack the information that we require. That is, by studying and coming here, we can see and are hopeful that there is certain information that we are about to receive. As previously mentioned, no one in Swayimane can deny that, despite its size, the Swayimane area does not even have one library. I can take you to any village in Swayimane, none of them has a library." - Participant 7: FG3.

> "I can say that we receive information from advisors who visit us from time to time. We ask them for the information we need, but unable to obtain." - Participant 6: FG1.

> "We still rely on advisors to bring us information." - Participant 4: FG2.

The findings show that most small-scale farmers rely heavily on farmer advisors for information on farming-related information. The focus group discussions revealed that small-scale farmers in Swayimane appear to have greater confidence in and reliance on farmer advisors. These findings are supported by Tamako, Thamaga-Chitja and Mudhara (2022), who discovered that rural small-scale farmers gain technical knowledge by participating in field demonstrations organized by agricultural advisors. The findings of Tamako, Thamaga-Chitja and Mudhara (2022) also showed that the primary way for small-scale farmers to access technical agricultural information was through these field demonstrations. These results are also consistent with those of Shikwambana and Malaza (2022), who found that most rural small-scale farmers desire visits from agricultural advisors for information, which is usually a challenge

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because advisors live far away from farmers and have no transportation to visit frequently, so they only come once in a while.

Internet and veteran farmers

Participants in FG2 and FG3 stated that they use the internet to access information. However, respondents stated that they are sometimes unable to access information due to a lack of data or a poor internet connection. Participants also mentioned that if they are unable to find information on the internet, they contact older colleagues in their community who have proven to be successful farmers, and they will assist them with the specific farming information they require. When asked if the information they receive from their colleagues meets their information needs, they responded that it does, even though it does not fully cover every detail required.

> *"As young people, we obtain information by using the internet. If we are unable to access the internet due to a lack of data or an internet connection, you speak with those who are knowledgeable about the information you require."-* Participant 6: FG3.

Follow up question - "Are there any knowledgeable people who have helped you with the information you required in the area where you live?"

> *"Yes, they are there, but they are most likely assisting me in learning how to plant. The grandmothers over there have the information. So, I occasionally contact them, and eventually I am able to obtain the information I seek." -* Participant 6: FG3

Follow up question - Is the information you get from people in the community enough to answer the questions you have?

> *"Yes, it is sufficient, but it does not always include everything I require, so I end up adding anything else that I can find." -* Participant 6: FG3.

> *"We rely on the internet even though we do not have the money to purchase data, but you are compelled to do so if the demand for information is great. You*

use the money you had set aside for other purposes to purchase data. Internet connection is also troublesome in this area." - Participant 2: FG2.

The downside to accessing information using the internet is that the small-scale farmers do not always have the money to buy data bundles and the internet connection is generally poor in Swayimane. This finding backs up Farmers Review Africa (2022) claims that many small-scale farmers in rural areas lack the resources to connect and access information online, even in areas where internet access is available. The results of this study are consistent with previous studies (Masuka *et al.* 2016; Raungpaka and Savetpanuvong 2017). The findings of Masuka *et al.* (2016) revealed that with reference to current mobile platforms, small-scale farmers access the internet from mobile phones, using the WhatsApp platform, Facebook and Twitter applications, but rural communities are still underserved in terms of broadband internet services. Raungpaka and Savetpanuvong (2017) found that some rural small-scale farmers have very limited or, in some cases, no internet connection at all.

It is apparent from the finding that a number of small-scale farmers in Swayimane consult with senior farmers in the community in their process of researching and accessing information. These results are similar to those found by Odini (2014) who found that small-scale farmers sought information by asking friends, neighbors, talking to relatives and talking with those who, according to them, had the necessary and correct information. Similarly, Rahman, Ara and Khan (2020) discovered that small-scale farmers frequently turn to their peers, seasoned farmers, and government extension agents for agricultural information.

Radio and television

Radio and television are the primary sources of information for FG2 and FG3 participants. Given that some small-scale farmers do not have access to the internet or own computers, radio and television are their best and almost sole means of obtaining information. The participant in FG2 reported frequent power outages, which rendered some electronic devices inoperable. The participant also stated that he required assistance with her small-scale farming practices.

"We have frequent power outages. One of our major issues is power. Because of the frequent power outages, even refrigerators have stopped working. We are planting but would appreciate it if we could be assisted in our efforts. I use TV when I need information." - Participant 5: FG2.

"We rely heavily on the radio and television for information. If it fails, we will be in big trouble because we do not have internet or computers. We are relying more on the radio." -Participant 7: FG3.

The findings reveal that radio and television are among the methods used by small-scale farmers to access information. Despite mentioning radio and television as their preferred sources of information, these participants complained about the frequent power outages. Obidike (2011) revealed that radio, television, and farmers' outreach organizations were the primary channels used to access agricultural information. Haider (2014) argues that most small-scale farmers tune in to agricultural radio programs because they learn new information about farming. Das, Ahmed and Awal (2021) state that insufficient ownership of radio and television, as well as poor infrastructure, limit their use. According to Nwafor, Ogundeji and van der Westhuizen (2020) small-scale farmers in rural areas struggle with a variety of issues, including high costs for radio batteries and radio equipment as well as limited access to and availability of electricity. The growing use of radio and television as informational tools for agriculture is influenced by the availability of dependable electrical power sources (Mtega 2018).

Traditional healers

Traditional healers were introduced in FG1. The respondent stated that he obtains information from traditional healers in his community. They explained that when they require critical information that they cannot obtain elsewhere, they consult traditional healers, who are able to provide them with the information they require.

"We employ magicians. If you need information or have a problem, such as a missing child, you can consult a traditional healer, who will tell you whether the child is still alive or dead." -Participant 7: FG1.

The results highlight, among the many methods used by small-scale farmers, that they consult traditional healers for information. These respondents appear to seek information from traditional healers when they are unable to obtain it elsewhere. They believe that the traditional healers have a higher power to provide information they would not be able to obtain otherwise. They use traditional healers as a source of information because they are the closest help they can get. This study's finding does not appear in the literature reviewed for the current study. This discovery thus provides a new perspective on the extent to which rural small-scale farmers are willing to seek out to obtain the information they require, and thus presents sources of information that are not typically discussed but are used by rural small-scale farmers as needed.

4.8.1.2   Sources of information used by rural small-scale farmers to meet their information needs

Respondents were asked to share the sources of information they use to address their information needs. The small-scale farmers cited the following as their informational sources.

Word of mouth

In focus groups FG1 and FG2, respondents stated that word of mouth is their primary source of information. The findings revealed that small-scale farmers in Swayimane relied heavily on information from friends and neighbors. Participants went on to say that because rural people, particularly women, have a very loud voice, they can call someone from a distance and get all the information they require.

> *"We rely on word of mouth. I stand on the other side of the fence and ask my neighbor for information, and the neighbor would tell me everything I need to know. For example, I could ask her if there is anything I should know about a new planting technique, and she would explain it to me."*- Participant 6: FG2.

> *"Rural ladies in Swayimane have loud voices, so if one is at the bottom of the mountain and I am at the top and we shout to each other, we communicate and share information."* -Participant 2: FG1.

