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**INYUVESI
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**Indigenous knowledge and participatory rural development in Mabheleni, Umzumbe
Municipality, KwaZulu-Natal, South Africa**

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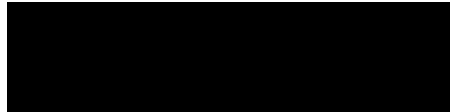
Declaration

1. I declare that this dissertation is my own work and does not involve any form of plagiarism.
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Abstract

This study aimed to explore the contribution of indigenous knowledge to participatory rural development in Mabheleni, a rural community in KwaZulu-Natal, South Africa. Drawing from the lenses of deliberative democracy, the study explored the role of indigenous knowledge in participatory rural development in Mabheleni; identified the challenges impeding the use of indigenous knowledge to stimulate rural development in Mabheleni; identified the opportunities for effective use of indigenous knowledge to promote rural development in Mabheleni and, explored the strategies used by people living in Mabheleni to preserve their indigenous knowledge. Semi-structured interviews and a focus group discussion were conducted with 20 participants in Mabheleni. All participants were selected through a purposive sampling technique and data was analyzed through thematic analysis. The results indicate that although indigenous knowledge is deemed crucial for the development in Mabheleni, it is not effectively used in rural development initiatives. While local people in Mabheleni use their indigenous knowledge to sustain their livelihoods at a household level, their indigenous knowledge is overlooked in rural development initiatives. This problem is attributed to two main reasons: first, Western scientific knowledge is given priority in informing rural development in Mabheleni. Second, government officials often use a top-down approach in decision making about rural development initiatives in Mabheleni, a practice which excludes indigenous people in their development. Thus, the role of indigenous knowledge in rural development in Mabheleni remains unclear and minimal.

Dedication

This dissertation is dedicated to Mabheleni, particularly to the members of the community who are socially and economically disadvantaged.

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I would like to acknowledge everyone who has contributed to the completion and the success of this research project. I may not be able to mention every name in the scope of this work, but each contributor is highly and equally appreciated.

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Table of Contents

Declaration	i
Abstract	ii
Dedication.....	iii
Acknowledgements	iv
List of tables.....	ix
List of figures	x
List of appendixes	xi
Chapter 1: Introduction	1
1.1. Background	1
1.2. Problem statement.....	5
1.3. Rationale and significance of the study.....	5
1.4. Research aim, objectives and questions.....	7
1.4.1. Aim.....	7
1.4.2. Objectives	7
1.4.3. Research questions.....	7
1.5. Structure of dissertation.....	7
1.5.1. Chapter 1: Introduction	8
1.5.2. Chapter 2: Literature review and theoretical framework	8
1.5.3. Chapter 3: Study Area and Methodology	8
1.5.4. Chapter 4: Data Presentation, Analysis and Interpretation	8
1.5.5. Chapter 5: Conclusion.....	9
Chapter 2: Literature Review and Theoretical Framework	10
2.1. Introduction	10
2.2. Conceptualization of indigenous knowledge	10
2.3. The role of indigenous knowledge in development	13
2.4. Conceptualization of indigenous knowledge systems.....	14
2.5. Indigenous versus scientific knowledge	15
2.6. Sharing and preserving indigenous knowledge.....	18
2.7. Challenges in the use of indigenous knowledge	18
2.8. Community Participation and rural development.....	19
2.9. Rural development issues.....	21

2.10. Agriculture and rural development	23
2.11. Theoretical framework	23
2.12. Conclusion	26
Chapter 3: Study Area and Methodology	27
3.1. Introduction	27
3.2. Study area	27
3.3. Research approach	29
3.4. Data collection methods.....	31
3.4.1. Semi-structured interviews	31
3.4.2. Focus group discussion	32
3.5. Sampling	32
3.5.1. List of participants	34
3.6. Data collection process.....	35
3.7. Data analysis	36
3.8. Ethical considerations.....	37
3.8.1. Non-maleficence:.....	37
3.8.2. Beneficence:	38
3.8.3. Informed consent and voluntary participation:	38
3.8.4. Anonymity and confidentiality:	38
3.8.5. Withdrawal:	38
3.8.6. Respect for participants' rights and dignity:.....	38
3.9. Trustworthiness	39
3.9.1. Credibility.....	39
3.9.2. Transferability.....	39
3.9.3. Confirmability	39
3.9.4. Dependability.....	40
3.10. Limitations	40
3.11. Conclusion	40
Chapter 4: Data Presentation, Analysis and Interpretation	41
4.1. Introduction	41
4.2. Themes and subthemes.....	41
4.3. Participants' perceptions of rural development.....	43

4.3.1. Perceptions on the current state of development in Mabheleni.....	43
4.3.2. Development issues in Mabheleni	44
4.3.3. Development initiatives in Mabheleni	48
4.3.4. Agricultural activities in Mabheleni.....	49
4.4. Perceptions and understanding of indigenous knowledge	50
4.4.1. Understanding of indigenous knowledge in the context of Mabheleni.....	50
4.4.2. Perceptions on the role of indigenous knowledge towards the development of Mabheleni.....	51
4.5. Challenges in the use of indigenous knowledge	53
4.5.1. Lack of recognition of indigenous knowledge in development practice.....	53
4.5.2. Top-down approach by government officials.....	54
4.6. Indigenous knowledge and participation in rural development	55
4.6.1. The use of indigenous knowledge by local people	55
4.6.2. Participation of local people in development activities	57
4.7. Management of indigenous knowledge for rural development	59
4.7.1. Research and documentation of indigenous knowledge	59
4.7.2. Sharing and preservation methods	60
4.8. Conclusion	62
Chapter 5: Conclusion.....	63
5.1. Introduction.....	63
5.2. Evaluation of objectives.....	63
5.2.1. Indigenous knowledge and participatory rural development.....	63
5.2.2. Challenges impeding the use of indigenous knowledge	64
5.2.3. The use of indigenous knowledge to promote rural development.....	64
5.2.4. Preservation and sharing of indigenous knowledge	64
5.3. Conclusion	65
5.4. Recommendations.....	67
5.4.1. Bottom-up rural development	67
5.4.2. Deliberative democracy in rural development.....	67
5.4.3. Research and documentation of indigenous knowledge	67
5.4.4. Preservation of indigenous knowledge	68
5.4.5. Recommendations for future research	68

References	69
Appendix A: English Interview Guide	83
Appendix B: Zulu Interview Guide	84
Appendix C: English Focus Group Guide.....	85
Appendix D: Zulu Focus Group Guide.....	86
Appendix E: English Informed Consent Form	87
Appendix F: Zulu Informed Consent Form.....	89
Appendix G: Ethical Clearance Letter	91
Appendix H: Turnitin Report.....	92

List of tables

Table 1: Indigenous knowledge versus scientific knowledge.....	14
Table 2: List of participants.....	32
Table 3: Themes and sub-themes.....	41

List of figures

Figure 1: Umzumbe Locality Map.....	27
Figure 2: Mabheleni Map.....	27

List of appendixes

Appendix A: English Interview Guide

Appendix B: Zulu Interview Guide

Appendix C: English Focus Group Guide

Appendix D: Zulu Focus Group Guide

Appendix E: English Informed Consent Form

Appendix F: Zulu Informed Consent Form

Appendix G: Ethical Clearance Letter

Appendix H: Turnitin Report

Chapter 1: Introduction

1.1. Background

The aim of this study is to explore the contribution of indigenous knowledge to participatory rural development in Mabheleni. This study deems indigenous knowledge a critical resource that can be used to address rural development issues like poverty. Based on the corpus of literature, poverty, unemployment, and inequality remain the major development issues across the world and South Africa is no exception (Francis and Webster, 2019; Fransman and Yu, 2019; Ronaghi and Scorsone, 2023). While Western scientific knowledge has been at the forefront in addressing these issues for decades, indigenous knowledge received recognition as a critical resource in development worldwide in the recent decades (Bruchac, 2014; Cuaton and Su, 2020; Parsons et al., 2017). In this regard, a growing number of development experts are realizing that scientific knowledge alone is not adequate to address development crises. Hence, indigenous knowledge has gained attention from researchers, development experts, and policy makers as a major contributor to solutions for development problems (Ajayi and Mafongoya, 2017; Briggs, 2013; Cuaton and Su, 2020; Vilakazi et al., 2019). For instance, in agriculture, the knowledge of local and indigenous people is increasingly recognized as an important source of climate knowledge and adaptation strategies (Ajayi and Mafongoya, 2017). Although the role of indigenous knowledge in development remains at the periphery, this knowledge, according to Familusi and Adekanmbi (2019), has been in existence since early humans till the present day. They further discovered that indigenous knowledge is the most reliable and secured source of employment. According to Familusi and Adekanmbi (2019), approximately 70 percent of the total employment population in Ekiti state, Osun state and Ondo state were gainfully employed in indigenous knowledge jobs, such as indigenous farming. This evidence indicates the role of indigenous knowledge in the development of poor rural communities in many parts of the world.

One of the frequent questions is why indigenous knowledge is important for participatory development? Participatory development involves the application of different strategies or approaches to enable and empower citizens to participate in their development (Fung, 2015). It is the kind of development characterized by power sharing between development experts and citizens in the development process. The premise of participatory development is that attaining positive development outcomes depends on the integrated process that involves

different stakeholders equally sharing control over development initiatives, resources, and decisions (Rasoolimanesh et al., 2017). Thus, the beneficiaries of development must become active participants in the development process. The participatory development process is characterized by active participation in decision making about development planning, implementation, monitoring, evaluation and in the sharing of development benefits (Gupta et al., 2015). While participatory development has been praised in the development discourse, it has been criticized for several issues, including being time consuming and costly to implement (Bello et al., 2017).

Some research evidence (see for example, Thompson et al., 2020) suggest that recognition of indigenous knowledge enables citizens to actively participate in and drive their development. Community participation is considered a key aspect that promotes sustainable development (Haldane et al., 2019). According to Kaul et al. (2022), sustainable development is the type of development which meets the needs of the current generation without compromising the ability of the future generations to meet their own needs. There is increasing evidence which suggests that meaningful community development can be achieved only if local people play a central role in their own development. This has been referred to as “people-centred” development by some scholars (Scolobig et al., 2015). Most rural communities remain underdeveloped socially and economically in South Africa (Tshishonga, 2020). Hence, policy makers continue their search for appropriate approaches to promote rural development. This has necessitated the need to promote participatory rural development, which is termed community-driven development by others. This is an approach to rural development which empowers local people to actively participate in planning and implementation of local development initiatives. Thus, this approach allows citizens to collectively manage their local resources to drive development. It recognizes poor people as crucial assets within their communities who can develop themselves (Wong and Guggenheim, 2018).

This approach follows a bottom-up approach that promotes development at a grassroots level. The bottom-up approach to development entails the voluntary and active participation of communities at different stages of the development project and programme that will affect their lives. This means that people within their communities must lead their development initiatives; they must participate from the planning phase up to the last phase, which is generally evaluation. This approach is very important to develop community’s self-reliance

and a sense of ownership for their development (Isidiho and Sabran, 2016). This study is founded on these participatory approaches which recognizes the role of indigenous knowledge to attain substantive rural development.

Numerous studies have been conducted on indigenous knowledge and community development or development in general. It has been discovered that the growing recognition of indigenous knowledge in development processes improves the development outcomes and thus leads to sustainability of development initiatives (Kaya and Seleti, 2013). Furthermore, indigenous knowledge is also recognized for its ability to inform effective, equitable and meaningful strategies to address socio-ecological crises (Parsons et al., 2017). Just like in many rural communities around the globe, there is some level of recognition of indigenous knowledge in Mabheleni under Umzumbe municipality. For instance, the role of indigenous knowledge is recognized in sectors such as arts and culture and housing. Through recognition of indigenous knowledge in development, the development process thereby become participatory in nature (Godfrey and Siraje, 2019). In this regard, local people contribute to development initiatives that affect their well-being by sharing local knowledge that shapes the development initiatives (Godfrey and Siraje, 2019). As a result, research has begun to appreciate the contribution of indigenous knowledge to environmental enhancement, resource and wildlife management, meteorology, biology and medicine, basic human behaviour, and educational practices (Khumalo and Bakoyi, 2017). Research studies conducted by Dutta et al. (2018) and Zidny and Eilks (2018) suggest that, at community level, indigenous knowledge plays a significant role in addressing complex development problems including climate change challenges. Therefore, indigenous knowledge is a proven resource which could contribute to the increased efficiency, effectiveness, and sustainability of the development processes (Dutta et al., 2018). However, the extent to which indigenous knowledge is used and how it complements Western scientific knowledge in rural development remains a controversial topic. In rural settings such as Mabheleni that remain underdeveloped despite the application of Western scientific knowledge, there was a need for context specific enquiry that seeks to explore the contribution of indigenous knowledge in rural development.

Although there is a level of controversy on the understanding of indigenous knowledge, a common ground has been drawn. By definition, indigenous knowledge is the type of

knowledge that is possessed by indigenous people which is accumulated through experiences of the past or which is based on the local people's daily life (Matsika, 2012). It has also been argued that indigenous knowledge is unique to each tradition and is closely associated with a given territory (Brascoupe and Mann, 2001). Several alternative terms to indigenous knowledge are used; they include traditional knowledge (TK), local knowledge (LK), and traditional environmental knowledge (TEK), which generally refers to knowledge systems that are developed by the communities over time based on their experiences (Godfrey and Siraje, 2019). Indigenous knowledge serves as a critical resource to local communities who generally rely on this type of knowledge for their livelihoods (Ajayi and Mafongoya, 2017).

Furthermore, indigenous knowledge is understood as local or traditional knowledge which people in their local communities have developed over time based on their traditional ways of living. It is a type of knowledge that is unique to each community given that each community has its own culture, norms and values to which indigenous knowledge is based. Thus, indigenous knowledge is essential for the development of each community. It is also crucial to note that communities draw from their indigenous knowledge to inform decisions about development and drive development themselves. Indigenous knowledge has therefore emerged as a critical resource to address development challenges (Siambombe et al., 2018). However, its potential has been constrained as it is considered inferior to science and technology (Akena, 2012), which has negatively affected indigenous communities' development processes (Gadgil et al., 1993). It is also believed that the absence of scientific knowledge in rural areas led to the recognition and use of indigenous knowledge (Siambombe et al., 2018). Indigenous knowledge is particularly important to rural communities where Western scientific knowledge has not brought meaningful development yet. Similarly, most rural areas, including Mabheleni, are underdeveloped socially, economically, and politically. In the context of this study, the term "indigenous knowledge (IK)" is used to refer to local and traditional knowledge that is embedded to local communities such as Mabheleni. Accordingly, the term "indigenous people" is used in this study to refer to local people who possess indigenous knowledge living in Mabheleni under Umzumbe municipality. The following sections will present the problem statement; the rationale for the study; the research aim, objectives and questions; and the structure of this dissertation.

1.2. Problem statement

This study has a specific focus on a rural area of Umzumbe municipality (Mabheleni) because development and livelihood conditions of many people in this context are poor and insecure, and their livelihood strategies are unsustainable. Various studies have been conducted to understand the conditions of rural areas. Evidence suggests that rural areas are generally characterized by high levels of poverty, high levels of unemployment and food insecurity issues (Moroda et al., 2018; Usoro et al., 2021; Zhao and Yu, 2021). In various parts of Umzumbe municipality, where indigenous people reside, development issues such as poverty, unemployment and illiteracy are prevalent. For instance, a recently published study that was conducted by Zondi and Qwabe (2022) discovered that one of the key factors which undermine the quality of education in Umzumbe is poor service delivery. Clearly, key development issues such as poverty, unemployment, food insecurity and illiteracy are interrelated in the context of Umzumbe communities, Mabheleni included. Additionally, many people living in these rural areas of Umzumbe are socially and economically excluded. It is also evident that indigenous people in Mabheleni, a small community within Umzumbe, are often excluded in the development initiatives taking place in their localities. Consequently, they have no meaningful contribution towards the development which affects their well-being. This form of alienation of local citizens in their development also implies that there is little or no recognition of indigenous knowledge in the development of rural communities under Umzumbe Municipality, with Mabheleni being one of these impoverished communities. Failure to recognize the indigenous knowledge and the role which indigenous people can play in their development is a major problem which undermines the important principles of development such as participation, empowerment, inclusion, social learning, and sustainability. Therefore, this research provides a better understanding of why indigenous knowledge is underutilized for rural development and how the use of indigenous knowledge in rural development can be enhanced, particularly in the context of Mabheleni.

1.3. Rationale and significance of the study

There is a growing concern regarding the possible drastic solution for development issues such as poverty, unemployment, and inequality across the world. Just like many other indigenous rural communities around the world, Mabheleni is challenged by key

development issues which includes unemployment, poverty, and lack of access to basic services such as water, electricity, and sanitation. Such development issues can partially be addressed through the recognition and the use of indigenous knowledge which is however overlooked. While Western scientific knowledge played a significant role to stimulate the worlds' development as evident in the previous research (see for example, Hanif and Arshed, 2016; Maneejuk and Yamaka, 2021), it has been recognized that, to some degree, this widely accepted knowledge has not provided sustainable development solutions, particularly in developing countries. In local contexts such as Mabheleni where indigenous knowledge is a critical resource, this study sees the need to recognize and utilize indigenous knowledge in development initiatives. Therefore, this study explored the potential role of indigenous knowledge in development, with a specific focus on participatory rural development in Mabheleni.

It has been argued that indigenous knowledge has several advantages to bring in development. However, its potential has not been fully assessed in rural contexts of South Africa. Particularly in remote rural areas like Mabheleni, there is lack of conclusive evidence regarding the contribution of indigenous knowledge in development. As noted by Ezeanya (2015), the approach to development in Africa has been largely focused on Western principles while ignoring the local wisdom and values of the indigenous communities. Accordingly, development initiatives have side-lined the potential of indigenous knowledge in favor of the mainstream Western science and knowledge, which is also the case in Umzumbe rural communities, including Mabheleni. This study takes cognizance of indigenous knowledge. It explored the contribution of indigenous knowledge to promote participatory rural development. The study thus demonstrates the value of indigenous knowledge in sustainable development of rural communities such as Mabheleni. While the contribution of indigenous knowledge in different development initiatives were explored, this study particularly explored the extent to which indigenous knowledge is used in agricultural projects. This study is important because it contributes to the body of knowledge in the field of indigenous knowledge and rural development. Additionally, the results of this study will further inform policy makers in government, private sector and civil society, researchers, and development experts about the value of indigenous knowledge in rural development.

1.4. Research aim, objectives and questions

1.4.1. Aim

The aim of the study is to explore the contribution of indigenous knowledge to participatory development in Mabheleni.

1.4.2. Objectives

The objectives of this study are to:

- Explore the role of indigenous knowledge in participatory rural development in Mabheleni.
- Identify the challenges impeding the use of indigenous knowledge to stimulate rural development in Mabheleni.
- Identify opportunities for effective use of indigenous knowledge to promote rural development in Mabheleni.
- Explore the strategies used by people living in Mabheleni to preserve their indigenous knowledge.

1.4.3. Research questions

This study addresses the following questions:

- What is the role of indigenous knowledge in participatory rural development in Mabheleni?
- What are the key challenges impeding the use of indigenous knowledge to stimulate rural development in Mabheleni?
- How indigenous knowledge can be used effectively to promote rural development in Mabheleni?
- How people living in Mabheleni preserve and share their indigenous knowledge?

1.5. Structure of dissertation

This dissertation consists of five chapters which includes the introduction; literature review and theoretical framework; study area and methodology; data presentation, analysis and interpretation and the conclusion.

1.5.1. Chapter 1: Introduction

Chapter one presents the background of the study taking into consideration the major debates on indigenous knowledge and development in a global, regional, national, and local contexts. This chapter also introduces the key issues to be addressed in this study while also highlighting the research aim, objectives and questions. In addition, the problem statement and the rationale for the study are presented in this chapter.

1.5.2. Chapter 2: Literature review and theoretical framework

Chapter two present the literature underpinning this study. This chapter unpacks the major relevant issues that have been studied in the area of indigenous knowledge and development, including diverse aspects of rural development. This chapter further covers the major debates on various themes including the use of indigenous knowledge, associated challenges, and opportunities. The chapter also discusses the main theories upon which this research is constructed. This study is based on a deliberative democratic theory which is discussed in detail and how this theoretical perspective forms the basis of analyzing the results of this study.

1.5.3. Chapter 3: Study Area and Methodology

This chapter presents the research methodology and design. This is a qualitative study and semi-structured interviews coupled with a focus group discussion were used to collect data. The chapter discusses in detail the research methods, including sampling method, data collection methods, and the various measures that were taken to ensure trustworthiness of the study.

1.5.4. Chapter 4: Data Presentation, Analysis and Interpretation

Chapter five presents an empirical report from primary data that was gathered from in-depth interviews and a focus group discussion conducted with participants. The chapter presents results about various themes which emerged through thematic analysis of data. This chapter takes an analytical approach in showing how the research questions and objectives are addressed. The results are discussed in light of the existing literature and the discussion draws from the lenses of deliberative democracy.

1.5.5. Chapter 5: Conclusion

This last chapter presents the evaluation of objectives and the overall conclusion of the study. Conclusions reached in light of the objectives of the study are covered. This chapter also presents the recommendations of the study.

Chapter 2: Literature Review and Theoretical Framework

2.1. Introduction

Rural development remains a topic of interest to various stakeholders such as policy makers, development practitioners, academics, and activists. Evidently, there is an increasing body of knowledge in rural development and researchers continue to conduct further research in this field in both developed and developing countries. While vast knowledge exists in the field, some studies (see for example, Khumalo and Baloyi, 2017) have suggested the need for further rural context specific enquiry, particularly to draw the link between indigenous knowledge and rural development. Thus, this chapter takes a critical approach to analyze and evaluate the corpus of literature in the field of indigenous knowledge and rural development. In particular, this chapter attempts to examine the use of indigenous knowledge in rural development. The chapter provides an analysis of literature across several themes. The first part of this chapter focuses on the conceptualization of indigenous knowledge, particularly in terms of how it continues to compete with Western scientific knowledge in rural development. The second part of the literature focuses on the conceptualization of rural development. This part of the chapter is also dedicated to an analysis of participation and rural development. This section further provides a critical analysis of the rural development challenges, particularly in developing contexts like South Africa. Agriculture, as a strategy for rural development, is discussed at the final stages of this chapter. This study is underpinned by deliberative democracy which is discussed as the last part of this chapter.

2.2. Conceptualization of indigenous knowledge

There is a growing interest in indigenous knowledge research in developed and developing countries. Accordingly, the increase in the research productivity on indigenous knowledge is evident in the recent literature. Nevertheless, indigenous knowledge remains a controversial topic at the global level. While there are major debates in the mainstream regarding what constitutes indigenous knowledge, the common understanding of indigenous knowledge has been drawn in the existing literature. Indigenous knowledge, which is also known as local knowledge, traditional knowledge or people's knowledge, refers to the kind of knowledge that is generally passed from generation to generation, that is, from older generations to younger generations (Greenwood and Lindsay, 2019; Thompson et al., 2020). Additionally,

Buenavista et al. (2018) argued that the term indigenous knowledge is associated with the native people in a specific context. Furthermore, Ubisi et al. (2019) asserted that indigenous knowledge is in fact unique to local communities and societies by the social, cultural, and ideological context within which it is found. It is argued that indigenous knowledge is rooted deeply in many generations of lived experiences. The lived experiences involve the sharing of resources, history narratives, and shared spirituality which constitute knowledge unique to local context (Thompson et al., 2020). This kind of knowledge is very important to indigenous people for their livelihoods and development. In this study, indigenous knowledge is accordingly viewed as an important resource which indigenous people can use in the processes of rural development.

In countries like South Africa, indigenous knowledge also represents the people's experiences of colonialization and how people responded to the system (Wane, 2008). Given its value, indigenous knowledge enabled indigenous people to cope with challenging times. Thus, indigenous knowledge suggests the contributions of the past in the current knowledge base. Clearly, there is something the current generation can harvest from the past to affect contemporary development practice (Buenavista et al., 2018). In the context of this study, indigenous knowledge is deemed crucial to support the current rural development initiatives. Indigenous knowledge is unique to each given community or society. This is particularly true as each community or society has its own cultural practices, social systems, and norms. These forms the basis of indigenous knowledge, the knowledge which is very important for localized decision making about development initiatives such as agriculture (Ubisi et al., 2019). Indigenous knowledge also constitutes the knowledge, skills, and practices which originates locally and naturally in a given context. According to Soropa et al. (2015), indigenous knowledge is the kind of knowledge that is gathered by the local people through their lived experiences. While this notion of indigenous knowledge seems understandable from the literature standpoint, there are questions regarding who is indigenous and who is not, and how this is determined.

In the understanding of indigenous knowledge and what it entails, there is a strong emphasis on place-based accumulated knowledge within cultural contexts over generations (Jessen et al., 2022). Indigenous knowledge originates from indigenous people themselves as they develop, maintain and evolve their knowledge systems over time through direct experience

interacting with biophysical and ecological processes, landscapes, ecosystems, and species over millennia (Jessen et al., 2022). Before the recognition of Western scientific knowledge, indigenous people survived through the use of indigenous knowledge, the knowledge which was also crucial for their livelihoods. In the modern era, however, indigenous knowledge is seemingly overlooked as far as rural development is concerned. This is accordingly evident in a study that was conducted by Wilujeng and Prasetyo (2018) which found that, though indigenous knowledge was resourceful to native people, its value in the modern era is deemed very low, even in education curricula. Does this mean indigenous knowledge has no more value in the presence of Western scientific knowledge? Can indigenous knowledge still add value in development initiatives?

Furthermore, the consideration of indigenous in development is controversial. Those proposing the use of indigenous knowledge in development have received critics based on the number of reasons. For example, the expertise of indigenous people with indigenous knowledge has been questioned given that indigenous people have no scientific training (Bruchac, 2014). Also, some have questioned the possibility of applying indigenous knowledge in contexts outside the original contexts (Bruchac, 2014). Although there is substantial body of literature on indigenous knowledge, the question of what knowledge should be considered indigenous and on what bases remains. Thus far, it is still unclear what really counts as indigenous knowledge and not (Lanzano, 2013). Likewise, some critics rests on the difficulties in incorporating indigenous knowledge in science. For example, a study that was conducted in Zimbabwe among primary school teachers found that teachers exhibited negative attitudes toward the use of indigenous science and supported maintaining the teaching of Western science (Shizha, 2007). As a result, indigenous knowledge is generally excluded in the education curriculum. It is due to these reasons, among others, that indigenous knowledge has been labelled unreliable, incomplete, and tainted by some scholars. Nevertheless, this current study is concerned about the use of indigenous knowledge in rural development. It addresses a very critical question, that is, what role does indigenous knowledge play in the development of Mabheleni, particularly how this knowledge enables participatory rural development.

2.3. The role of indigenous knowledge in development

Indigenous knowledge plays a crucial role in development because it informs communities of the solutions to development issues (Smith, 2011). Through the recognition and the use of indigenous knowledge, indigenous communities are able to address their issues in a culturally acceptable manner (Smith, 2011). Parsons et al. (2017) argued that indigenous knowledge is increasingly recognized as a critical resource which brings about effective and sustainable strategies to address socio-economic issues. Recognition of indigenous knowledge does not only enable indigenous people to participate in development, but it contributes to successful projects, programmes and policies (Parsons et al., 2017). This is possible because when indigenous people participate in decision making about possible solutions for their problems, they contribute to informed decisions regarding solutions for their problems. This is supported by the view that, if integrated with Western scientific knowledge, indigenous knowledge can lead to positive development outcomes (Mistry and Berardi, 2016). Research clearly demonstrates that indigenous communities have survived challenges for many years through the application of indigenous knowledge. For example, Huaorani, Sápara and Sarayaku Kichwa people in the Amazonian region, east of Ecuador, used their local knowledge to adapt to and cope with climate change (Etchart, 2017). To sustain livelihoods, hunter gatherers, for instance, used their indigenous knowledge to inform hunting strategies (Makondo and Thomas, 2018). This evidence demonstrates the value of indigenous knowledge in sustaining livelihoods and in producing positive development outcomes.

Furthermore, indigenous knowledge is associated with sustainability of development initiatives. In this regard, indigenous knowledge enables indigenous people to use their scarce resources in a sustainable manner in meeting their needs (Demssie et al., 2020). For example, indigenous ecological knowledge is applied in natural resource management, a critical practice for sustaining lives (Demssie et al., 2020). Similarly, a study by Sidali et al. (2015) also concur that indigenous people are using indigenous knowledge in the production of food in a manner that is socially and environmentally sustainable. Clearly, the use of indigenous knowledge is not only important to ensure food security, but it also promotes sustainability. The use of indigenous knowledge in development is not unique to Africa. In other nations like Asia and Latin America, indigenous people rely on indigenous knowledge to formulate local initiatives to sustain livelihoods and improve the quality of life within their communities

(Ubisi et al., 2019). It is further evident that indigenous knowledge continues to play a critical role in farming, shifting cultivation, pastoralism, fishing, agroforestry, and hunting and gathering (Magni, 2017). There is therefore no doubt that indigenous knowledge makes a major contribution to development practice. However, whether this knowledge is appropriately used in rural development practice, particularly in remote contexts like Mabheleni, is of special interest in this study.