Many previous studies (Stefano 2004 ; Meyer 2005; Khapayi and Celliers 2016; Kaddu, Nanyonga and Haumba 2020; Zimu-Biyela, Van der Walt and Dube 2020) confirm that farmers on a rural scale rely on word of mouth to obtain the information they need. The results by Khapayi and Celliers (2016) show that most of the rural small-scale farmers suffered from a lack of market information due to a lack of communication, tools and support services from the government and extension officials; as a result, the majority of farmers relied on word of mouth for information. Zimu-Biyela, Van der Walt and Dube (2020) came to the conclusion that word-of-mouth is primarily used to spread information conveyed to rural-small scale farmers by parents and other family members using word of mouth and observation. Meyer (2000) discovered that because small-scale farmers are illiterate, information is shared primarily through word of mouth, observation, and visual demonstrations. This backs up the claim made by Kaddu, Nanyonga and Haumba (2020) that farmers prefer word-of-mouth as a source of information over other information sources.

Social media

A participant in FG1 mentioned that using WhatsApp to ask for information is convenient for them as small-scale farmer. The participant explained that when they use WhatsApp, they are able to keep in touch with people in other provinces. This allows farmers to obtain information that may not be available or accessible where they are. Respondent in FG3 mentioned that in his search for information, he uses Facebook as a source of information. The participant further mentioned that Facebook has its own community where they can post any question they have about small-scale farming and receive a variety of responses.

> *"We use WhatsApp because it is convenient as you can have a friend in Johannesburg and receive information that you cannot get where you are."* -Participant 2: FG1.

> *"I mostly use Facebook because we have a large group of people. You post a question and get various opinions, then you select the point with which you agree."* -Participant 6: FG3.

The study funding confirms Food and Agriculture Organization (2021) reports that that the utilization of social networks and internet-based platforms for sharing information relevant to small-scale farmers has been increasing within plant wise countries. Similar results to those of the current study were reported by Schreiber *et al.* (2022), which demonstrated that rural small-scale farmers did not want to rely solely on resources, but valued connections abroad or in other provinces to learn new methods and tools from like-minded farmers and that social media has helped overcome logistical barriers to enable this exchange. Findings of Wangu (2014) and Chandra and Collis (2021) also found that most smallholder farmers now use social media such as WhatsApp and Facebook to meet their information needs and search for a variety of agricultural information. According to Li *et al.* (2018) even though there are few small-scale farmers using social media to access information, it was found that they were already accustomed to using the internet to solve daily problems.

Traditional doctors and spirit

FG1 respondents revealed that they use traditional doctors as a source of information. A very low-voiced respondent in FG2 noted that use spirit as a source of information. When asked what this spirit is and how they use it, the respondent did not give an answer.

> *"I use traditional doctors"* -Participant 7: FG1.

> *"I use the spirit; I enter the spirit."* - Participant 9: FG2.

The use of traditional and spirit healers appears to be new knowledge that the current study has uncovered. Studies have revealed many methods that rural small-scale farmers have adopted to find the information they need, but traditional healers and spirit were not revealed in the studies consulted for this study. The use of spirit as a means of accessing information is particularly new and necessitates further investigation, as respondents were unwilling to explain how they use the spirit to access information.

4.8.1.3 Level of satisfaction on sources of information

The final question asked respondents to discuss whether the information-access strategies they use are adequate for meeting their information needs. All focus groups agreed that while the aforementioned strategies help in obtaining information, they do not address all of the information needs.

> *"Yes, they are useful, but they do not meet all of our informational needs."* - Participant 3: FG1.

> *"Not entirely."*- Participant 6: FG3.

> *"They do not always assist us, as we have stated that there is additional information we need but do not have."* -Participant 5: FG2.

The results are consistent with those of (Ramli *et al.* 2013; Ndimbwa, Mwantimwa and Ndumbaro 2022), whose study made it abundantly clear that not all agricultural information available to rural small-scale farmers satisfied them. (Peter *et al.* 2021) observed that the majority are dissatisfied with the quality of agricultural information and technological services provided by agricultural advisors. According to (Ndimbwa, Mwantimwa and Ndumbaro 2022) the types, relevance, and timeliness of the information determine how satisfied small-scale farmers are with it. Rural small-scale farmers may be dissatisfied with their access to information because the majority of farmers rely on word-of-mouth, family, and self-research to obtain information, which according to Khapayi and Celliers (2016) is frequently biased, unreliable, or outdated.

4.8.2 Strategies needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty

In an attempt to find strategies for alleviating information in small-scale rural farming communities, the study found it idealistic to start by collecting data from the affected community about the strategies the small-scale farmers need to alleviate information poverty. To fully meet this objective, three sub-questions were asked. First, respondents were asked to describe what they believe they can be done to address the information poverty issues they face. Then indicate the sources of information that

are critical to meeting their information needs. Finally, describe ideal means of obtaining information.

4.8.2.1   Measures to address information poverty

The first question asked respondents to share what they think can be done to address the issues of information poverty that you face as rural small-scale farmers. The following themes merged from their responses.

Government intervention

Participants in all focus groups suggested that government intervention could go a long way in tackling the information poverty they face. The participants mentioned that the government neglected and deceived them for a very long time. They expressed that the government does not keep its promises and that the ongoing research is only used for campaign purposes, not to help them. Respondents further explained that they implore the government to increase the number of agricultural advisers because having few agricultural advisers means that even when they need immediate help, they cannot get it as the advisor might not be available to assist them for another week.

> *"We want attention, the government ignores us. When we are participating in research like we are doing right now, they will take these things we say and campaign using them until we believe them and then we vote for them but never come back to help us. These people need to stop messing with us. Another thing is that here in the village we are known as people who cannot handle animals like dogs. It is well known that a black man cannot handle animals. But where is the SPCA because there are animals here, why don't they approach us in the villages. We never see them coming into our communities. The only thing they can do is say black people are cruel. We want attention, the government does not pay attention to us. Government only responds when it wants something from us. Dogs and other animals do not die because we do not take care of them, they die because we do not have help from the SPCA."*
> - Participant 1: FG1.

"In agriculture, we can ask the government to hire more farmer advisors. If I need a farmer advisor right now, I will be able to find him until next week. And, since it is farming season, I want to know that if I need the farmer advisor, he will come no matter what. Please provide more advisors." - Participant 6: F2.

"The government is deceiving us a lot. We hoped that the government would lift black people out of poverty, but we find that we still have big problems despite its presence. I always hear on the radio the government saying it will reach out to rural people to bring development. Every time we hear this news, we get so happy and wait for them, but it never comes. It hurts us when they do not come, and we wonder which villages they go to because they do not come where we live." - Participant 2: FG3.

The results demonstrate that participants believe the government is responsible and has the resources to address information poverty in their community. Mou and Xu (2020) and Lwoga, Ngulube and Stilwell (2010) agree. Mou and Xu (2020) state that initially government agencies should improve information products and services in rural communities, ensuring that the information poor can get all the information they need without difficulty. Lwoga, Ngulube and Stilwell (2010) also argue that for effective research and extension services, government should also address financial and resource issues such as provision of adequate information materials and agricultural inputs and improvement of telecommunications and road infrastructure.

4.8.2.2 Critical sources of information for addressing information needs

Respondents were asked to identify the sources of information that are critical for meeting their information needs. From the responses, the themes presented below emerged.

Agricultural advisors

Respondents in FG1 and FG2 primarily identified small-scale farmer advisors as their main source of information. They noted that they mostly depended on them for information.

"I would say farmer advisors because they provide us with a lot of useful information." - Participant 5: FG2

"In farming, the most important source of information for me is that of farmer advisors. I rely on them a lot." - Participant 7: FG1.