2.4. Conceptualization of indigenous knowledge systems

Indigenous knowledge systems has become one of the buzzwords in the field of development studies and social sciences in general. At a broader level, indigenous knowledge systems is understood as the knowledge and practices that are developed and applied by the local community within their geographic environment over generations (Greenwood and Lindsay, 2019). In developing countries, in particular, indigenous knowledge systems is increasingly accepted as a science of survival for local communities (Ayaa and Waswa, 2016). For Greenwood and Lindsay (2019), indigenous knowledge systems is built through connections with land, language and songs, ceremonies, protocols, and ways of life within local context. Thus, indigenous knowledge systems cannot be imposed on a local community, but it emerges from within the local context. These systems are the outcome of indigenous people's observations of their local world. The indigenous knowledge systems is based on locally shared knowledge. This knowledge is a crucial asset for local communities which complements the community capitals such as financial capital, social capital, human capital, natural capital and physical capital (Buenavista et al., 2018). In some contexts, indigenous knowledge is critical to identify and solve local problems. According to Buenavista (2018: 10), "Yunnan farmers in China, spatially dispersed farmers carefully observed local ecosystem (human capital) and shared their experience within the community (social capital), which resulted in anthropogenic accumulation of collective knowledge, and this enabled the farmers to identify and find solution to local problems". This clearly indicate how indigenous knowledge systems is crucial for indigenous people to address their development problems.

Research shows that the recognition, development, protection, and affirmation of indigenous knowledge systems is crucial to improve the quality of life of indigenous people (Dintwa et al., 2022; Tharakan, 2015). Also, indigenous knowledge systems is well documented as knowledge systems which draw from the knowledge of indigenous people to solve

development problems. Evidence shows that, in the past, before the introduction of Western scientific knowledge, indigenous knowledge was effectively used by farmers to cope with climate issues (Ubisi et al., 2019). This knowledge systems was the foundation for successful and sustainable farming practices for many years (Ubisi et al., 2019). Farmers could read the natural indicators, including the behavior of animals, to plan their farming activities in a manner which guarantees success (Ubisi et al., 2019). This evidence suggest that indigenous people understood how to apply their indigenous knowledge in farming activities. While indigenous knowledge systems are crucial to community's social identity and heritage, they are also very crucial for the community's wellbeing (Sithole, 2020). For example, indigenous people apply indigenous knowledge to address some health issues. In some indigenous communities, indigenous trees are used to treat influenza. Therefore, there is adequate literature suggesting the value of indigenous knowledge in development and it is of interest to determine if this is the case with rural communities such as Mabheleni.

2.5. Indigenous versus scientific knowledge

There is a controversial debate regarding what indigenous knowledge shares with scientific knowledge and how these knowledge systems differ. While the differences between the two may seem straightforward, the question of what makes knowledge indigenous or scientific remain debatable. While there are competing claims of what counts as 'science', it is established in the corpus of literature that science refers to knowledge developed through observation or experience with nature (Cobern and Loving, 2001). The general claim in the literature is that scientific knowledge is universal whereas indigenous knowledge is unique to particular people and their community (Radcliffe et al., 2021). According to Ubisi et al. (2019: 27) "modern scientific knowledge is knowledge generated by research institutions and universities, which form part of the technological and global scientific enterprise of human civilization". The modern or Western scientific knowledge is developed and acquired through teaching and learning processes. So, what about indigenous knowledge? Indigenous knowledge is knowledge that is unique to a particular culture or society. Unlike scientific knowledge, which is generated through formal education and scientific research, indigenous knowledge is passed down by the elderly to the younger generation (Selaledi et al., 2021). While indigenous knowledge has generally been viewed inferior to Western scientific knowledge, research suggests that indigenous knowledge is equally important as Western

scientific knowledge (Iloka, 2016). Thus, many scholars in social sciences have called for the integration of indigenous knowledge and scientific knowledge.

There are a few key elements that have been considered in the previous studies in an attempt to differentiate indigenous knowledge from scientific knowledge. This study adopts the table by Balehegn et al. (2019) to show the key differences between indigenous knowledge and scientific knowledge (see Table 1 below).

Table 1: Indigenous knowledge versus scientific knowledge

Indigenous Knowledge	Scientific Knowledge
Communication is usually oral	Communication is usually written
Forecast methods are rarely documented	Forecast methods are documented and more developed
Use nature/environment for climate indicators as well as spiritual methods	Measurable use of weather and climate meteorological data
Description is based on spiritual and social values	Explanation is theoretical
Taught by experienced and observation	Taught through lectures and readings
Applied at a local level	Lacks relevance at the local level
Refers to rainfall duration and distribution and it is aligned to crop-weather indicators	Refers to rainfall quantity at a regional level
Mainly language-based and qualitative	It is number based
It is holistic and covers variables qualitatively	Quantitatively and covers a small number of variables

Based on the rules of knowing process	Based on scientific rules that are repeatability, evidence, and quantification
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Source: Balehegn et al. (2019).

With reference to the above table, indigenous knowledge is seen as traditional whereas scientific knowledge is seen as modern. However, the presentation on the above table can be criticized for being biased for several reasons. For instance, it is not always the case that indigenous knowledge is orally based because some indigenous knowledge is documented. Also, one can argue that indigenous knowledge's understanding of climate is not always spiritual. These biases regarding indigenous knowledge, among others, calls for further research on indigenous knowledge. Furthermore, based on the existing literature, both indigenous knowledge and scientific knowledge have limitations (Wilujeng and Prasetyo, 2018). This is the main reason behind integrating indigenous knowledge and scientific knowledge together (Ubisi et al., 2019). While modern scientific knowledge has been praised from increasing food production in many contexts, some studies (see for example, DeWalt, 1994) argued that the application of modern technology improves food production, but at the expense of the environment. Thus, previous research (Bohensky and Maru, 2011) has recommended mixing both indigenous knowledge and scientific knowledge in development related initiatives. This recommendation is informed by the need to consider ecological problems emanating from the use of advanced technologies in economic growth activities (Ubisi et al., 2019). It is also argued that integrating indigenous knowledge with scientific knowledge is also important in creating collaboration opportunities. For example, indigenous farmers can work with agricultural scientists in finding sustainable solutions for farming related challenges (Kolawole et al., 2014). Evidently, the combination of indigenous knowledge and scientific knowledge is critical to achieve positive development outcomes. While taking cognizance of the role of modern scientific knowledge in rural development, this current study specifically focuses on the role of indigenous knowledge in rural development.

2.6. Sharing and preserving indigenous knowledge

One of the highly debated subjects in the field of indigenous knowledge systems is the preservation and sharing of indigenous knowledge and the importance of this practice. The question of how indigenous people manage, preserve, and share their indigenous knowledge is critical. In their recent study on knowledge management, Mdhluli et al. (2021) indicate the importance of using a digital library for managing, sharing, and preservation of indigenous knowledge. Similarly, Yunnus (2017) argued for the digitization of indigenous knowledge as a way of preserving it. This is deemed crucial to ensure that indigenous knowledge is secured for current and future generations. Benyei et al. (2020) noted that indigenous knowledge is rapidly eroding partly because it is not well managed and shared. Preserving indigenous knowledge requires the application of appropriate approaches to ensure that indigenous knowledge holders are engaged in the processes of sharing it and of integrating it into the modern systems (Ubisi et al., 2019). In rural contexts, social activities remain crucial in enabling the sharing of indigenous knowledge. However, this approach has limitations as in some cultures young people are discouraged to interact with the elderly (Hlongwane et al., 2020). This limitation thus suggests the need for employing digital means in the preservation of indigenous knowledge in particular. Some studies (see for example, Mawere, 2015) promoted the better dissemination of indigenous knowledge practices. This involves the inclusion of indigenous knowledge systems subjects in the education curriculum at all levels. This study argues that preserving and sharing of indigenous knowledge is crucial to promote rural development.

2.7. Challenges in the use of indigenous knowledge

Although indigenous knowledge is recognized as an important resource in community development and development in general, the use of indigenous knowledge is associated with numerous challenges. Some studies have attempted to analyze the factors impeding the use of indigenous knowledge. In some instances, indigenous knowledge is ignored in development practice because it is not accepted as “real knowledge” (Selemani, 2020). As evident in the literature, policy makers and development practitioners are generally biased to only use Western scientific knowledge in the belief that it is appropriate for development (Selemani, 2020). Thus, indigenous knowledge is undermined, and consequently, indigenous people are sidelined in their development. The validity and reliability of indigenous

knowledge has also been questioned. Hence, some are hesitant to consider indigenous knowledge in development practice (Radeny et al., 2019). This problem is partially due to the fact that, in some contexts, indigenous knowledge is not adequately researched and documented. It is believed that indigenous knowledge gets eroded as it is passed down to younger generations; hence, it cannot be accepted as reliable or valid knowledge. This is the reason why some studies (see for example, Chinsebu and Cheikhyoussef, 2016) recommended that indigenous knowledge be integrated into the academic curriculum and that further scientific research be conducted on indigenous knowledge.

Globalization, which is understood as the increasing interconnectedness of different parts of the world (Talani, 2019), has also undermined the use of indigenous knowledge in development to some extent. According to Selemani (2020), indigenous knowledge has been threatened by the globalization. As countries increasingly integrate into the world economic system, partly due to the increase in the use of technology, the value of indigenous knowledge is slowly getting lost (Selemani, 2020). Due to globalization, indigenous communities are also rapidly losing indigenous knowledge as they adopt Western culture, values, and ways of life (Sujarwo et al., 2014). With the increasing influence of globalization, indigenous communities are abandoning their indigenous knowledge in favor of Western scientific knowledge. Hlalele (2019) concurs that the domination of Western scientific knowledge in development practice meant the devaluation of indigenous knowledge. As a result, indigenous knowledge systems remain at the periphery of global sustainable development efforts. What is even more concerning is that, even at a local level in Africa, indigenous knowledge is not given appropriate attention in social, economic, political, and environmental development efforts. This study thus also explores the factors undermining the use of indigenous knowledge in rural development efforts in Mabheleni.

2.8. Community Participation and rural development

Community participation is one of the important principles in community development practice. This notion is receiving acceptance from different stakeholders, including development professionals, who now claim that for development to achieve positive outcomes it must entail substantive community participation (Djaelani, 2021). Community participation involves the active engagement in decision making about development planning by those who will be affected by development (Davids and Theron, 2014). Effective

community participation extends to cover participation in the implementation, monitoring and evaluation of programmes and projects (Iddi and Nuhu, 2018; Sulemana et al., 2018). The importance of community participation in development practice is well documented in the literature. Literature shows that community participation can lead to greater acceptance of development activities. Davids and Theron (2014) presented the following reasons suggesting the importance of community participation: (1) Community participation enables the contribution of marginalized groups to development, for example, women. (2) Community participation can motivate people to accept responsibility for their own development, thus promoting self-reliance. (3) Community participation can lead to capacity building and empowerment, especially at an organizational level. (4) Community participation can ensure that information collected by external development agencies regarding local needs, capacity and reality are relevant and correct. (5) Community participation can be the basis for understanding affordability issues and creating the necessary conditions for cost recovery. Other studies also concur that community participation is important to achieve the intended development outcomes (Nasution et al., 2021; Sobhani et al., 2022).

This study focuses on “participatory” rural development; it argues that rural people can draw from their indigenous knowledge to engage in a rural development process. According to Parsons et al. (2017), participatory, community-driven, and locally based development processes are likely to produce the desired development outcomes. This is because if development practice is participatory in nature, appropriate decisions on what should be done and how are collectively taken. This practice thus informs relevant programmes and projects which addresses the pressing needs of local people while promoting empowerment. In a study that examined community participation in health services, Haldane et al. (2019) discovered that community participation is beneficial because when people play a central role in planning and implementing health services, such services become sustainable with sustainable health outcomes. A lot more studies show an association between community participation and sustainability of programmes and projects. Correspondingly, the results of the study that was conducted by Rasoolimanesh et al. (2017) shows that community participation often leads to sustainability of tourism sites. Thus, citizens should actively participate in tourism development activities in their communities. Another study discovered that community

participation enables people to gain control over the quality of their lives. In this regard, individuals and communities work collaboratively in programmes and projects that brings about a positive change in their lives and communities (Markantoni et al., 2018). There is therefore adequate evidence which suggests that community participation is central to successful community or rural development practice.

2.9. Rural development issues

Rural development remains a topic of contestation among policy makers, development practitioners, researchers, and the general public. While the notion of rural development has been contextualized in different contexts, its broader meaning involves programmes, projects, policies, or any initiatives designed and implemented to improve the living standards of rural people (Pain and Hansen, 2019; Zadawa and Omran, 2020). The focus of rural development has been on reducing poverty through income generating activities and employment creation (Pain and Hansen, 2019). Perhaps it is important to draw from the work of Robert Chambers on “rural development: putting the last first”. In his book, Chambers (1983) unpacked the problem of poverty in rural areas. He believes that rural poverty is often unseen or misperceived by outsiders (Chambers, 1983). This means that outsiders, including researchers and development officials, generally overlook the knowledge poor people possess in development planning. This undermines the role local knowledge and wisdom can play in rural development or in strategies to escape poverty (Chambers, 1983). This practice is associated with a top-down approach, which is an approach to development where decisions are taken by government officials and imposed at a local level (Semeraro et al., 2020). This approach is converse to the bottom-up approach, which advocates for localized decision-making processes (Semeraro et al., 2020). Chambers, therefore, argues that, in order to reduce poverty in rural areas and to promote overall rural development, an enabling environment should be created for local people to develop themselves. In this regard, outsiders, such as development practitioners, should appreciate the capacity of rural people in developing themselves and provide necessary support (Chambers, 1983). Thus, Chambers ideas on rural development are relevant in the context of this study which argues for the better use of indigenous knowledge in rural development initiatives.

Rural development is multidimensional in nature and rural development issues are diverse. While research on rural development has mostly focused on the issue of poverty (Cheteni et

al., 2019; Toerien, 2020), other issues affecting rural citizens such as unemployment have been explored (Harry et al., 2018). It is impossible to discuss all rural development issues within the scope of this chapter, thus the discussion is focused on the key issues only. Starting with poverty, the overall poverty rate in South Africa is 61.60 percent (Statistics South Africa, 2023). It is evident that the situation in rural areas is worse. For example, Umzumbe, the municipal area where this study is conducted, has the highest levels of poverty under Ugu District Municipality (Ugu District Municipality, n.d.). The persistence of this issue in the municipal area suggests that rural development initiatives have not been effective. Just like poverty, the overall unemployment rate in South Africa is very high. South Africa recorded unemployment rate of 32.9 percent in the first quarter of 2023 (Statistics South Africa, 2023). Youth unemployment in the country is even worse with the current rate of 62.10 percent. The situation in rural areas like Umzumbe municipal area is concerning with Umzumbe reportedly having the highest rate of unemployment in the Ugu district (Ugu District Municipality, n.d.). Therefore, it is reasonable that rural development be prioritized in the South African policy debate.