These results support the findings of Stevens and van Heerden (2016) who reported that all types of farmers, especially small-scale farmers, rely on reliable and competent agricultural advisory services as a source of knowledge and information. The results of the study suggest that certain extension methods are considered effective and having an impact by rural small-scale farmers in the study area, suggesting that frequent farm visits are essential for spreading extension messages and should be encouraged (Maoba 2016). Williams *et al.* (2008) state that extension advisory is a knowledge and information support function for agricultural workers that does more than just give advice; extension worker relays scientific information to farmers.

Radio

Radio was also mentioned as the most importance source of information by a respondent from FG3. The respondent stated that listening to the radio provides them with the most important information.

> *"As for me, who is always listening to the radio, I have been hearing about rising prices for gasoline and car tires. When they said the price would go up, they warned us on the radio that it would affect everything. As the country deteriorates, so will the stores. When I learned that we would also be affected, I decided that I should begin planting and selling potatoes in town to prepare for the impending famine. What I am trying to say is that I rely heavily on the radio to alert me on crucial circumstances like these. Because I am uneducated, I rely on radio and television to learn things that we do not yet know as we do not have any other source of information here."* - Participant 7: FG3.

Rural small-scale farmers believe that radio is and can continue to help fight information poverty. These findings are in line with those of Meitei and Devi (2009) who discovered that radio is the most widely used informational medium among small-

scale farmers, followed by television and newspapers published in the local dialect and languages. Chen, Liu and Yang (2011) state television, radio, newspapers, and other conventional communication channels are still the current main channels for rural small-scale farmers to obtain information and suggested the full use of these conventional media to solve the information problem cover. As a result, Odini (2014) strongly advised that rural radio be broadcast at night when farmers have time to see and listen to agricultural programs.

4.8.2.3 Ideal means of obtaining information

Question three asked participants to describe their ideal way of obtaining information. The responses are presented in the themes below.

Internet

Respondents from focus groups 2 and 3 stated that using the Internet would be the best way for them to obtain information. The participants noted the internet because it enables people to search for information even from the comfort of their own homes. Respondents added that having WhatsApp would enable them to communicate with their advisors and receive real-time assistance. They pointed out that in order to be able to do this, they would need data, which small scale farmers do not typically have.

> *"Internet is very important because if I have it, I can search for information even when I am sitting at home."* - Participant 5: FG3

> *"If I can have data to access the internet, I can contact an agricultural advisor or use WhatsApp to get real-time help. This then requires that I always have data or airtime, which I usually do not have."* - Participant 3: FG1.

The results of this current study reveal that the participant believe that the best way in which they can receive their information need is through the access of the internet, however this can only be possible if they data which is a challenge for them. According to Li *et al.* (2018) "expensive" and "without equipment" are the main obstacles to small-scale farmers' use of the internet but majority of them still want to learn to use the

internet as they believe that the internet can help improve their living conditions. In support of these findings Seretse *et al.* (2018) discovered that people in the rural communities are willing to acquire computer literacy skills and have access to computer and internet but due to lack of ICT infrastructure in a form of telecentres in the community this is not possible.

4.9 Summary of the chapter

This chapter analyzed and discussed the findings. The chapter began with reports on response rate of the participants. The following section of the chapter discussed the procedures followed for data analysis. Next, the chapter presented the profiles of the participants in the focus group discussions. The chapter then analyzed the data against the objective of the study, which were to establish the information needs of the selected small-scale farmers, determine factors that influence information poverty for the selected small-scale farmers, ascertain whether the selected small-scale farmers are information poor in accordance with Chatman's information poverty theory and determine the strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty. The conclusion and recommendations of the study are presented in the following chapter.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The previous chapter analyzed and discussed the findings of the study. This chapter summarizes the findings in accordance with objectives of the study. The chapter offers a conclusion of the study and then recommendations are provided based on the gaps identified in the study.

5.2 Summary by objectives

5.2.1 Establish the information needs of the selected small-scale farmers

The first objective was to establish the information needs of small-scale farmers in Swayimane. The current study relied heavily on understanding the information needs of small-scale farmers. Attempting to alleviate information poverty is impossible without first determining the community's exact information needs as knowing the information allows helps in designing appropriate policies, programs, effective channels, and sources of information for rural small-scale farmers. The findings of the study indicate that small-scale farmers have significant information needs in terms of crop soil nutrients, market information and professional agricultural guidance on cultivation practices and maintenance of animal production.

In terms of the information needs that are most crucial for small-scale farmers, these findings ran counter to some of the findings of earlier studies. While researching the information needs of small-scale farmers, Lwoga, Ngulube and Stilwell (2010) found that some of small-scale farmers also needed information on soil classification and fertility, crop husbandry practices, and animal husbandry practices; however, the study highlighted that the most crucial information small-scale farmers needed was on the control of animal diseases, animal breeds, and crop varieties. Similarly, Babu *et al.* (2012) discovered that disease and pest management, as well as pesticide and fertilizer application, were the most important information needs for rice. When examining the information requirements of small-scale farmers, Nagarkar (2009) found that farmers needed information, primarily about fungal infections and fungicides. Phiri,

Chipeta and Chawinga (2019b) discovered that the top five informational needs of rural smallholders were crop management, pest and disease control, agricultural markets, weather, and climate.

The findings also show that the information needs of rural small-scale farmers are not limited only to information needs on farming practices; farmers also have essential information needs in terms of adult education, ICT and library services, which are required for the survival of young and old people in the rural small-scale community. Although literature emphasizes the importance of education, ICTs, and libraries in the development of small-scale farmers, the study found no literature in which participants expressed a desire for education, ICTs, or library services. Most studies on the information needs of small-scale farmers seem to have reveal needs related to the agricultural work that small-scale farmers do.

5.2.2 Determine factors that influence information poverty for the selected small-scale farmers

The second objective of the study was to identify the factors that influence information poverty among small-scale farmers in Swayimane. If the study is to develop strategies to alleviate information poverty in farming communities thorough understanding of the factors that influence the community's information poverty is required. These factors are an indication of what needs to be corrected first if information poverty is to be eradicated. The findings of the study show that rural farmers face information poverty due to low family income caused by a lack of employment opportunities, leaving them without financial means to access the information they need. Similar findings were made by Phiri, Chipeta and Chawinga (2019a), who discovered that small-scale rural farmers lack easy access to information because of a lack of funds. The backs up Atah *et al.* (2018)'s assertion that small-scale farmers frequently lack access to reliable information sources because they earn meager incomes and have limited access to financing.

The findings also show that another factor influencing information poverty is farmers' isolation because they live far from cities where government and other essential services are available. This finding is consistent with research by Nkebukwa (2018),

who came to the conclusion that the lack of access to information continues to isolate rural communities in remote locations, and that this isolation is linked to the rural economy's sluggish growth, which fuels information poverty. These findings back up Kirkman *et al.* (2022)'s claim cited in Richard (2011) that there are few reliable sources of information in remote areas where small-scale farmers live due to a lack of access to more sophisticated ICT.

The results reveal that participants believe that government leaders also influence widespread information poverty in Swayimane because the leaders do not keep their promises and believe that they are ignored by these authorities. This finding is supported by a study conducted by Babu *et al.* (2012) on the search habits of farmers in Tamil Nadu, India, which found that the main obstacles to information access are a lack of availability, reliability and a delay in the delivery of information. This validates Odini (2014) claims that despite government resources being focused on enhancing agricultural information, small-scale farmers in rural communities still face barriers to information provision and access.

The study findings further demonstrated that the cultural beliefs of rural small-scale farmers play a role in the information poverty they face, as their beliefs are outdated and rural small-scale farmers are not sufficiently informed to accept innovation and new information, due to lack of knowledge. This finding supports Chatman (1996)'s claim that self-protective behaviors adopted in response to social norms determine information poverty. According to Chatman (1996), insiders in any group adhere to a set of shared cultural standards that decide what is significant and live in their own "little world," therefore they disregard new information.

5.2.3 Ascertain whether the selected small-scale farmers are information poor in accordance with Chatman's information poverty theory

The third objective was to ascertain whether the selected small-scale farmers are information poor in accordance with Chatman's information poverty theory. This objective was critical for this study in order to confirm or invalidate Chatman's hypothesis about information-poor communities. According to the findings of this study, participants exhibit some, but not all, characteristics of information-poor

communities, as described in Chatman's theory of information poverty. Findings reveal that small-scale farmers distrust information received from outsiders, which is consistent with Chatman (1996)'s theory of information poverty. Their mistrust stems from their belief that outsiders are providing them with inaccurate information, owing to the fact that they have never achieved anything using information provided by outsiders.The study also revealed that while many participants disclose their information needs and recognize how the divulger can help them get the information they need, they do not receive the support they need from those to whom they disclose their information and therefore remain in conditions of information poverty. This finding contrasts with Chatman (1996)'s claim that people who find themselves in a state of information poverty remain poor in information due to the delay in asking for help from others because they feel isolated. According to the findings of the study the problem is not that small-scale farmers do not disclose their information needs, but rather never get the support they need when they openly disclose their information needs.

5.2.4 Determine the strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty

The findings of the study identified strategies employed and needed by the selected small-scale farmers to address information needs for the aim of alleviating information poverty. It was essential for the study to identify the strategies already in place in order determine how well they assist farmers in obtaining the information they require. Knowing how farmers meet their information needs helps the study gain understanding of how the strategies small-scale farmers employ impact the information poverty they experience and how the current strategies can be enhanced in an effort to lessen information poverty. The results of the study show that small- scale farmers use a variety of strategies to meet their information needs. Small-scale farmers in the rural farming community of Swayimane rely heavily on agricultural advisors, seasoned farmers, and word of mouth for information. These results are in line with those of Phiri, Chipeta and Chawinga (2019b), who found that small-scale farmers relied heavily on personal experience, family members, and extension agents as sources of information. However, the results are at odds with those of Abubakar and Magaji

(2019), who came to the conclusion that small-scale farmers are more likely than any other source to consult agricultural dealers for information on agricultural methods.

Other information channels mentioned by participants include radio, television, social media, and the Internet, but their use is primarily determined by ownership and accessibility. In their study, Abubakar and Magaji (2019) discovered that radio and television are other sources of information used by small-scale farmers. Similar findings were made by Munyua (2011) when investigating agricultural knowledge and information systems among small-scale farmers in Kirinyaga District, Kenya. Munyua (2011) found that farmers preferred to acquire agricultural information via radio, television, and mobile phones.

In addition, the study found that rural small-scale farmers turn to traditional healers to meet their information needs, which the study highlighted as new knowledge, as previous studies reviewed in conducting the current study did not reveal that traditional healers were a source of information used by rural small-scale farmers.

It was important for this study to ask participants to discuss strategies in which small-scale farmers believe could be used to alleviate information poverty in order to gain their perspectives and a vision of what an ideal information world looks like for them. The finding of the study demonstrate that small-scale farmers believe that government intervention and service provision can help eliminate information poverty. Several authors' claims are in agreement with this finding. Makaula (2021) argues that governments must use ICT channels to promote agricultural information in order to overcome the problem of information poverty experienced by small-scale farmers. According to Haruna and Baba (2017), the government should prioritize fast broadband in order to address the issue of using the internet for agriculture growth. In their study, Gebru, Yared and Gebremichael (2017) suggested the government collaborate with other parties to enhance rural electrification in a way that is effective and efficient in order to assist small-scale farmers in overcoming obstacles to accessing pertinent information. McKeown (2016) argues that government funding of library literacy initiatives is necessary to reduce information poverty.

The farmers also pointed out that increasing the number of agricultural advisors would aid in improving access to information as they work closely with them and are the primary source of information. Friis-Hansen (2004) cited in Zikhali (2016) asserted that extension agents are more than just providers of technologies and advice; they also create the conditions for a broader flow of information and knowledge. Ekenta *et al.* (2013) found that formal extension was one of the most effective information dissemination methods used by extension workers in Kogi State, Nigeria to spread organic farming practices.

The internet was also mentioned as one of the strategies that could help fight information poverty because it allows people to search for information from anywhere and at any time. This is consistent agreement with Mago and Mago (2015)'s claim that the internet connections enable farmers to connect with their counterparts in different areas and share useful agricultural information.

5.3 Conclusion

The aim of this study was to examine the strategies for alleviating information poverty in a selected small-scale farming community in Kwazulu-Natal. The findings demonstrate that small-scale farmers have critical basic information needs that are not being satisfied. This information gap is largely caused by low literacy rates, low household incomes, a lack of digital skills, the cost of information, insufficient power supplies, weak signals, a lack of reliable information services, and a lack of ICT. Rural small-scale farmers rely heavily on radio, word of mouth, and agricultural advisors for information, however, these sources do not always meet their needs. The findings show that farmers are aware that they live in conditions of information poverty and aware of some of the techniques that could be used to alleviate it, but they lack knowledge about how to put such strategies into action since even when they make their information requirements known, they do not receive the assistance they require.

Although it is widely known that information is vital for agricultural development, the results of this study demonstrate that rural small-scale farmers face considerable hurdles as a result of a lack of critical information that can assist them in increasing agricultural output. The findings demonstrate that information access continues to

marginalize rural small-scale farming communities. Their information rights are violated which has a severe influence on their economic and social growth, especially as most rural small-scale farmers are unable to attain food security to alleviate poverty. It is reasonable to conclude that information poverty is a major issue in rural small-scale farming communities. As a result, alleviating information poverty is critical for the development of rural small-scale farming communities.

The study has succeeded in its aim as it is evident from its findings that rural economic development is essential for eradicating information poverty and ensuring the farmers rights to information access. Without appropriate information dissemination to rural farming communities, the benefits of democratization will not be realized in small-scale farming communities. The government should commit to developing rural telecommunications infrastructure so that information infrastructure is available in every rural farming community in South Africa. Information centres should be established in rural small-scale farming communities as it is a democratic right of every citizen to have access to information. The information-providing agencies should strive to give timely and pertinent information to all rural dwellers, including small-scale farming communities.

5.4 Recommendations

The study identified several issues related to small-scale farmers' information poverty in Swayimane. Based on the findings of the study, the researcher recommended strategies that can be implemented to alleviate information poverty in small-scale farming communities.

- The results of the study show conclusively that there is a shortage of agricultural advisors. The study recommends hiring more agricultural advisors to provide small-scale farmers with more immediate support to ensure that information flows, is consistent, and is understood.
- Small-scale farmers have revealed that even though they take soil samples for testing, they are still unable to read the results because the test reports come back written in a language they do not understand. The study suggests that laboratory soil test results should be communicated in the language that small-

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scale farmers are able to read and understand, or that agricultural advisers interpret the results to small-scale farmers.

- The study reveals that over 80% of study participants lack access to library services. The establishment of a public library in Swayimane is strongly recommended and necessary, given the extent of the Swayimane area and the number of the population. The library should provide adequate and pertinent information sources, particularly oral information sources for small-scale farmers who are illiterate.