Access to services such as water and electricity are very important for the success of rural development initiatives (Kharel, 2019; Shakoori, 2019). South African rural areas, in particular, are characterized by poor delivery of services (Krugell et al., 2010; Masuku and Jili, 2019). This does not only deny citizens their constitutional right to access basic services, but it also impedes the rural development initiatives which rely on these basic services. For instance, agricultural activities largely depend on access to adequate water (Sadiki and Ncube, 2020). Due to lack of access to adequate water in South Africa, particularly in rural areas, agricultural initiatives generally fail. Similarly, lack of access to electricity is another service delivery issue which undermines rural development initiatives in South Africa (Azimoh et al., 2016). For example, some farming activities depend on the availability of electricity yet some rural areas in South Africa are not electrified. Access to health care services is an important sign of rural development. Disappointingly however, most rural areas in South Africa are characterized by poor health services (Neely and Ponshunmugam, 2019). These issues are of major policy concern, and they should be policy priorities if rural development were to be achieved. Mabheleni, under Umzumbe, is characterized by a lack of access to basic services among other rural development issues.

2.10. Agriculture and rural development

At a global level, agriculture is deemed very important in rural development. According to Baig and Straquadine (2014), the agricultural sector plays a critical role in ensuring food security and in improving the livelihoods of rural citizens. The literature shows that agriculture does not only contribute to rural economic development, but this sector is also very critical for survival of the majority poor (Baig and Straquadine, 2014). This phenomenon is not new because past generations largely relied upon the agricultural sector for livelihoods. Furthermore, agriculture remains an important sector which meets the needs of rural people, particularly to ensure that rural households are food secure. It is further evident that agriculture continues to create economic opportunities, including job opportunities for rural citizens (Van der Ploeg et al., 2017). Thus, in South Africa for example, the government has invested a lot of money in the agricultural sector in order to promote economic development and job creation (Geza et al., 2022). While it is recognized that such investments created economic development opportunities, concerns over the prevailing issues, particularly unemployment, remain. Therefore, there is a need to rethink the role of agriculture in rural development. This study positions indigenous knowledge as an important resource that can enhance agricultural activities and rural development.

2.11. Theoretical framework

This study uses deliberative democracy, a theoretical perspective that was originally coined by Joseph M. Bessette in 1980. The deliberative democratic theory is widely accepted as a practical framework for participatory development practice. Deliberative democracy (also known as discursive democracy) is the type of democracy that deems “deliberation” a central aspect for decision-making (Kadlec and Friedman, 2020). Deliberative democracy is based on the premise that proper political decision-making is the outcome of robust discussion or deliberation among citizens (Curato et al., 2017). Through deliberation, citizens can reach consensus regarding the action that can affect their lives. Thus, deliberation is seen as an important precondition for legitimate decision-making (Ercan and Dryzek, 2015). Substantive participation is the key feature of deliberative democracy. This theoretical perspective is therefore based on the idea that political decision-making process should be participatory in nature.

While deliberative democracy is deemed a theoretical perspective which combines both representative democracy and direct democracy, this study draws precisely from the lenses of the latter. Direct democracy, which is also known as pure democracy, is a form of democracy in which citizens directly participate in decision making processes about policies, programmes and projects that affect them (Leemann and Wasserfallen, 2016). This form of democracy allows citizens to have direct influence in the manner in which policies are formulated and implemented. Through direct democracy, citizens can actively participate in the political affairs of the country and in governance (Leininger, 2015). Very significantly, direct democracy promotes the “bottom up” process of decision making and planning where citizens are offered fair chance to make their contributions. Evidently, direct democracy played a key role in promoting public participation and empowerment of citizens in development (Linder and Mueller, 2021). This study advocates for direct democracy which is crucial to promote the effective use of indigenous knowledge in rural development.

While deliberative democracy as a concept has been misused in some study fields and in the political arena, the understanding of this concept is well established in the literature. The following definition is deemed comprehensive and captures the essence of deliberative democracy. It is stated that deliberative democracy is:

“A process of reaching reasoned agreement among free and equal citizens, ensuring that they have an opportunity to express their views and preferences and justify their decisions within a deliberative process for the purpose of reaching conclusions that are collectively binding” (Farrell and Suiter, 2021: 12).

This definition suggests that participation in a discussion leading to a decision affecting one’s life, the key feature of deliberative democracy is reasoning in the process of discussion. The point is that all citizens who will be affected by the decision must be allowed to influence decisions in a reason-based discussion. In this study, the deliberative democracy theory is used to explain the importance of allowing people to deliberate on matters of rural development drawing from their indigenous knowledge.

Deliberative democracy focuses on reasoned-based discussion among people over issues affecting their well-being. Although deliberative democracy seeks to promote participatory decision making, not all citizens are given an equal chance to speak up their concerns and

priorities in the process of deliberation (Abdullah and Abdul Rahman, 2015). Similarly, marginalized groups are often excluded from participation in decision making about their problems (Scudder, 2023). These groups include, but not limited to, women, persons living with disabilities and the illiterate persons. To facilitate deliberation in development practice, deliberation methods are increasingly applied in decision making about development initiatives. These methods include, but not limited to, public meeting, citizens' panel, citizens' conference, and deliberative forum (McKay and Tenove, 2021; Scudder, 2023). Despite the application of these methods, meaningful deliberation is still difficult to achieve in many communities. This problem has generally been attributed to political capture and unequal power relations at the local level (McKay and Tenove, 2021).

This study utilizes deliberative democratic theory, with a specific focus on direct democracy (Leemann and Wasserfallen, 2016; Kadlec and Friedman, 2020), to explain the contribution of indigenous knowledge in participatory rural development. The theory further explains the community development effect of indigenous knowledge. Therefore, this theory explains, for instance, the contribution of indigenous knowledge in rural development practice, how it affects service delivery and overall community development. Any form of rural development outcome that arises from appropriate consideration of indigenous knowledge is well explained through the lenses of deliberative democracy. This theoretical perspective is an appropriate tool for analyzing the relationship between the use of indigenous knowledge, community participation, community empowerment and overall rural development. Rural development is supported by developmental government which promotes democracy in decision-making about development projects. The deliberative democratic theory accordingly encourages citizen engagement in public matters (Kadlec and Friedman, 2020).

This study unpacks the role of indigenous knowledge in participatory rural development. Therefore, deliberative democracy is appropriate to explain the role of public participation or community participation, which incorporates the use of indigenous knowledge, in rural development (Leemann and Wasserfallen, 2016; Kadlec and Friedman, 2020). The theory is used to explain the importance of involving all implicated parties, particularly the community, in deliberation for legitimate decision-making about rural development. This theory further explains the value of community engagement in formulation of developmental strategies. Given its relevance, this theory contextualizes the bottom-up approach in

development planning and its contribution to participatory rural development. Drawing from the lenses of deliberative democracy, this study argues that the success of rural development initiatives is largely the outcome of deliberative democracy in rural communities like Mabheleni.

2.12. Conclusion

This chapter has revealed the complexity of rural development in a developing context like South Africa. It is evident in the existing literature that most rural areas remain underdeveloped socially, economically, and politically. The underdevelopment of rural areas, particularly in South Africa, has been attributed to various factors including the failure to use indigenous knowledge appropriately. Despite rural development being a mainstream discourse, most rural communities are still characterized by the lack of access to basic services such as water, sanitation, and electricity. Studies indicate that while indigenous knowledge has a potential contribution to rural development, this knowledge remain overlooked in the rural development efforts in favor of Western scientific knowledge. Clearly, there is a need to recognize and effectively use indigenous knowledge if rural development were to be achieved. This chapter has also demonstrated that the neglect of indigenous knowledge undermines the participation of local people in their own development. Therefore, this chapter is concluded on the discussion of deliberative democracy as a theoretical framework that can enable the recognition and use of indigenous knowledge in participatory rural development. The chapter shows that there is a link between deliberative democracy, effective use of indigenous knowledge and rural development. In this regard, it is evident that sustainable rural development depends on appropriate recognition and use of indigenous knowledge enabled through deliberative democratic processes.

Chapter 3: Study Area and Methodology

3.1. Introduction

The success of the research project depends on the appropriate methodology. This involves the selection of appropriate research approach and design, sampling technique, data collection methods and so forth. This chapter presents the area in which this study was conducted and discusses the entire methodology that was followed to execute this study. The chapter covers all the important aspects of methodology. The chapter begins with a presentation of the study area, which is Mabheleni. This is followed by a discussion of the qualitative research approach in which this study is based. The third section is dedicated to the sampling procedure that was adopted for the selection of participants. In this regard, a non-probability sampling technique, known as purposive sampling, was adopted to select participants. Furthermore, the chapter discusses the data collection methods that were used for data collection; these are semi-structured interviews and focus group discussion. The rest of the chapter discusses how data was analyzed through thematic analysis, which measures were adopted to ensure the trustworthiness of this study's results, ethical considerations, and limitations.

3.2. Study area

This study was conducted in Mabheleni, a deep rural community under the Umzumbe Municipality. Umzumbe municipality is a local municipality under the Ugu District Municipality in KwaZulu-Natal, South Africa (See Narsiah and Maharaj, 1997). This local municipality is located at uMthwalume near Hibberdene and Portshepstone (Umzumbe Municipal IDP, 2022-2027). The Umzumbe municipal area is mostly rural, and it consists of about one percent of semi-urban area (Umzumbe Municipal IDP, 2022-2027). The municipal area consists of eighteen traditional authority areas, and Mabheleni falls under one of these traditional authority areas. Mabheleni is one of the large communities located within the Umzumbe municipal area. Just like most parts of the municipality, Mabheleni falls under traditional leadership and the municipality has a total of twenty wards (Umzumbe Municipal IDP, 2022-2027). Approximately 188 066 persons reside in twenty wards of Umzumbe municipality. Similar to other many South African local municipalities, this municipality has numerous key development challenges ranging from poverty to unemployment (Umzumbe

Municipal IDP, 2022-2027). Agriculture remains the most important sector of the economy in the municipality with the main activities being sugar cane for sale and small-scale farming (Umzumbe Municipal IDP, 2022-2027).

While poor service delivery is a major problem in Umzumbe municipality, unemployment remains stubbornly high across all municipal wards. The official unemployment rate in Umzumbe 53.32 is percent (Umzumbe Municipal IDP, 2022-2027). Most people living in Umzumbe are not active in the economic activities of the country (Umzumbe Municipal IDP, 2022-2027). Due to higher levels of unemployment, poverty levels remain high within the municipal area. Most households rely on social grants for income. The municipality is also characterised by high levels of income inequalities. As a rural-based municipality, Umzumbe, particularly Mabheleni, was identified as the appropriate context for the study of this nature. Figure 1 below shows the Umzumbe locality map in South Africa and within the province of KwaZulu-Natal. It is very important to note that Mabheleni falls under ward 12 of the 20 municipality wards which are displayed in the map below. The map of Mabheleni is presented in figure 2.

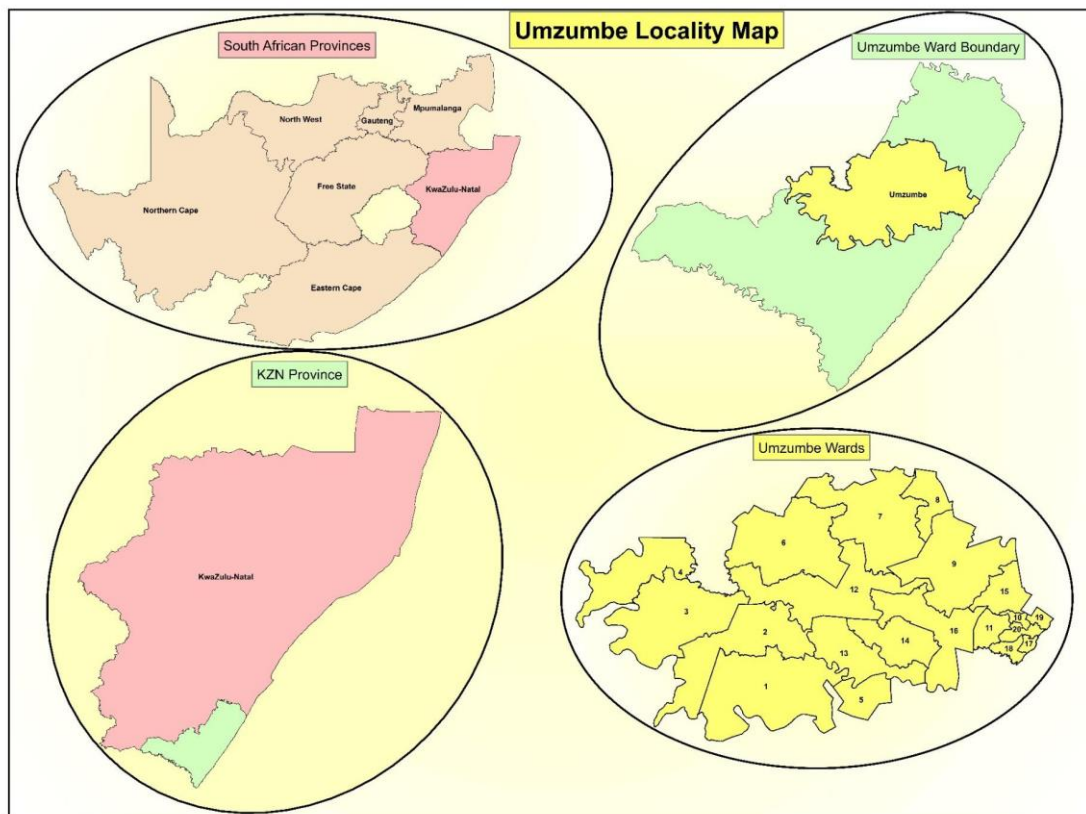


Figure 1: Umzumbe Locality Map

Source: Umzumbe Municipal IDP (2022-2027)



Figure 2: Mabheleni Map

Source: Google Maps (2022)

3.3. Research approach

Research methodology refers to the systematic plan of conducting research. It involves strategies, processes and techniques that are used to collect and analyze data in order to address research objectives and questions (Bryman, 2016; Creswell and Clark, 2011; Walliman, 2017). This study was conducted to explore the contribution of indigenous knowledge in participatory rural development in Mabheleni. The study aimed to generate in-depth insights on this phenomenon. The purpose was to elicit detailed data on how indigenous knowledge is used for participatory rural development. This purpose could only be achieved through appropriate application of a qualitative research approach. Thus, this study adopted a qualitative approach and qualitative methods were employed to elicit data to answer the research questions. The essence of qualitative research is that it studies a phenomenon in its natural setting (Teherani et al., 2015). In this regard, qualitative researchers study the manner in which individuals experience their way of life, the behavior of individuals and groups, the manner in which organizations function within communities and the relationships between

individuals, groups and organizations (Teherani et al., 2015). Accordingly, this study adopted the qualitative approach to study how indigenous knowledge is used by local people for their own development. In particular, this study attempted to explore how local government (Umzumbe Municipality) as an institution considers the indigenous knowledge of local people for their own development in their natural environment. This study is informed by the premise that rural communities (in this regard, Mabheleni) can drive development themselves through application of indigenous knowledge in participatory development processes. The manner in which this process transpires can best be studied through qualitative research approach, which was employed in this study.