- The study revealed that small-scale farmers, especially the illiterate, are highly dependent on these informational mediums. Accordingly, the study recommends and advises that local radio and television stations increase their agricultural programming in order to better meet the informational needs of rural small-scale farmers.

- The study found that low literacy levels are a barrier to information access for the rural farming community. The recommends that the Department of Education ensures the provision of ABET programs in rural areas to combat illiteracy and the lack of essential numeracy skills among rural small-scale farmers.

- The study revealed that the farmers are unable to sell their produce due to the absence of a trading center where consumers can buy the products. It is recommended that the government encourage the development of commercial centers in rural areas by launching initiatives such as the promotion of rural agricultural production to attract investors to invest in rural commercial centers. The study discovered that small-scale farmers require information on crop health practices and livestock production. It is recommended that agricultural advisors train small-scale farmers in the fundamental farming techniques to be applied for raising crops and poultry.

- The study revealed that rural small-scale farmers have little confidence in the information they receive from outside sources and are skeptical about using modern practices. It is recommended that the government regularly organizes a public awareness campaign to educate rural small-scale farmers on new modern methods of obtaining agricultural information. In this campaign, the

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government must involve profiles that rural farmers can trust and who are part of the rural community such as agricultural advisors, community leaders, and so on.

5.5 Opportunities for further research

The study was limited to small-scale farmers in ward 13 of Swayimane; further research can be conducted with larger population that fall under different classifications.

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APPENDICES

Appendix A: Letter of information

LETTER OF INFORMATION

Title of the Research Study: Strategies for alleviating information poverty in a selected small-scale farming community in Kwazulu-Natal

Principal Investigator/s/researcher: Name: Miss Nombuso Phamela Zondi
Qualification: Bachelor of Technology in Library and Information Studies

Co-Investigator/s/supervisor/s: Dr SP Moyane, PhD LIS.
Mr. Ntando Nkomo, Masters LIS.

Brief Introduction and Purpose of the Study: My name is Nombuso Phamela Zondi a student at the Durban University of Technology enrolled for a Master of Management Sciences in Library and Information Science. My dissertation is titled "Strategies for alleviating information poverty in a selected small-scale farming community in Kwazulu-Natal". The study aims to examine the strategies for alleviating information poverty in a selected small-scale farming community in Kwazulu-Natal. This letter serves as an invitation for your participation in this study. Below you will find information about the study and about what your involvement would entail, should you decide to take part.

Outline of the Procedures: Consenting to participate in this study entails taking part in a face-to-face interview that asks you basic questions about yourself. This interview will last for approximately 15 to 30 minutes. Interviews will be conducted by the principal researcher, it will be audio-taped and later transcribed for the purpose of data analysis.

Risks or Discomforts to the Participant: There are no anticipated risks or discomforts related to this research.

Explain to the participant the reasons he/she may be withdraw from the Study: Non-compliance with the terms and conditions of the research objectives will result in participation withdrawal. During participation if an issue arises that makes you feel uncomfortable, you may at any time stop your participation with no further repercussions. You are also free to withdraw from the study at any time, without needing to provide any explanation and without any negative repercussions for you.

Benefits: There will be no direct benefit to you from participating in this study. The anticipated benefit of your participation in this study is the opportunity to discuss feelings, perceptions, and concerns related to the experience of information poverty and to contribute to understanding of strategies that can be implemented to alleviate information poverty.

Remuneration: This study is completely voluntary; there will be no reimbursement or payment for participating in the study.

Costs of the Study: No cost implication for the participants.

Confidentiality: Confidential data is obtained and recorded in a manner that the information is not immediately identified with the research participant who supplied it, but such a link is possible by the researcher if required or necessary. Confidential data is usually "coded"- that is, the research participant is assigned a unique identifier or code that will be used to identify the data. The unique code identifies the data and the participant's identity is kept separate from the code and data. Coded data is not anonymous.

Results: The final report will be kept within the institution. However, if the findings of the assessments are to be published further, it will be determined whether or not ethical approval is required before proceeding with the work.

Research-related Injury: If you experience adverse effects as the result of participating in this study, you may contact the principal researcher. If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the primary Investigator, please contact the Institutional Research Ethics Administrator.

Storage of all electronic and hard copies including tape recordings All information that identifies will be kept confidential and stored and locked in a secure place that only the study personnel will have access to. The principal investigator will protect your records and keep all the information in your study file confidential to the greatest extent possible. Data will be kept for the duration of the study and retained for five years after the completion of the study.

Persons to contact in the Event of Any Problems or Queries:(Supervisor and details) Please contact the principal researcher Nombuso Zondi on 061 481 0903, my supervisor Dr. S. P. Moyane on 031 373 6879 or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: Research and Postgraduate Support Dr L Linganiso on 031 373 2577 or researchdirector@dut.ac.za.

Appendix B:Translated letter of information

INCWADI YOLWAZI

Isihloko Socwaningo Locwaningo: Amaqhinga okuqeda ububha bolwazi emphakathini okhethiwe wabalimi abancane KwaZulu-Natal

Umphenyi Oyinhloko/umcwaningi: Igama: Nombuso Phamela Zondi

Qualification: Bachelor of Technology in Library and Information Studies

Umphenyi/abaqondisi/abaqondisi: Dr SP Moyane, PhD LIS.
Mr. Ntando Nkomo, Masters LIS.

Isethulo esifushane kanye nenjongo yocwaningo: Uhlaka lwami lusihloko sithi "Amaqhinga okuqeda ububha bolwazi emphakathini okhethiwe wabalimi abancane KwaZulu-Natal". Lolu cwaningo luhlose ukuhlola amaqhinga okuqeda ububha bolwazi emphakathini okhethiwe wabalimi abancane KwaZulu-Natal. Le ncwadi isebenza njengesimemo sokubamba kwakho iqhaza kulolu cwaningo. Ngezansi uzothola ulwazi mayelana nocwaningo kanye nokuthi ukuzibandakanya kwakho kuzobandakanya ini, uma unquma ukubamba iqhaza.

Isibingelelo: Sawubona, ngithemba ukuthi uphilile

Zethule kumhlanganyeli: Igama lami nginguNombuso Phamela Zondi ongumfundi eDurban University of Technology obhalisele iMasters of Management Sciences kuLibrary and Information Science.

Isimemo kwabangase babambe iqhaza: Ngithanda ukukumema ukuthi ubambe iqhaza ocwaningweni lwami njengengxenye yephrojekthi ye-Masters Degree. Ngaphambi kokuthatha isinqumo ngingathanda ukuthi uqonde ukuthi kungani ucwaningo lwenziwa nokuthi luzobandakanyani kuwena. Sicela uzinike isikhathi sokufunda imininingwane elandelayo ngokucacile futhi ubuze uma kukhona okungacacile noma ungathanda ulwazi olwengeziwe.

Luyini Ucwaningo: Igama elithi methodology yocwaningo livame ukusetshenziswa ngokushintshana nendlela yocwaningo (Sinikezwe 2008). Indlela yocwaningo iphathelene nemithetho nezimiso ezijwayelekile zokuhlela umsebenzi wocwaningo nokukhetha indlela yocwaningo ephumelelayo (Novikov and Novikov 2013). Kubhekiselwa kumasu asetshenziswa abacwaningi ukuze baqinisekise ukuthi umsebenzi wabo ungabuyekezwa, uphindaphindwe, futhi ushintshwe. Kuyindlela yokuxazulula inkinga yocwaningo ngendlela ehlelekile. Kungacatshangwa njengesayensi ephenya ukuthi ucwaningo lwenziwa kanjani. Lapho, sibheka izinyathelo ezehlukene umcwaningi azithathayo lapho efunda inkinga yocwaningo, kanye nokucabanga kwazo (uPatel noPatel 2019).

Uhlaka Lwezinqubo: Lolu cwaningo luhlose ukuhlola amasu okuqeda ububha bolwazi emiphakathini yasemaphandleni yaKwaZulu-Natal. Lolu cwaningo olwenzelwe abalimi abancane emiphakathini

yasemakhaya kuphela. Ukuvuma ukubamba iqhaza kulolu cwaningo kuhlanganisa ukubamba iqhaza kwinhlolokhono yobuso nobuso ekubuza imibuzo eyisisekelo ngawe. Le nhlolokhono izohlala cishe imizuzu eyi-15 kuya kwengama-30. Izingxoxiswano zizokwenziwa umcwaningi oyinhloko, zizoqoshwa ngokulalelwayo futhi kamuva zilotshwe ngenjongo yokuhlaziya idatha. Ngeke kube khona ulwazi olubuyisiwe noma olushicilelwe olunamandla okukukhomba. Azikho izimpendulo ezilungile noma ezingalungile kule mibuzo ngakho-ke sicela uphendule ngokwethembeka.

Ubungozi noma Ukungaphatheki kahle Kobambe iqhaza: Azikho izingcuphe okulindelekile noma ukungaphatheki kahle okuhlobene nalolu cwaningo.

Chazela umhlanganyeli izizathu zokuthi angahoxa Ocwaningweni: Unelungelo lokuyeka ukubuka ikhasethi noma ngasiphi isikhathi, noma ukwenqaba ukuphendula noma imiphi imibuzo yami ngaphandle kokucwasa okuvela kimi noma kwabanye abahlobene nalolu cwaningo. Ukungathobeli imigomo nemibandela yezinhloso zocwaningo kuzoholela ekuhoxisweni kokuhlanganyela. Ngesikhathi sokubamba iqhaza uma kuphakama inkinga ekwenza uzizwe ungakhululekile, ungakwazi noma nini ukumisa ukuhlanganyela kwakho ngaphandle kwemiphumela eyengeziwe. Ukhululekile futhi ukuthi ungahoxa ocwaningweni nganoma yisiphi isikhathi, ngaphandle kokudinga ukunikeza incazelo futhi ngaphandle kwemiphumela engemihle kuwe. Uma unokuthile okukukhathazayo noma unganelisekile nganoma iyiphi ingxenye yalolu cwaningo, ungabika lokhu kukhathazeka ngokungaziwa ku-Research and Postgraduate Support uDkt L Linganiso ku-031 373 2577 noma researchdirector@dut.ac.za.

Izinzuzo: Ngeke kube nenzuzo eqondile kuwe ngokubamba iqhaza kulolu cwaningo. Inzuzo elindelekile yokubamba kwakho iqhaza kulolu cwaningo yithuba lokuxoxa ngemizwa, imibono, nokukhathazeka okuhlobene nolwazi lobubha kanye nokuba negalelo ekuqondeni amasu angasetshenziswa ukuze kuncishiswe ubumpofu bolwazi.

Umholo: Lolu cwaningo lungokuzithandela ngokuphelele; ngeke kube khona imbuyiselo noma inkokhelo yokubamba iqhaza ocwaningweni.

Izindleko Zocwaningo: Akukho okushiwo yizindleko kubahlanganyeli.

Ukugcinwa kuyimfihlo: Idatha eyimfihlo iyatholakala futhi irekhodwe ngendlela yokuthi ulwazi alukhonjwanga ngokushesha nomhlanganyeli wocwaningo olunikezile, kodwa isixhumanisi esinjalo singenziwa ngumcwaningi uma kudingekile noma kudingekile. Idatha eyimfihlo ngokuvamile "ifakwe ikhodi"- okungukuthi, umhlanganyeli wocwaningo unikezwe isihlonzi esiyingqayizivele noma ikhodi ezosetshenziselwa ukukhomba idatha. Ikhodi eyingqayizivele ikhomba idatha futhi ubunikazi bomhlanganyeli bugcinwa buhlukanisiwe nekhodi nedatha. Idatha enekhodi ayaziwa.

Imiphumela: Umbiko wokugcina uzogcinwa ngaphakathi kwesikhungo. Kodwa-ke, uma okutholwe ekuhloleni kuzophinde kushicilelwe, kuzonqunywa ukuthi ukugunyazwa kwezimiso zokuziphatha kuyadingeka noma cha ngaphambi kokuqhubeka nomsebenzi.

Ukulimala Okuhlobene Nocwaningo: Uma uhlangabezana nemiphumela engemihle njengomphumela wokubamba iqhaza kulolu cwaningo, ungathintana nomcwaningi oyinhloko. Uma unemibuzo mayelana namalungelo akho njengomhlanganyeli wocwaningo, noma uma kuphakama izinkinga onomuzwa wokuthi ungakwazi ukuxoxa ngazo noMseshi oyinhloko, sicela uthinte Umlawuli Wezimiso Zocwaningo Lwesikhungo.

Ukugcinwa kwawo wonke amakhophi e-electronic kanye nama-hard copies okuhlanganisa namakhasethi aqoshiwe: Lonke ulwazi oluhlonzayo luzogcinwa luyimfihlo futhi lugcinwe futhi lukhiywe endaweni evikelekile okuzokwazi ukufinyelela kuyo kuphela abasebenzi bocwaningo. Umphenyi oyinhloko uzovikela amarekhodi akho futhi agcine yonke imininingwane efayilini lakho locwaningo

iyimfihlo ngendlela ongakwazi ngayo. Idatha izogcinwa isikhathi socwaningo futhi igcinwe iminyaka emihlanu ngemva kokuphothulwa kocwaningo.

Abantu ongathintwa Esigamekweni sanoma Iziphi Izinkinga noma Imibuzo: Sicela athinte umcwaningi onguthishanhloko uNombuso Zondi ku-061 481 0903, umphathi wami uDkt SP Moyane ku-031 373 6879 noma i-Institutional Research Ethics Administrator ku-031 373 2375. Izikhalo zingabikwa kuMqondisi wezoCwaningo kanye ne-Postgraduate Support kuDkt. 373 2577 noma researchdirector@dut.ac.za.

Appendix C: Consent Form

CONSENT

Full Title of the Study: Strategies for alleviating information poverty in a selected small-scale farming community in Kwazulu-Natal

Names of Researcher/s: Nombuso Phamela Zondi

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Nombuso Phamela Zondi, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____ ,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____   _____   _____   _____

Full Name of Participant   **Date**   **Time**   **Signature   /   Right Thumbprint**

I, _____ (name of researcher) herewith confirm that the above participant has been fully

informed about the nature, conduct and risks of the above study.