This study used only two qualitative data collection methods (semi-structured interviews and focus group discussion) to gather data on the contribution of indigenous knowledge towards rural development. These methods are discussed in detail in section 3.4 of this chapter. According to Bless et al. (1995), the qualitative research is based on the people's subjective views of their experiences. Qualitative research seeks to understand the ways people experience the same events, places, and processes differently as part of a fluid reality; a reality constructed by them through multiple interpretations and filtered through multiple frames of reference and systems of meaning making. Accordingly, the use of qualitative data collection methods (semi-structured interviews and focus group discussion) enabled this study to generate in-depth insights regarding indigenous knowledge and participatory rural development. Drawing from the participants' subjective views and perspectives, this study was able to: explore the role of indigenous knowledge in participatory rural development in Mabheleni, identify the challenges impeding the use of indigenous knowledge to stimulate rural development in Mabheleni, identify opportunities for effective use of indigenous knowledge to promote rural development in Mabheleni and also explore the strategies used by people living in Mabheleni to preserve their indigenous knowledge. The study drawn from the strength of qualitative approach to generate rich data to successfully address its objectives. While few studies (see for example, Buthelezi and Hughes, 2014; Shackleton et al., 2015) were conducted on indigenous knowledge and rural development, these studies overlooked the participatory aspect of rural development as an outcome of effective indigenous knowledge use. Thus, this study is unique in a sense that it considers indigenous knowledge as an integral aspect of participatory rural development. To the best of researcher's

knowledge, there is no previous study that has been conducted in Mabheleni on indigenous knowledge and participatory rural development.

3.4. Data collection methods

To address the objectives of this study, two data collection methods were employed. These are semi-structured interviews and focus group discussion. A detailed discussion of the application of these methods is presented in the sub-sections below.

3.4.1. Semi-structured interviews

This study utilized semi-structured interviews (see Appendix A and B for interview guides) to elicit data useful to understand the contribution of indigenous knowledge in rural development with a context specific focus in Mabheleni. Semi-structured interviews are widely used in qualitative research and are considered effective to understand issues in-depth. According to Fylan (2005: 65), “semi-structured interviews are simply conversations in which you know what you want to find out about and so have a set of questions to ask and a good idea of what topics will be covered, but the conversation is free to vary, and is likely to change substantially between participants”. Accordingly, in this study, semi-structured interviews were used to provide in-depth insights regarding the use of indigenous knowledge in participatory rural development. This research technique is recommended for qualitative research because it allows participants to share in-depth insights regarding their personal and group experiences. Similarly, this qualitative data collection method enabled participants to share their knowledge and perspectives on the role of indigenous knowledge in participatory rural development within their community (Mabheleni). Through the flexibility of the research process, participants were empowered in this study. They were recognized as participants than just subjects in the construction of knowledge. The manner in which semi-structured interviews empowers participants is also understood by Seidman (2013) who believes that this data collection technique is suitable to generate wealth of information regarding the issues under investigation. In this study, 10 semi structured interviews were conducted to elicit in-depth insights necessary to understand the contribution of indigenous knowledge in participatory rural development. Further details about the semi-structured interviews are provided on headings 3.5 and 3.6.

3.4.2. Focus group discussion

To supplement data collected through semi-structured interviews, this study also employed focus group discussion as a second data collection method. A focus group is a qualitative data collection method which is used to collect data where the researcher directly interacts with the research participants (Bless et al. 1995). A focus group discussion is an interview that is conducted in a small number of people who share similar characteristics (Bless et al. 1995). As already highlighted, the purpose of this study was to generate in-depth insights regarding indigenous knowledge and its contribution to participatory rural development. In this study, a focus group discussion was conducted in a semi-structured manner to elicit insights from community members regarding the role of indigenous knowledge in participatory rural development. In this regard, the researcher developed open-ended questions (see Appendix C and D for focus group guides) that were used to stimulate the group discussion and to elicit rich data from the community members. The focus group consisted of 10 community members who were selected through purposive sampling technique. The following were considered in executing the focus group discussion: (1) participants were recruited and gathered under the tree in the community (2) the researcher welcomed the focus group participants (3) participants introduced themselves (3) ground rules for discussion were established (4) questions and topics were chronologically introduced to the group for discussion (5) the researcher closed the discussion by thanking the participants. Further details about the focus group discussion are provided on headings 3.5 and 3.6.

3.5. Sampling

Sampling is the selection of few items instead of the entire number of units (Bless et al. 1995). For the purpose of this research, a non-probability sampling method was applied to select participants. Given the qualitative nature of this study, selection of participants was subjective and non-random. In this regard, a purposive or judgmental sampling technique, which is described as a sampling technique that is based on the judgment of the researcher regarding the characteristics of an appropriate sample was applied (Patton, 1990). Through purposive sampling process, the researcher only recruited participants who possess solid information about the phenomenon under investigation. By solid, the researcher means “in-depth” knowledge about the subject under study. In the research methodology literature, participants with in-depth knowledge are known as “information-rich cases”, a phenomenon which is

understood by Shaheen and Pradhan (2019) as involving participants who possess deep knowledge on the subject of enquiry. The subject of enquiry in this study is the role of indigenous knowledge in participatory rural development in the context of Mabheleni. Thus, this study's sample only included those community members who have been living in the community for at least over 20 years.

Using the purposive sampling technique, councillors and traditional leaders who are born and raised in Mabheleni were also recruited to participate in this study. It was believed that these specific members of Mabheleni have good understanding of the community dynamics, way of life, issues, development initiatives going on in the community and so forth. Thus, their long-lived experience in the community is what constituted their in-depth knowledge deemed crucial to answer the research questions particularly on the use of indigenous knowledge. The local knowledge or indigenous knowledge is developed overtime based on local experiences. Accordingly, the researcher is not an "outsider" in the community. It is very important to note that the researcher was born and raised in the community and has been part of the community for years. Therefore, the researcher's in-depth knowledge about the community came handy in the selection of appropriate participants with solid knowledge on the subject. This was done purposively based on the researcher's judgement.

Therefore, the total sample size for this research is 20, which was a point of data saturation. According to Aldiabat and Le Navenec (2018), the point of data saturation is reached when there is depth and breadth of data, a point where further data collection will not add value in the study. In-depth detailed interviews were conducted in this study. In addition, a focus group discussion was conducted with community members. Therefore, the final sample size of 20 participants provided adequate data to draw appropriate conclusions. Most previous studies recommend for the sample size of 10 to 30 participants in qualitative research (Guest et al., 2005; Vasileiou et al., 2018). In this study, the selection of 20 participants was based on the population integrity. Therefore, semi-structured interviews were conducted with 2 traditional leaders, 2 ward councillors, 4 community development workers (CDWs), 1 public participation (PP) officer and 1 local economic development (LED) officer. In addition, one focus group discussion consisting of 10 community members sharing common traits who are living in Mabheleni was conducted. This is in line with what previous research recommends for the size of a focus group which is 6 to 10 participants (Bless et al. 1995). All the

participants in this study were selected based on their knowledge regarding the subject of this study.

3.5.1. List of participants

To ensure anonymity and confidentiality, participant's unique identity numbers are used in this study instead of their real names. Table 2 below shows the list of participants who participated in the semi-structured interviews or focus group discussion. Each participant is allocated a unique identity number. Information that may lead to the identification of participants is not included in this dissemination.

Table 2: List of participants

Identity Number	Role	Interview or Focus Group
Participant #1	Traditional leader	Interview
Participant #2	Traditional leader	Interview
Participant #3	Ward councillor	Interview
Participant #4	Ward councillor	Interview
Participant #5	CDW	Interview
Participant #6	CDW	Interview
Participant #7	CDW	Interview
Participant #8	CDW	Interview
Participant #9	PP officer	Interview
Participant #10	LED officer	Interview
Participant #11	Community member	Focus group
Participant #12	Community member	Focus group

Participant #13	Community member	Focus group
Participant #14	Community member	Focus group
Participant #15	Community member	Focus group
Participant #16	Community member	Focus group
Participant #17	Community member	Focus group
Participant #18	Community member	Focus group
Participant #19	Community member	Focus group
Participant #20	Community member	Focus group

As shown in the above table, a total of 20 participants participated in the study. A total of 10 semi-structured interviews were conducted. In addition, 1 focus group discussion consisting of 10 community members was conducted. Each participant has a unique identity number, for example, Participant #20.

3.6. Data collection process

In terms of recruitment, access to participants was smooth given the researcher's knowledge of the municipal profile and geographic municipal area, particularly Mabheleni. With the assistance of gatekeepers, the researcher arranged a meeting in a local community hall in order to present the study to the community members. The meeting included community members, ward councillors, traditional leaders, community development workers, public participation officers and LED Officer. The presentation provided potential participants with the detailed information about the study which drew their interest to participate. Thereafter, the researcher approached individual attendees if they are interested to participate in the study (either in semi-structured interviews or focus group discussion). All interviews and the focus group discussion were conducted by the researcher between June and August 2023. Depending on how individual participants responded, the length of each interview was 45 to 60 minutes, and of course probing and points of clarifications increased the duration of the interviews. Accordingly, the duration of the focus group took about 2 hours due to robust

discussions. While semi-structured interviews were conducted at the participants' home or at their own preferred locations (for example, own office), the focus group discussion with community members was conducted under the tree within the community. Both interviews and focus group discussion were conducted face to face. All logistics arrangements, where applicable, were made by the researcher.

3.7. Data analysis

This study relied on unstructured data (qualitative data) and thematic analysis was conducted to analyse data. Thematic analysis is considered a useful and flexible method of analysis for qualitative research (Braun and Clarke, 2006). It is further stated that thematic analysis is suitable to make meaning of the reported experiences, meanings, and the reality of participants (Braun and Clarke, 2006). In conducting thematic analysis, the procedure involved capturing all interviews in Microsoft Word documents and thorough reading of the interview records (each participant had 1 interview record). It is very important to note that notes were manually taken during the interviews and typed in Microsoft Word documents. Data was collected using the home language of participants. Therefore, all data collection tools and interview records were translated from IsiZulu to English by the researcher whose home language is IsiZulu. In analysis, broad steps of analyzing qualitative data were considered. In this process, the researcher organized raw data into interview records and initial codes were created from the interview records. Thereafter, the researcher spent some time searching for themes across codes. This process allowed the researcher to look for patterns in the existing codes where various codes were organized into relevant themes. Lastly, data presented through themes was interpreted to compile the report of results (Braun and Clarke, 2006). For the purposes of reporting how thematic analysis was precisely executed with the help of NVivo 2012 data analysis software. Different NVivo tools including analyze, visualize, auto code, case setup, word search and tree map, among others, were used to facilitate data analysis. The following steps as proposed by Braun and Clarke (2006: 19) were followed logically and systematically:

Step 1: Become familiar with the data – The researcher familiarized himself with all data by reading and re-reading the interview records. This activity was very important to give the researcher a comprehensive picture of the study's data.

Step 2: Generate initial codes – After a thorough reading of the interview records, the researcher generated an initial list of ideas about what is in the data and what is interesting about data.

Step 3: Search for themes – After generating initial codes, the researcher searched for themes. This process involved sorting the different codes into potential themes and collating all the relevant coded data extracts within the identified themes.

Step 4: Review themes – After searching for themes, the researcher embarked on refining such themes. Hence, some themes were merged while others were deleted.

Step 5: Define themes – After reviewing themes, the researcher defined and further refined the themes that were considered for final analysis and data was analyzed and interpreted within the themes.

Step 6: Write-up – Finally, the write up of the results based on a set of fully worked-out themes was done. The results of the study are presented in chapter 4 thematically and all the important themes that emerged in the process of data analysis are presented in chapter 4.

3.8. Ethical considerations

Compliance with ethical requirements is important in research. According to Arifin (2018), it is the responsibility of a researcher to consider all the ethical issues in the research process. These include the assurance for voluntary participation, anonymity, and confidentiality matters (Arifin, 2018). In this research, the researcher followed important steps to ensure that the study is ethically sound. Therefore, this study adhered to the following ethics principles:

3.8.1. Non-maleficence:

The researcher understands that participants must not be harmed by participating in a research project. The researcher took responsibility to ensure that participants are not harmed physically, psychologically, or emotionally throughout the duration of the project and beyond. It is very important to indicate that this study was assessed and found ethically sound by the Humanities and Social Sciences Research Ethics Committee, protocol reference no: HSSREC/00005180/2023. See Appendix G for ethical clearance certificate. Permission to collect data in the community was also obtained from the gatekeeper (Umzumbe Municipality).

3.8.2. Beneficence:

The researcher understands that research must potentially contribute to the well-being of others. While this study may not directly benefit Mabheleni, it is desired that the results of this study will inform policies, programmes and projects geared towards better use of indigenous knowledge in rural development. This may indirectly benefit not only the community where this study was conducted.

3.8.3. Informed consent and voluntary participation:

The researcher in this study ensured that the participants are aware that their participation in the study is strictly voluntary. With the use of an informed consent form (see Appendix E and F for informed consent forms), participants were informed about the study, the benefits, and risks of participation before they commit to participate. Participants were also informed that the study is strictly for academic purposes. Participants were thereafter requested to fill in and sign the informed consent forms before participation.

3.8.4. Anonymity and confidentiality:

To protect their identity, participants in this study remained anonymous and the information provided was kept confidential. Instead of using participants' real names, each participant was allocated a unique study number, for example, participant #1. To protect data gathered from participants, interview records are kept in a passworded laptop, and all files are encrypted with only the researcher having access to the laptop and passwords.

3.8.5. Withdrawal:

Participants were also informed regarding that they can withdraw their participation in the study at any given point without being required to provide any explanation for their withdrawal.

3.8.6. Respect for participants' rights and dignity:

The researcher ensured that the research project does not violate the rights of participants. Throughout the project, participants' rights, and dignity, including their culture and way of life, were respected.

3.9. Trustworthiness

Ensuring the quality of qualitative research remains a controversial topic in the scholarly community. Different scholars have written on how the quality of qualitative research can be assessed and measured. According to Bless et al. (1995), assessing the quality of qualitative research should consider its trustworthiness. In this regard, its credibility, transferability, dependability, conformability should be assessed. Accordingly, this study adopted a number of techniques to ensure its trustworthiness.

3.9.1. Credibility

Firstly, to ensure the credibility of the study's findings, this study applied triangulation. In this regard, two methods were used in the collection of data. These methods are semi-structured interviews and focus group discussion. Conducting focus group discussion was crucial to supplement data collected through semi-structured interviews.

3.9.2. Transferability

In terms of transferability, the researcher of this study ensured that the results of this study are transferable to other contexts. Therefore, this research provides thick description of the phenomenon under study (Sankofa, 2023). In this regard, the researcher went beyond the surface in describing the phenomenon. The thick description therefore takes into account the various aspects such as context, culture, meanings and intentions that may have influenced the perspectives regarding the phenomenon under study.

3.9.3. Confirmability

To ensure confirmability, and very importantly, to ensure that the study results are not influenced by the researcher biases, this study adopted some measures. One of the measures that were adopted is respondent validation. This is also known as member checking or informed feedback. Therefore, the researcher presented the results of the study to research participants and ask for their feedback. The results were presented to participants by the researcher immediately after data analysis in September 2023. This process allowed the researcher to understand if research participants are happy about the research results and conclusions which should reflect and align with their experiences as research participants. The feedback indicated that the researcher did understand and correctly captured the research participant's experiences. The use of sufficient verbatim quotations, as evident in the next

chapter, was also taken into consideration to increase the trustworthiness of the research results. In this regard, the researcher used direct quotations from the original data collected in the report as an attempt to clarify to the reader how data was collected and the way it is interpreted.

3.9.4. Dependability

Lastly, this study ensured dependability. This is very important to allow the replicability of the study in the future by other researchers. To enable replicability of this study, this study provided adequate details regarding its execution. The methodological approach is comprehensively explained in this chapter. It is also very important to note that this study was supervised by an established researcher or seasoned scholar who reviewed it and examined its process.

3.10. Limitations

This study only relied on qualitative data gathered through semi-structured interviews and focus group discussion. This study only focused on one rural geographic area; thus, its scope is limited, and results cannot be generalized to all rural communities in South Africa or even KwaZulu-Natal.

3.11. Conclusion

The purpose of this research was to explore the role of indigenous knowledge in participatory rural development. To achieve its purpose, this study adopted a qualitative methodological approach which is deemed appropriate given the nature of this study. Thus, this chapter discussed the comprehensive methodological approach that was adopted to execute this study. Methodological components, such as qualitative approach, have been discussed in this chapter. This chapter also discussed the data collection methods, sampling technique and data analysis method. Very importantly, this chapter has presented solid justification for this study's methodological choice. Overall, this chapter provided a detailed discussion of how this study was conducted.

Chapter 4: Data Presentation, Analysis and Interpretation

4.1. Introduction

This study explored the contribution and the use of indigenous knowledge in participatory rural development in Mabheleni, a rural community in KwaZulu-Natal, South Africa. The aim was to elicit in-depth insights from key informants regarding the role of indigenous knowledge in rural development, the challenges impeding the use of indigenous knowledge in rural development, the opportunities for effective use of indigenous knowledge to promote rural development and the strategies used by rural inhabitants to preserve their indigenous knowledge. In order to address the objectives of this study, data was collected using semi-structured interviews and focus group discussion. Thematic analysis was employed to analyze qualitative data. Thus, a number of themes and sub-themes emerged in the coding process during the analysis. These themes are presented in section 4.2. below.

While most of the results presented in this chapter are consistent with the results of the previous studies on indigenous knowledge and rural development (see for example, Khumalo and Bakoyi, 2017; Ubisi et al., 2019), this study has some level of novelty as it positions indigenous knowledge as a critical resource enabling the participation of indigenous people in their development. Drawing from the lenses of deliberative democracy, the results of this study indicate that recognition of indigenous knowledge is crucial in participatory rural development. This chapter is organized as follows. The first part of this chapter focuses on the participants' perceptions of rural development. Secondly, the chapter presents the results on the perceptions and understanding of indigenous knowledge in the local context. The third section presents the challenges in the use of indigenous knowledge in rural development. The fourth section focuses on indigenous knowledge and participation in rural development. The last section of the chapter focuses on the management of indigenous knowledge for rural development.

4.2. Themes and subthemes

Table 3 below presents several themes and sub-themes that emerged during the analysis of qualitative data. The themes were identified through thematic analysis using the NVivo 12 software. As shown in the table, each sub-theme belongs to one main theme and several sub-

themes are clustered into individual main themes. Accordingly, the results in this chapter are presented thematically.

Table 3: Themes and sub-themes

Themes	Sub-themes
Participants' perceptions of rural development.	<ul style="list-style-type: none"> • Perceptions on the current state of development in Mabheleni. • Development issues in Mabheleni. • Development initiatives in Mabheleni. • Agricultural activities in Mabheleni.
Perceptions and understanding of indigenous knowledge.	<ul style="list-style-type: none"> • Understanding of indigenous knowledge in the context of Mabheleni. • Perceptions on the role of indigenous knowledge towards the development of Mabheleni.
Challenges in the use of indigenous knowledge.	<ul style="list-style-type: none"> • Lack of recognition of indigenous knowledge in development practice. • Top-down approach by government officials.
Indigenous knowledge and participation in rural development.	<ul style="list-style-type: none"> • The use of indigenous knowledge by indigenous people. • Participation of indigenous people in development activities.
Management of indigenous knowledge for rural development.	<ul style="list-style-type: none"> • Research and documentation of indigenous knowledge. • Sharing and preservation methods.

4.3. Participants' perceptions of rural development

This study explored the manner in which rural development is perceived by local people in Mabheleni. This was very important to do considering the complexity and multi-dimensionality of rural development as understood by Zadawa and Omran (2020). The possibility that local people may perceive rural development differently from how it is perceived on the mainstream was acknowledged in this study. Thus, perceptions on the current state of development, development issues, development initiatives, and agricultural activities in Mabheleni were explored.

4.3.1. Perceptions on the current state of development in Mabheleni

It was fundamental to establish the current development situation in Mabheleni as perceived by participants. As evident in the literature, most rural areas in South Africa are underdeveloped, particularly socially and economically (Chambers, 1983). Similarly, Mabheleni was reportedly having appalling socio-economic conditions. When asked about the current state of development in the community, one participant expressed the following:

“As you can also see, the situation in the community is very bad. Even though we are working very hard to change the situation, but the truth is, the situation is still very bad. If you look at our main road, you may think that the quality of life for the people living here is good, but trust me, people are hungry and there are no opportunities. So, in terms of development, this community is still far behind. I believe a lot of work is needed to develop this community. Unfortunately, we cannot achieve that working alone as councillors”. Participant #4

Corresponding remarks were presented by the community development worker who stated that:

“Although I think maybe the situation is better than how it was in the past, the conditions are still bad. The community is experiencing a lot of issues. They still do not have access to basic necessities like water, sanitation, and electricity. There is a large number of people who are uneducated and unemployed. In my view, the situation is still bad”. Participant #5

The above evidence demonstrates that Mabheleni is still underdeveloped socially and economically. While it is evident that the conditions have improved over the years, this community remains at the periphery of South Africa's development agenda. Hunger, illiteracy, unemployment, and unavailability of basic services are key issues suggesting the current poor state of development in Mabheleni. While the underdevelopment of rural

communities is a well-documented phenomenon in South Africa (see for example, Zondi and Qwabe, 2022), to the best of our knowledge, no previous studies have explored this phenomenon in the context of Mabheleni, which is a traditional community. This discussion is advanced in the next section which presents the key development issues in Mabheleni.

4.3.2. Development issues in Mabheleni

Understanding the key development issues in the study context was deemed critical to understand the possible role indigenous knowledge can play in addressing such issues. This study found poverty, unemployment, and lack of basic services as major issues facing Mabheleni.

4.3.2.1. Poverty

Based on the previous studies (see for example, Pain and Hansen, 2019), rural communities are generally characterized by diverse socio-economic issues. One of these issues, which has been largely studied, is poverty. Unsurprisingly, the results of this study are consistent with the results of the previous studies (for example, Cheteni et al., 2019 and Toerien, 2020). In this study, poverty was reported as a major socio-economic issue facing many households in Mabheleni. Based on the municipality IDP, the levels of poverty in the community are very high and the average household income was R204 per month between 2016 and 2019 (Umzumbe Municipal IDP, 2022-2027). The 2016 survey data shows that approximately 10540 households in the municipal area lived without money to buy food or skipped a meal daily between 2015 and 2016 (Umzumbe Municipal IDP, 2022-2027). These statistics shows the severity of poverty across communities under Umzumbe municipality. Accordingly, poverty was reported by several participants in the study and one participant stated that:

“You see my son, I was born here in Mabheleni, and I will be buried here. So, I know almost every household in this community. And one thing I know for sure is that we have a serious problem here, which is poverty. People are suffering here; they are struggling to survive. I even think that it was better when we were growing up because families were active in growing their own food for household consumption. Now, we buy almost everything, which makes things very difficult for many families. So, poverty issue is getting worse in my view”. Participant #2

The above remarks indicate that poverty is a major problem in Mabheleni which is affecting many households. These results are not surprising as poverty is a global problem which has been cited in many studies as also indicated by Chambers (1983). However, what is more

interesting in these remarks is that households within this community used to rely on their own knowledge to sustain their livelihoods during the past. This phenomenon is unpacked further on section 4.6. on indigenous knowledge and participation in rural development. Other community members in the focus group shared similar sentiments regarding poverty in the community as reported below:

“I would also like to agree with others in the group. Most of the families in this community depends on social grants for survival which is not enough because most of the families have very large family members. For instance, at home we are eleven and no one has a proper source of income. So, poverty is a serious problem in this community”. Participant #13

Similarly, the above sentiments suggest that many households within Mabheleni are faced with poverty. It is also evident that the livelihoods of these households depend on social grants. Approximately 73% of households in Mabheleni largely depends on social grants for livelihoods (Umzumbe Municipal IDP, 2022-2027). One can therefore wonder if these households fail to apply their indigenous knowledge, if any, to supplement their livelihoods strategies. The question on indigenous knowledge for livelihoods is particularly interesting in this regard as previous studies (see for example, Makondo and Thomas, 2018) indicate that households in the past were able to sustain livelihoods based on their indigenous knowledge.

4.3.2.2. Unemployment

Linked to poverty is the issue of unemployment which was also reported as a major problem in the study context. Based on the municipal IDP, the official unemployment rate in Umzumbe 53.32 percent (Umzumbe Municipal IDP, 2022-2027). The rate of unemployment in Umzumbe is extremely high compared to the South Africa’s national unemployment rate which is 32.9 percent (Statistics South Africa, 2023). Based on the qualitative insights, most citizens within Mabheleni are unemployed. In some households, all family members are unemployed and rely on social grants and unsustainable self-employment for survival. Reporting the unemployment problem in the community, one participant stated the following:

“In as much as unemployment is a national problem in South Africa, it is very bad in most communities under our municipality. Most people are unemployed because there are no economic opportunities. But what I also think contributes to the problem is high illiteracy rate. I mean, how many people you know in Mabheleni with decent jobs or higher education qualifications? Obviously, they are very few, you see”. Participant #9

Unemployment is reported as a major problem in Mabheleni. These results are not surprising because South Africa continues to experience high unemployment rate (Khumalo and Baloyi, 2017). Correspondingly, while South Africa has 32.9 percent of unemployment recorded in the first quarter of 2023 (Statistics South Africa, 2023), only 14 percent of people living at Umzumbe are employed. These results clearly indicate how problematic unemployment is, both at national and local levels. Likewise, youth unemployment was reported as a key problem within the community. During the interviews, a ward councillor said, “our young people are struggling to find employment that is why you will always find them here in the local shops sitting for the whole day doing nothing” (Participant #3). These remarks are also not new as it is evident that youth unemployment is a major socio-economic issue in South Africa. The current rate of youth unemployment in South Africa is 62.10 percent, a rate which demonstrates that most young South Africans are impoverished. While youth employment is obviously a national problem in South Africa, the problem is severe in rural communities like Mabheleni.

4.3.2.3. Lack of basic services

Poor service delivery is a major problem in South Africa, and it is evident that there are many communities without access to basic services in the country (Masuku and Jili, 2019). Most rural areas, in particular, are still characterized by poor service delivery and results shows that Mabheleni is no exception. Although a large number of households in Umzumbe are still not electrified, access to electricity under this municipality has improved. Approximately 67% of households in Umzumbe are now electrified (Umzumbe Municipal IDP, 2022-2027). Correspondingly, the results of this study shows that some households are still not electrified. In this regard, one community development worker expressed that:

“My brother, I am also living in this community, and it is sad that after so many years into democracy people have no electricity. As you may know, some sections of the community still do not have electricity. Look here for instance, izinyokanyoka [meaning illegal electricity connections]. People are tired; they have been waiting for government for too long to deliver. That is why they decided to connect illegally on their own and I do not blame them”. Participant #6

These remarks reveal that, due to lack of access to electricity, some residents within Mabheleni have opted to illegal electricity connections. The problem of electricity was

further identified as a major problem during the focus group discussion. During the discussion, one community member indicated the following:

“Well, for me, I can say I lost hope in our government. In fact, we do not have government. They will only remember us when it is time for elections; they just do not care what is happening in our community. Just imagine, we do not have electricity. That is why we came up with a plan, but we are struggling. The government must do its job; that is what I can say on services”. Participant #18

Evidently, lack of access to electricity in Mabheleni is a major problem which negatively affects households and individuals. Hence, illegal connections are viewed a solution in this community. These results are not new as the results of the previous studies (see for example, Azimoh et al., 2016) also indicate that lack of access to electricity in many rural areas in South Africa is a major challenge.

While there is lack of accurate statistics regarding access to water in Mabheleni or Umzumbe, out of 175146 households under Ugu district, approximately 21018 have no access to quality water. Notable, access to water in Umzumbe within RDP standard was 29 percent in the year 2016 (Umzumbe Municipal IDP, 2022-2027). These statistics are corroborated by the qualitative insights which indicate that lack of access to water within Mabheleni is a major problem. Drawing from the participants’ insights, it appears that most households in the area still lack access to clean and adequate water. It is widely accepted that access to clean and adequate water is a basic human right in South Africa. In fact, Chapter 2 of the Constitution of South Africa provides that everyone has the right to have access to sufficient and clean water (África, 2020). However, for those living in Mabheleni, this right is violated as reflected in the following sentiments:

“It is funny that when I meet people from other areas and tell them that in our community we still fetch water from the river, they do not believe me. I am sure maybe you have seen some people coming from the river streams with water. It is our reality and most people have accepted the situation. We share the same water with donkeys and cows. Luckily, we are not sick, but the water is not good for our health” Participant #16

These results concur with the results of the previous research suggesting that many rural areas are characterized by the lack of access to basic services such as water (Krugell et al., 2010). Similar remarks were shared by the community development worker working in this community who stated the following:

“You know at some point I felt like this community is cursed. Honestly, nothing seems to go right in this community. There is no electricity! There is no water! It is very discouraging to work here. When we report these issues to the municipality, they will be like, ‘we are working on addressing it’, but nothing happens after. This is very sad and unfair because other communities have access to similar services”. Participant #8

These results are very disappointing and discouraging as far as development practice is concerned. While service delivery backlogs are prevalent in South Africa, Mabheleni evidently lacks most of the basic services including electricity, water and even sanitation. Given that access to basic services is crucial for the success of rural development initiatives (Kharel, 2019; Shakoori, 2019), accepting that there is a community (Mabheleni) without the basic services is difficult. If real development were to be achieved, basic services at least should be provided.