_____   _____   _____

Full Name of Researcher   **Date**   **Signature**

Full Name of Witness (If applicable)   Date   Signature

Full Name of Legal Guardian (If applicable) Date   Signature

Appendix D: Translated consent form

IMVUME

Isihloko Esigcwele Socwaningo: Amaqhinga okuqeda ububha bolwazi emphakathini okhethiwe wabalimi abancane KwaZulu-Natal

Amagama omcwaningi: Nombuso Phamela Zondi

Isitatimende Sesivumelwano Sokuba Iqhaza Ocwaningweni Locwaningo:

- Ngiyaqinisekisa ukuthi ngaziswe ngumcwaningi uNombuso Phamela Zondi, mayelana nesimo, ukuziphatha, izinzuzo kanye nobungozi balolu cwaningo - Ukucaciswa Kwezimiso Zokucwaninga

   Inombolo: _____ ,
- Ngiphinde ngathola, ngifunde futhi ngaqonda imininingwane ebhalwe ngenhla (Incwadi Yombambiqhaza ka Ulwazi) mayelana nocwaningo
- Ngiyazi ukuthi imiphumela yocwaningo, okuhlanganisa imininingwane yomuntu siqu mayelana nobulili bami, ubudala, usuku lokuzalwa, amagama okuqala kanye nokuxilongwa kuzocutshungulwa ngokungaziwa kwenziwe umbiko wocwaningo.
- Ngokubheka izidingo zocwaningo, ngiyavuma ukuthi idatha eqoqwe phakathi nalolu cwaningo ingacutshungulwa ohlelweni lwekhompuyutha ngumcwaningi.
- Ngingakwazi, kunoma yisiphi isigaba, ngaphandle kokubandlulula, ngihoxise imvume yami nokubamba iqhaza ocwaningweni.
- Ngibe nethuba elanele lokubuza imibuzo futhi (ngokuzithandela kwami) ngazitshela ukuthi ngikulungele ukuhlanganyela esifundweni.
- Ngiyaqonda ukuthi okutholakele okusha okubalulekile okuthuthukiswe phakathi nalolu cwaningo okungenzeka okuhlobene nokubamba kwami iqhaza kuzokwenziwa kutholakale kimi.

_____   _____   _____   _____

Igama Eligcwele Lombambi qhaza Usuku   Isikhathi   Isiginesha   / Kulungile

Izigxivizo zesithupha

Mina, _____ (igama lomcwaningi) qinisekisa ngalokhu ukuthi umhlanganyeli ongenhla ubegcwele ngokugcwele ukwaziswa ngohlobo, ukuziphatha kanye nobungozi bocwaningo olungenhla.

_____   _____   _____

Igama Eligcwele Lomcwaningi   Usuku   Isiginesha

_____   _____   _____

Igama Eligcwele LoFakazi (Uma likhona) Usuku   Isiginesha

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Igama Eligcwele Lomnakekeli Wezomthetho Usuku   **Isiginesha**

Appendix E: Interview schedule

SEMI STRUCTURED INTERVIEW SCHEDULE FOR SMALL-SCALE FARMERS

RESEARCH TOPIC: Strategies for alleviating information poverty in a selected small-scale farming community in Kwazulu-Natal

The following questions will be asked during the interview. A voice recorder will be used to record the interview.

DEFINITIONS OF IMPORTANT TERMINOLOGIES

For the purpose of this study, the following definitions will be adopted.

Information poverty refers to a situation in which individuals and communities, within a given context, lack the necessary skills, abilities, or material means to obtain efficient access to information, interpret it, and apply it appropriately (Britz 2004).

Small-scale farmers refer to producers who farm in smallholdings (Foresight for food 2021).

Information need is defined as a state or process started when one perceives that there is a gap between the information and knowledge available to solve a problem and the actual solution of the problem (Savolainen 2017).

DEMOGRAPHIC DETAILS

1. Please indicate your age
   - Under 18   [   ]
   - 18-24   [   ]
   - 25-34   [   ]
   - 35-44   [   ]
   - 45-54   [   ]
   - 55-64   [   ]
   - 65- and older   [   ]

2. Please indicate your gender
   - Male   [   ]
   - Female   [   ]

- Gender non- binary   [   ]

3. Please indicate your marital status
   - Single   [   ]
   - Married   [   ]
   - Divorced   [   ]
   - Widowed   [   ]
   - Separated   [   ]

4. Which of the following best describes your highest level of education?
   - No schooling completed   [   ]
   - Some primary level   [   ]
   - Completed primary level (Grade 7)   [   ]
   - Some high school level   [   ]
   - Completed high school level (Grade 12)   [   ]
   - Completed trade/technical/vocational training   [   ]
   - Some post high school/tertiary level (certificate/diploma/degree)   [   ]
   - Completed post high school/tertiary level   [   ]
   - Some post graduate level (Postgraduate certificate/Postgraduate
     diploma/Advanced diploma/BTech/Honors/Masters/PhD   [   ]
   - Completed post graduate level   [   ]

5. Which of the following best describes you in terms of employment status?
   - Full-time employed   [   ]
   - Part-time employed   [   ]
   - Not employed   [   ]
   - Other, please specify…………

6. Please indicate your household income per month.

   - None of the household members are working   [   ]
   - Below R1000   [   ]
   - R1000 – R5000   [   ]
   - R5000 – R10,000   [   ]
   - R10,000 – R15,000   [   ]
   - R15,000 – R20,000   [   ]
   - R20,000 or over   [   ]

7. How many people are dependent on this income?
   _____

8. What led you to become a small-scale farmer?

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9. Is there anything else you do besides being a farmer? Please elaborate your answer

……..
……….

10. Have you ever used a computer at home/ work/ school?

1. Yes	
2. No	

11. Do you have any type of personal computer, including laptops and smartphones, at home?

1. Yes	
2. No	

12. Do you have Internet access at home?

1. Yes	
2. No	

13. Are you computer literate?

1. Yes	
2. No	

14. Are library services provided in your community?

1. Yes	
2. No	

If your answer to question 14 is no, from where do you access library information services?
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- Please tell me your information needs as a rural small-scale farmer ?

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- Please tell me about any other information needs you have as a rural dweller, aside from agricultural information

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- How do you access information?

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- What barriers do you face in attempt to access information?

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- What sources of information do you use for your information needs?

……
……

- Are these sources adequate for addressing your information needs? y/n

……
……

- Would you say that you are experiencing information poverty based on the information poverty definition? Give a reason for your answer.

……
……

- Please indicate factors that you believe contribute to information poverty in your community.

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- What are the challenges that you experience in locating information?

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……

- What do you think can be done to address the issues of information poverty that you face as a rural small-scale farmer?

……
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- Please tell me the sources of information that are important for addressing your information needs.

……
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- What would be your ideal way of getting information?

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- Do you believe you lack access to information that could be useful to you?

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- Do you trust the information provided by outsiders?

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- Do you disclose your information needs? Or do you make your information needs known?

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- Do you have any other comments relating to information poverty? Please elaborate.

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Thank you for taking time to participate in this interview.

Appendix F: Translated interview schedule

SEMI STRUCTURED INTERVIEW SCHEDULE FOR SMALL-SCALE FARMERS

ISIHLOKO SOCWANINGO: Amaqhinga okuqeda ububha bolwazi emphakathini okhethiwe wabalimi abancane KwaZulu-Natal.

Imibuzo elandelayo izobuzwa ngesikhathi socwaningo. Irekhoda yezwi izosetshenziswa ukurekhoda ucwaningo.

IZINCAZELO ZAMAGAMA ABALULEKILE

Ngenhloso yalolu cwaningo, kuzokwamukelwa lezi zincazelo ezilandelayo.

Information poverty

Ubumpofu bolwazi busho isimo lapho abantu kanye nemiphakathi, ngaphakathi kwengqikithi ethile, bengenawo amakhono adingekayo, amakhono, noma izindlela ezibonakalayo ukuze bathole ukufinyelela okuphumelelayo olwazini, ukulihumusha, nokulisebenzisa ngendlela efanele (Britz 2004).