4.3.3. Development initiatives in Mabheleni

In an attempt to understand the current development profile in the community, this study also explored the development initiatives currently taking place in Mabheleni. The results are disappointing as it appears that there is a lack of development initiatives in the community. It was reported that the only initiatives taking place in the community are those under the Expanded Public Works Programme (EPWP) as stated below:

“I cannot say there are development initiatives in this community because the only programme I know is that of EPWP. Some people in the community are working in that programme. Besides, I only know people who are involved in cleaning the road. Other than that, there is nothing happening here”. Participant #14

The ward councillor also shared the same sentiments regarding the lack of development initiatives in the area. From a development perspective, this is a concern because the development of the community largely depends on the quality and the quantity of development initiatives within the community. In addressing the question on development initiatives, the ward councillor remarked that:

“I am not too sure about development initiatives. But what I know for sure is that opportunities are very limited in the community. In fact, I do not think there are things like cooperatives. Well, I know of things like stokvels and small businesses, but these are not formalized. There are also people who are part of the EPWP programme. But the scope of the EPWP in the area is very limited”. Participant #3

The results provide a discouraging picture of the community as far as development initiatives are concerned. As evident in the remarks of participants, there are limited development initiatives in the community. These includes the EPWP programme which largely focuses on waste management, informal small businesses and stokvels. There are no formal cooperatives, Small, Medium, and Micro Enterprises (SMMEs) and even community garden projects. This implies that only few people in the community benefit from the existing development initiatives, mainly from EPWP. As a result, the development of the community, economically and socially, is restricted.

4.3.4. Agricultural activities in Mabheleni

Agriculture is an important sector which contributes to rural development. Previous studies have shown that agriculture creates economic opportunities for many rural communities (Baig and Straquadine, 2014; Van der Ploeg et al., 2017). It is also evident that some rural communities rely on agriculture to sustain their livelihoods (Van der Ploeg et al., 2017). While agriculture is widely recognized for its contribution to rural development in different contexts, the results of this study shows that this sector's contribution to development in Mabheleni is minimal. Evidently, it is largely subsistence agriculture which is a common practice in the community. For example, one community member stated that:

“I think agriculture is still very important in this community. There are so many families who grow some food because we have access to huge land which is fertile. Look, I have my large piece of land at home where I grow maize, beans, and even sweet potatoes. Obviously, this is only done seasonally. For instance, we cannot plough in winter; we must always wait for the right season”. Participant #12

The above remarks indicates that agriculture is still a sector that is recognized for its contribution to livelihoods for rural households. However, agriculture is most practiced for subsistence at a household level. Corresponding remarks were reported by Participant #11 who reported that although agriculture is important for livelihoods, it has challenges:

“We do grow food in our families. We have small gardens where we grow some crops but there are challenges. Let me just give you some examples. You know there are some monkeys here that can eat and destroy everything you are trying to grow. There are other insects which are incontrollable. Sometimes it is very difficult to get the seeds because if you do not have money, you cannot buy seeds. But it is better to grow something on your own as a family because food is very expensive”. Participant #11

The in-depth insights from community members present a comprehensive picture suggesting agricultural practice in the community. It appears that most families practice what is known as subsistence agriculture where they grow food to sustain their livelihoods at a small scale. None of the participants reported growing food for sale in the market. Thus, the contribution of agriculture to the development of this community remains minimal. Some challenges impeding subsistence agriculture were also noted, including difficulties to afford seeds. This study also unpacked the role of indigenous knowledge in development initiatives, with one being agricultural initiatives (see section 4.6.1).

4.4. Perceptions and understanding of indigenous knowledge

This qualitative study also explored how indigenous knowledge is perceived and understood in Mabheleni. This section therefore presents results on the understanding of indigenous knowledge and the perceived role of indigenous knowledge towards the development of Mabheleni.

4.4.1. Understanding of indigenous knowledge in the context of Mabheleni

While a lot of studies have been conducted on indigenous knowledge and its meaning has been established in the existing literature (Ubisi et al., 2019), it was crucial to elicit how indigenous knowledge is understood in the context of Mabheleni. Thus, this study explored the local understanding of indigenous knowledge through the lenses of local people in Mabheleni. Positively, this study discovered that local community members possess a good understanding of indigenous knowledge. Generally, they understand indigenous knowledge as their own knowledge as expressed by one community member below:

“My understanding of indigenous knowledge is very simple. I understand indigenous knowledge as ours, the knowledge we create and develop within the community. So, this is our knowledge because it is created by us, and it comes from inside the community. What is also important to mention is that we own that knowledge because it is created by us based on how we live our lives”. Participant #20

The above definition indicates a good understanding of indigenous knowledge from a local context. The definition suggests at least two important aspects. First, that indigenous knowledge emerges from within the community. Second, that indigenous knowledge is owned by the local community. The latter is even more important as it suggests a sense of community ownership over its resource – indigenous knowledge. From a deliberative

democracy perspective, it is this kind of knowledge which should be considered in rural development as it makes the participation of local people in their development meaningful through deliberation (Kadlec and Friedman, 2020). Similarly, other community members understand indigenous knowledge as traditional and routed in the community as indicated below:

“I would like to agree with others. I think indigenous knowledge is traditional. It is traditional in a sense that it is based on our culture and cultural practices. It is knowledge that we got from our forefathers. For example, they taught us how to build houses with soil and grass. It is not like we went to school for that, but we learned from elderly in our families and in the community. That is why I am saying it is traditional”.
Participant #17

Based on the insights from community members, it is evident that people living in Mabheleni have a good understanding of indigenous knowledge and its origins. Interestingly, the local people’s understanding of indigenous knowledge is in line with how it is defined in the literature. For example, several studies have established that indigenous knowledge is traditional, locally based, and passed down from generation to generation (Buenavista et al., 2018; Dintwa et al., 2022; Greenwood and Lindsay, 2019). Although this study managed to elicit the local understanding of indigenous knowledge, it failed to elicit the local youth’s understanding of this phenomenon since the focus group was dominated by participants aged over 35 years. Thus, future studies should consider the perspectives of young people in this regard.

4.4.2. Perceptions on the role of indigenous knowledge towards the development of Mabheleni

Having established the local people’s understanding of indigenous knowledge, this study further explored the perceived role of indigenous knowledge towards the development of Mabheleni. The results are disappointing as it was discovered that indigenous knowledge currently plays no role in the development of the community though it is deemed critical for households’ livelihoods. When asked about the role of indigenous knowledge in the development of Mabheleni, one traditional leader stated:

“The problem is that although we do have knowledge, but when it comes to programmes and projects of the municipality, our knowledge does not apply at all. Maybe that is why we do not even have community projects where our knowledge is used. I do not think the municipality even cares”. Participant #1

The above remarks indicate that though indigenous knowledge exist it plays no role in the community development practice in the municipality. This clearly implies that the local municipality and its officials disregard the importance of reasoned-based discussion in decision making about development initiatives which can allow citizens to influence decisions based on their indigenous knowledge (Farrell and Suiter, 2021). It can therefore be deduced that the current rural development practice under Umzumbe municipality does not create spaces for rural citizens to shape decisions affecting their lives – a practice which overlooks the importance of direct democracy in rural development (Leemann and Wasserfallen, 2016). Corresponding remarks were also shared by a community member in a focus group discussion as follows:

“I think our knowledge can play a key role in community development projects. But what is happening is that most projects that the municipality is trying to create fail because they do not use our knowledge and skills in those projects. To give you an example, they tried this community garden project, and the project supervisor was someone we do not even know. The project eventually failed. I feel our knowledge could have contributed to that project in terms of what to grow and how. But I mean, what can we say?”. Participant #12

Contrary to the results of the previous studies (Dutta et al. 2018; Godfrey and Siraje, 2019; Zidny and Eilks, 2018) which suggest the important role indigenous knowledge plays or can play, the results of this study indicate that indigenous knowledge plays no direct role in community development projects in Mabheleni. Based on the participants’ remarks, indigenous knowledge can play an important role in the development of Mabheleni, however, it is currently not recognized. The LED officer from Umzumbe municipality also expressed corresponding remarks; it was remarked that:

“In my view, I think indigenous knowledge is what is lacking in our local economic development initiatives. We have had numerous discussions with colleagues regarding how we can better integrate local knowledge into local economic development initiatives. It is something not easy to do but that is where we are heading to”. Participant #10

It is therefore evident that the potential role of indigenous knowledge in community or rural development initiatives is known. However, putting indigenous knowledge in to practice as far as its contribution to development practice is concerned is still a challenge. This challenge undermines the principle of “people-centredness” in development (Scolobig et al., 2015). In a view that direct democracy can enhance rural development outcomes, participatory

approaches that considers local knowledge should be adopted in rural development practice (Leemann and Wasserfallen, 2016). Therefore, it is very important, particularly for those involved in rural development practice, to consider how the role of indigenous knowledge in rural development can be enhanced.

4.5. Challenges in the use of indigenous knowledge

While it is widely accepted that indigenous knowledge is crucial in rural development (Godfrey and Siraje, 2019; Zidny and Eilks, 2018), application of indigenous knowledge in some contexts is undermined by numerous challenges. The results of this study indicate that there are two major challenges in the application of indigenous knowledge in the development of Mabheleni. These relate to the lack of recognition of indigenous knowledge itself in development practice and the use of a top-down approach by government officials.

4.5.1. Lack of recognition of indigenous knowledge in development practice

Indigenous knowledge is still not recognized in development planning and implementation in Mabheleni. The results of this study show that government officials generally do not consider the knowledge of local people in planning and implementing rural development projects. This problem can partly be attributed to the dominance of Western scientific knowledge in development planning as highlighted in the previous research (Hlalele, 2019). In the presence of the dominant Western scientific knowledge, indigenous knowledge hardly gets recognition in development practice. Failure to recognize indigenous knowledge in rural development initiatives was reported by many participants in the study as reflected below:

“I honestly do not think the municipality realize that we can also help the municipality with some ideas on how our community can develop. Maybe they think we know nothing about development, and we cannot contribute anything. I think that is why they do everything on their own without us”. Participant #15

Similarly, Participant #19 stated the following:

“I cannot even remember the last time the municipality people came to us, just to hear from us. So, how can they even know that we have valuable knowledge which can be used for the development of our community?”. Participant #19

Additionally, Participant #20 said:

“I think the government officials need to understand that living here in a poor community and being poor does not mean we are also poor in mind. You see what we

are talking about here is very important. I so wish they were here so that they can get to understand that we have valuable knowledge”. Participant #20

Based on the above remarks, there is lack of recognition of indigenous knowledge in rural development in the context of Mabheleni. Evidence suggests that the municipality often fails to recognize the role indigenous people can play in their development projects. Although indigenous people understand the value indigenous knowledge can add to their development, gap exist between the municipality and the communities, thus indigenous knowledge is often overlooked in development planning. While previous studies (for example, Mistry and Berardi, 2016; Parsons et al., 2017) clearly demonstrate the importance of integrating indigenous knowledge in rural development practice, this study found indigenous knowledge at the periphery of rural development practice in the context of Mabheleni. The study therefore argues that for indigenous knowledge to get recognition and equal consideration as Western scientific knowledge in the context of Mabheleni, direct democracy (Leemann and Wasserfallen, 2016) should drive rural development initiatives in this locality.

4.5.2. Top-down approach by government officials

This study discovered that the use of a top-down approach by government officials in decision-making about development projects and programmes overlooks indigenous knowledge. When a top-down approach is applied in development practice, important decisions are taken by government officials and citizens are excluded, thus their indigenous knowledge is sidelined (Semeraro et al., 2020). Most community members highlighted that they are not offered a chance to contribute to decision making processes about development plans that will affect their lives as expressed below:

“The problem here is that we do not even know those people who take decisions about community projects. It is not like they communicate with us before they take their decisions. I am sure they do not think it is necessary for them to involve us in their processes. Now, how can we even contribute if we are not given a chance to do so?”. Participant #16

The above remarks demonstrate that local people are generally excluded in decision making processes regarding development initiatives. The use of a top-down approach, particularly in planning, is one reason why indigenous knowledge does not contribute to rural development in the context of Mabheleni. Likewise, Participant #17 stated:

“Nothing will go right as long as they continue to take important decisions on what should be done about our community without us. It is high time that the municipal officials accept that we also know something, and we can contribute something in the development projects”. Participant #17

These remarks demonstrate that indigenous people are generally excluded in decision-making about development planning. This practice thus automatically impedes the contribution indigenous knowledge may make in rural development practice. This can be deemed inappropriate development practice. As understood by Chambers (1983), the biggest mistake outsiders (including researchers and development officials) make is to overlook the knowledge poor people possess which can make a substantive contribution to development planning. Therefore, it is very important that government officials consider a bottom-up approach (Semeraro et al., 2020) in decision making about development activities. From a deliberative democracy theoretical standpoint, mainly direct democracy, this approach encourages deliberation in decision making about development initiatives (Kadlec and Friedman, 2020). If applied correctly, the approach empowers indigenous people to use their indigenous knowledge to inform solutions to their development problems. Direct democracy in rural development can also improve the responsiveness and accountability of local government to local needs (Leemann and Wasserfallen, 2016). Unfortunately, this was found lacking in development activities in Mabheleni.

4.6. Indigenous knowledge and participation in rural development

In this study, indigenous knowledge is deemed a critical resource which indigenous people can use for their development and to sustain their livelihoods. This study also acknowledges the importance of indigenous people’s participation in rural development. This is in line with the essence of deliberative democratic perspective which deems participation as critical aspect of proper decision making (Godfrey and Siraje, 2019). Thus, the study explored how indigenous people use indigenous knowledge and their participation in rural development initiatives as discussed below.

4.6.1. The use of indigenous knowledge by local people

This study discovered that local people living in Mabheleni understand the value of their indigenous knowledge. While there is evidence suggesting that their indigenous knowledge is generally not recognized by government in development planning as shown in the previous

section, the results suggest that local people in this community are able to apply their knowledge for daily survival. When asked about the use of indigenous knowledge, most community members reported that they draw from indigenous knowledge to sustain livelihoods as stated below:

“In these difficult times where it is difficult to find a job, it is good to use your knowledge and skills to survive. You must be able to say, okay there are no jobs, so what can I do to survive. Remember in the past, our ancestors did not even worry about looking for jobs because they had knowledge to survive on their own. They did not ask government to help them, but they survived for years. They survived because they used their knowledge to survive”. Participant #1

This participant further remarked:

“I always feel blessed because my parents did not spoil me. They taught me how to survive. They taught me how to grow food, even vegetables. I know even how to hunt. I have cows; I have goats; I have chickens. So, I do survive with my family even though I do not have a job. Remember that you do not get much when you work as a king. So, I cannot really say I have a job hahaha [laughter]”. Participant #1

The remarks of Participant #1 are positive and encouraging given that, at least, indigenous knowledge in Mabheleni is still effectively used to sustain livelihoods at a household level. It is evident that local people still draw from their indigenous knowledge to create livelihoods strategies. It was discovered that some local people ensured household food security through growing indigenous food. For example, the local people who participated in this study use their own knowledge to grow foods such as amadumbi (Zulu potatoes), ubhatata (sweet potatoes), amathanga (pumpkins), and imfino (indigenous vegetables) just to name a few. These results are consistent with the results of the previous studies which suggest that indigenous knowledge remain a critical resource to sustain livelihoods in many indigenous communities (Ubisi et al., 2019; Sidali et al., 2015). Further in-depth insights from indigenous people shed light on how indigenous knowledge is used to sustain livelihoods in Mabheleni as stated below:

“Let me tell you something, a lot of food that you buy from the supermarket can be grown at home. It is just that maybe our generation is lazy compared to the previous generations. You know that at home you can grow maize. From own grown maize, you create samp and maize meal using your machines. Umbila uyawugaya kuphume istambu nempumpu [you can grind maize to get samp and maize meal]. What is also nice is that you can grow your beans, pumpkin, imfino [indigenous vegetables] and get your nice curry from that. What I am trying to say is that some people survive through

indigenous ways. It is just that most are lazy to produce food on their own. I am sorry to say this, but it is the reality”. Participant #15

The above remarks do not only demonstrate the importance of indigenous knowledge to local people for survival, but it also shows how indigenous knowledge is applied for livelihoods strategies. This knowledge to grow indigenous food is deemed “indigenous” because it is developed locally by local people, and it is unique to Mabheleni. For example, people living in Mabheleni use their indigenous method (isigqulo) to make samp as opposed to the application of modern machinery. While indigenous knowledge was largely and effectively used in the past, the results indicate that it is limitedly used by the current generation. The fact that Western scientific knowledge continues to be prioritized over indigenous knowledge, as evident in the literature (Balehegn et al., 2019; Ubisi et al., 2019; Wilujeng and Prasetyo, 2018), may be the reason why some indigenous people fail to use it for their livelihoods. This thus suggest the need to promote the use of indigenous knowledge to sustain livelihoods, particularly within rural communities.