Small scale farmers

Igama elithi abalimi abasafufusa libhekise kubakhiqizi abalima ezindaweni ezincane (Foresight for food 2021).

Information need

Isidingo solwazi sichazwa ngokuthi isimo noma inqubo eqalwe lapho umuntu ebona ukuthi kunegebe phakathi kolwazi nolwazi olukhona lokuxazulula inkinga kanye nesixazululo sangempela senkinga (Savolainen 2017).

IMININININGWANE YEDEMOGRAPHIC

15. Sicela ubonise iminyaka yakho
    - Ngaphansi kwe-18 [   ]
    - 18-24   [   ]
    - 25-34   [   ]
    - 35-44   [   ]
    - 45-54   [   ]
    - 55-64   [   ]
    - 65- nangaphezulu   [   ]

16. Sicela ubonise ubulili bakho
    - Owesilisa [   ]
    - Owesifazane [   ]
    - Ubulili obungeyona kanambambili [   ]

17. Siyini isimo sakho somshado?
    - Awushadile [   ]
    - Ushadile [   ]
    - Uhlukanisile [   ]
    - Umfelokazi [   ]
    - Ihlukanisiwe [   ]

18. Yikuphi kokulandelayo okuchaza kangcono izinga lakho eliphezulu lemfundo?
    - Asikho isikole esiqediwe [   ]
    - Izinga elithile eliyinhloko [   ]
    - Ibanga eliphansi eliqediwe (iBanga lesi-7) [   ]
    - Izinga elithile lesikole samabanga aphezulu [   ]
    - Ibanga lesikole samabanga aphezulu (iBanga le-12) [   ]
    - Uqedile ukuqeqeshwa kwezohwebo/ezobuchwepheshe/emisebenzini [   ]
    - Abanye abaphumelele esikoleni esiphakeme/izinga
      eliphezulu (isitifiketi/idiploma/degree) [   ]
    - Iqede izinga lesikole samabanga aphezulu/imfundo ephakeme [   ]
    - Izinga elithile lokuthweswa iziqu (Isitifiketi se-Postgraduate/
      idiploma ye-Postgraduate/Idiploma ethuthukisiwe/BTech/Honours
      /Masters/PhD [   ]
    - Ileveli ye-postgraduate eqediwe [   ]

19. Yikuphi kokulandelayo okukuchaza kahle ngokwesimo sokuqashwa?
    - Usebenza ngokugcwele [   ]
    - Umsebenzi wesikhashana [   ]
    - Awuqashiwe [   ]
    - Okunye, sicela ucacise……………………..

20. Ngicela usho imali engena ekhaya ngenyanga

    - Akekho kumalungu omndeni osebenzayo [   ]
    - Ngaphansi kuka-R1000 [   ]
    - R1000 – R5000 [   ]
    - R5000 – R10,000 [   ]
    - R10,000 – R15,000 [   ]
    - R15,000 – R20,000 [   ]
    - R20,000 nangaphezulu [   ]

21. Bangaki abantu abathembele kule mali?

22. Yini eyakuholela ukuba yi small scale farmer?

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23. kukhona engikwenzayo ngaphandle kokuba umlimi?

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24. Ingabe nawe uke wasebenzisa ikhompiyutha ekhaya, emsebenzini, noma esikoleni?

3. Yebo	
4. Cha	

25. Ingabe unanoma yiluphi uhlobo lwekhompuyutha yomuntu siqu, okuhlanganisa
amakhompyutha aphathekayo nama-smartphones, ekhaya lakho?

3. Yebo	
4. Cha	

26. Ingabe unayo i-inthanethi ekhaya?

3. Yebo	
4. Cha	

27. Ingabe uyakwazi ukusebenzisa ikhompyutha?

5. Yebo	
6. Cha	

28. Ingabe uyakwazi ukufinyelela izinsiza zelabhulali?

3. Yebo	
4. Cha	

Uma impendulo yakho kumbuzo 13 ingucha, ulubheka kanjani ulwazi?

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- Ngicela ungitshele ngezidingo zakho zolwazi njengomsebenzi wasemapulazini amancane
  asemaphandleni?

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- Ngicela ungitshele nganoma yiziphi ezinye izidingo zolwazi onalo njengomuntu ohlala
  emakhaya, ngaphandle kweminininingwane yezolimo.

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- Uluthola kanjani ulwazi?

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- Yiziphi izithiyo zakho zokufinyelela lolu lwazi?

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- Imiphi imithombo yolwazi oyisebenzisayo lapho usesha ulwazi?

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- Ingabe le mithombo iwusizo ekubhekaneni nezidingo zolwazi lwakho?

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- Ungasho ukuthi ubhekene nobumpofu bolwazi ngokusekelwe kule ncazelo engenhla? Nikeza isizathu sempendulo yakho.

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- Ungachaza ezinye zezinto okholelwa ukuthi zinesandla ebuphofini bolwazi emphakathini wakini?

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- Yiziphi izinselele ohlangabezana nazo ekutholeni ulwazi?

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- Ucabanga ukuthi yini engenziwa ukubhekana nezinkinga zokuswela ulwazi obhekene nazo njengomlimi omncane wasemakhaya?

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- Ngicela ungitshele ngemithombo yolwazi ebaluleke kakhulu kuwe ekutholeni ulwazi ngezidingo zakho.

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- Kungaba iyiphi indlela yakho ekahle yokuthola ulwazi?

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- Ingabe ukholelwa ukuthi awunakho ukufinyelela olwazini olungaba wusizo kuwe?

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- Uyaluthemba ulwazi olunikezwa abantu bangaphandle?

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- Ingabe uyazidalula izidingo zakho zolwazi? Noma uyazazisa izidingo zakho zolwazi?

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- Ingabe onakho okunye ukuphawula okuhlobene nobumpofu bolwazi? Sicela ucacise.

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Siyabonga ngokuthatha isikhathi sokubamba iqhaza kulolucwaningo.

Appendix G: Ethics letter

Faculty Research Office
Durban University of Technology
27 May 2022

Student: NP Zondi
Student Number: 21431722
Degree: Master of Management Sciences in Library and Information Science
Email: 21431722@dut4life.ac.za
Supervisor: Dr. S. P. Moyane
Supervisor email: smangelem1@dut.ac.za

Dear NP Zondi

I am pleased to inform you that the Faculty Research Ethics Committee (FREC) following feedback from two reviewers, has granted preliminary permission for you to conduct your research "Strategies for alleviating rural information poverty: the case of a selected rural small-scale farming community in Swayimane, KwaZulu-Natal".

When ethics approval is granted:
You are required to present the letter at your research site(s) for permission to gather data. Please also note that your research instruments must be accompanied by the letter of information and the letter of consent for each participant, as per your research proposal.

This ethics clearance is valid from the date of provisional approval on this letter for one year. A student must apply for recertification 3 months before the date of this expiry.

Recertification is required every year until after corrections are made, after examination, and the thesis is submitted to the Faculty Registrar.

A summary of your key research findings must be submitted to the FRC on completion of your studies.

Kindest regards.

Yours sincerely

_____
Dr Olga Sizakele Ndlovu
Faculty Research Ethics Committee Chairperson
Faculty of Accounting and Informatics
Durban University of Technology
Ritson Campus
P O Box 1334, Durban, 4000, South Africa

Tel: +27 31 373 6767
Email: olgaN@dut.ac.za

Appendix H: Ethics certificates