4.6.2. Participation of local people in development activities

Community participation is a buzzword in rural development, community development and development practice in general. Various studies in the field of development indicate that community participation is an important principle which often contributes to successful development practice (Djaelani, 2021; Iddi and Nuhu, 2018). Thus, research emphasize the value of substantive participation of community members in development activities (Sulemana et al., 2018). In this study, the participation of indigenous people in development activities was explored. While participation is widely acknowledged in development practice, the results of this study are disappointing. It was discovered that participation of local citizens in development initiatives in Mabheleni is more passive than active. This means that local people do not directly plan, implement, and manage development activities. For instance, all community members in this study reported that they only receive invitations to participate in community meetings where they will be told about the municipality plans regarding services. This undermines the principle of direct democracy which emphasize that citizens must directly participate in decision making processes about policies, programmes and projects that affect them (Leemann and Wasserfallen, 2016). However, the results indicate that

citizens in Mabheleni are often excluded in decision making about development initiatives.

This concern is reflected in the response below:

“One thing I know for sure is that the ward councillor and the municipality hardly organize the community meetings. I think the last time we had a community meeting was in February. Worse, the meeting was only for them to tell us that they will be fixing access roads. You see now, it is not like they include us on what they plan about services. They just come to tell us on what they are going to do and funny enough, they do not even keep their promises”. Participant #16

Informing the community about plans of the municipality or services to be rendered is deemed inappropriate practice which generally leads to disastrous outcomes. Thus, local people should participate substantively in the actual development planning processes (Davids and Theron, 2014; Sobhani et al., 2022). Based on the principle of deliberative democracy, local people should be allowed to deliberate on decisions regarding matters affecting their lives (Ercan and Dryzek, 2015). Through direct democracy, in particular, local people can freely and equally express their preferences and provide reasons for their decisions, a practice which generally leads to positive rural development outcomes (Leemann and Wasserfallen, 2016). In the context of Mabheleni, however, citizens are often excluded from participating in decisions regarding development initiatives that are meant to affect their lives. Another participant said:

“There is no participation here. The only time you will hear from the councillor is when elections are around. That is when you will see them coming to make empty promises. I do not even want to talk about that municipality because it is useless. People are always complaining about the services, but they do not show up. They only care about themselves not us. That is why they do not even bother even to come here so that we can tell them about our needs and problems”. Participant #17

What is evident in this section is related to what was discussed in section 4.5.2. regarding the use of a top-down approach in decision-making. Due to top-down decision making, indigenous people are denied an opportunity to participate in development activities. This is against the view of Parsons et al. (2017) who believe that participatory, community-driven, and locally based development processes are crucial to produce the desired development outcomes. Based on the participant’s remarks, there is lack of indigenous people’s participation in development activities in Mabheleni. Substantive participation can allow indigenous people to address their needs with development practitioners (Haldane et al., 2019; Nalau and Fisher, 2017). This is however not the case in Mabheleni where local citizens

hardly participate in decisions about services and needs of the community. Lack of substantive participation is one of the reasons why some initiatives failed.

4.7. Management of indigenous knowledge for rural development

This study also explored the management of indigenous knowledge for rural development in Mabheleni. As presented in the sub-sections below, the results indicate the lack of research and documentation of indigenous knowledge in the community. It is also evident that the community relies on traditional sharing and preservation of indigenous knowledge methods.

4.7.1. Research and documentation of indigenous knowledge

Indigenous knowledge is increasingly recognized in development and more research is conducted on this phenomenon for documentation and preservation purposes (Mdhluli et al., 2021). While there is a growing trend globally suggesting the importance of researching and documenting indigenous knowledge, the results of this study indicate that little to nothing is done to research and document indigenous knowledge in Mabheleni. In this regard, the participants reported lack of research in the community as a problem; it was reported that:

“The problem is that there is no research done in this community. People who are educated have no interest to come here and do research; maybe it is because this community is poor and far from the city; I do not know. But that is the problem now; no research is done here. I am even surprised that you are here to do research”.
Participant #1

Without proper scientific research, indigenous knowledge cannot be documented in scientific journal articles, book chapters and books. As accordingly found by Chinsembu and Cheikhyoussef (2016), lack of indigenous knowledge research and documentation means that this important knowledge is likely to get lost. Thus, research on indigenous knowledge is crucial. Corresponding remarks were also shared by the ward councillor who stated that:

“I think you are the first person to interview me for research since I started my term as a councillor. So, this means whatever knowledge we have is not known out there because it is not written anywhere. You know, I even blame our municipality for this, why they do not hire people to do research on this? Because to be honest, this information is very important and can also assist the municipality somehow”.
Participant #3

The above remarks emphasize two important points. First, indigenous knowledge should be researched and be documented. This is not currently happening in Mabheleni. Second, the

municipality should also take responsibility to research and document indigenous knowledge. In this regard, indigenous knowledge can be a crucial resource to the municipality in addressing the needs of the rural communities taking into consideration the indigenous knowledge. Likewise, community members in a focus group discussion also expressed lack of research and documentation of indigenous knowledge as a problem:

“If you can ask us what we know about research, you will notice that we do not know anything about research because no one is doing research here. I think maybe they think the information we have about how to do things right is not necessary. I can say that no one want to hear from us. If people think you are poor, they think you know nothing”.
Participant #14

It is evident that the indigenous people’s knowledge is undermined. To research and document indigenous knowledge, indigenous people should be engaged. Another participant stated that:

“Another problem is that we do not have people locally who can conduct research here. I so wish there were people from the community who can conduct research and who can say, this is our community, let us do research on this to raise the flag of our community. But unfortunately, we do not have those people”. Participant #13

These remarks also shows that one of the possible reasons for the lack of research and documentation of indigenous knowledge is the lack of local expertise to conduct research. Rural communities like Mabheleni are characterized by high illiteracy levels. Thus, it is unlikely to have local expertise to conduct research in such communities. While these results indicate lack research on indigenous knowledge in Mabheleni, it is crucial to acknowledge that research on this subject is increasingly conducted in rural contexts of South Africa (see for example, Ajayi and Mafongoya, 2017; Vilakazi et al., 2019). These results therefore suggest for more research on indigenous knowledge in remote rural communities like Mabheleni and it calls for the active role of local government in indigenous knowledge research.

4.7.2. Sharing and preservation methods

This study also attempted to elicit how indigenous people living in Mabheleni share and preserve indigenous knowledge. This was very important to explore as previous studies indicate the importance of sharing and preserving indigenous knowledge (see for example, Mdhuli et al., 2021; Yunnus, 2017). According to Benyei et al. (2020), sharing indigenous

knowledge is crucial to ensure that it is not lost. This study discovered that people living in Mabheleni use traditional ways to share indigenous knowledge such as witnessing of traditional practices and oral history. The following participant explained the use of witnessing of traditional practices as a way to share indigenous knowledge:

“I think the best practice of sharing our indigenous knowledge in this community is by letting everyone, in particular young people, to get involved in our traditional activities. For example, when I go for hunting, I go with my sons so that they can learn how to hunt. If we do plantation, I get them involved so that they will learn how to grow food so that when I am gone, they will know how to survive on their own. So, my family learn a lot from me by participating in the farming activities” Participant #1

The above remarks indicate that sharing of indigenous knowledge occurs in traditional activities at household level. Members of households learn from each other, and they share their traditional knowledge and skills through participating in traditional activities such as farming and hunting. Another participant explained the use of oral history as a way of sharing indigenous knowledge; this participant stated:

“When we were young, my grandmother used to call all of us, and sit us down. She would tell us how our ancestors lived and how they survived. And she will be like, indlela ibuzwa kwabaphambili [you must learn from elderly]. That is how we learned about weather forecast. For instance, the sound of some birds tells us that it will rain that day; if the sky is blue and clear at night, it means the following day is likely to be sunny. So, we learned a lot from elderly, and we also communicate the wisdom to the younger ones. It is up to them whether they want to learn or not, but we do share our knowledge”. Participant #17

The above remarks indicate that one of the ways in which indigenous people share indigenous knowledge is through oral communication. Evidently, indigenous knowledge is passed down from older generation to younger generation in Mabheleni. These results are consistent with the results of the previous studies which indicate that indigenous knowledge is passed down from generation to generation (Godfrey and Siraje, 2019; Ubisi et al., 2019). While these traditional strategies of sharing indigenous knowledge are good, these should be complemented with scientific means, for example, scientific research and documentation, to ensure that indigenous knowledge is not eroded. This is the reason why some previous studies (see for example, Yunnus, 2017) even recommends for using digital methods to preserve and share indigenous knowledge.

4.8. Conclusion

This study explored the role of indigenous knowledge in participatory rural development. Drawing from qualitative insights, this chapter indicates that while indigenous knowledge exists in Mabheleni, its contribution to rural development is limited. The results suggest that indigenous knowledge is not fully considered in development initiatives in Mabheleni. Nevertheless, community members are able to use their indigenous knowledge to sustain their livelihoods. It was discovered that lack of recognition of indigenous knowledge and the use of a top-down approach in development planning, particularly by development practitioners, constitute a challenge in the use of indigenous knowledge for rural development. Lack of community participation in development activities, including in the provision of services, undermines the potential contribution of indigenous people to their development. These results call for better ways to integrate indigenous knowledge in rural development practice.

Chapter 5: Conclusion

5.1. Introduction

This study explored the role of indigenous knowledge in participatory rural development in the context of Mabheleni in Umzumbe. Empirical evidence, which is analyzed in the preceding chapter, was elicited through semi-structured interviews and focus group discussion. Thus, this study addressed the following objectives, which were to:

- Explore the role of indigenous knowledge in participatory rural development in Mabheleni.
- Identify the challenges impeding the use of indigenous knowledge to stimulate rural development in Mabheleni.
- Identify opportunities for effective use of indigenous knowledge to promote rural development in Mabheleni.
- Explore the strategies used by people living in Mabheleni to preserve their indigenous knowledge.

This chapter is organized into three sections. The first section provides an evaluation of the objectives and an indication of how each of the above objectives were addressed. The second section provides the overall conclusion of the study. And the third section present the key recommendations emanating from the study.

5.2. Evaluation of objectives

5.2.1. Indigenous knowledge and participatory rural development

This study deems indigenous knowledge as a critical resource for rural communities' development. Consistently with the results of the previous studies (see for example, Mistry and Berardi, 2016; Parsons et al., 2017), this study discovered that indigenous knowledge is a critical resource to indigenous people living in Mabheleni. While indigenous people recognize and use their indigenous knowledge to sustain their livelihoods, at a household level in particular, this study shows that indigenous knowledge is largely not considered in the community development initiatives in Mabheleni. For instance, it is evident that indigenous knowledge is overlooked in community gardening projects despite the effective use of this knowledge in subsistence agricultural activities at a household level.

5.2.2. Challenges impeding the use of indigenous knowledge

In addition to the important discovery that indigenous knowledge is overlooked in the development initiatives, this study also explored the challenges impeding the use of indigenous knowledge in the context of Mabheleni. The literature indicates that, in some cases, indigenous knowledge is not used in development practice because it is deemed unreliable (Radeny et al., 2019; Selemani, 2020). Building on the results of the previous studies, this study discovered that indigenous knowledge is generally not considered in development planning and implementation in Mabheleni. This is due to the lack of recognition of indigenous people and their knowledge in their development. Evidently, government officials often use a top-down approach in decision making about development initiatives. This does not only exclude indigenous people in rural development initiatives, but it sets those initiatives up for failure. Thus, the results of this study suggest the need to apply a bottom-up approach in the planning, implementation and management of development initiatives which takes into consideration the indigenous knowledge of local people.

5.2.3. The use of indigenous knowledge to promote rural development

This study also explored how indigenous knowledge is used effectively to promote rural development in the context of Mabheleni. While the results show that indigenous knowledge is overlooked in development initiatives, it was discovered that indigenous people in Mabheleni are able to use their indigenous knowledge effectively. In particular, the results suggest that indigenous people in this community value their knowledge as a source for livelihoods. According to Thompson et al. (2020), indigenous knowledge remains a critical resource to indigenous people in sustaining their livelihoods and development. Similarly, the results of this study demonstrated that indigenous knowledge in Mabheleni is deemed critical and used effectively to sustain livelihoods at a household level. For instance, indigenous people in Mabheleni reported using their indigenous knowledge in livelihood activities such as farming and hunting.

5.2.4. Preservation and sharing of indigenous knowledge

The last objective of this study was to explore how indigenous people in Mabheleni preserve and share their indigenous knowledge. The practice of preserving and sharing indigenous knowledge is critical in attaining sustainable rural development (Benyei et al. 2020; Mdhluli et al. 2021). This study discovered that people living in Mabheleni use traditional ways to

share indigenous knowledge such as witnessing of traditional practices and oral history. However, there is lack of research and documentation of indigenous knowledge in the community. This is a cause of concern as the community is running a risk of indigenous knowledge erosion.

5.3. Conclusion

This study explored the role of indigenous knowledge in participatory rural development in the context of Mabheleni. It positioned indigenous knowledge as a critical resource in which indigenous communities like Mabheleni can rely on for their development. The view that indigenous knowledge is a critical resource in rural development is also evident in the previous studies (Cuaton and Su, 2020; Parsons et al., 2017). As evident in the literature (see for example, Dintwa et al., 2022) and in the results of this study, indigenous knowledge is developed and owned by indigenous communities. However, the contribution of this knowledge towards rural development remains controversial. This study has demonstrated that although indigenous knowledge exists in Mabheleni, its application in rural development practice remains a challenge. Just like many other rural communities, Mabheleni possess rich indigenous knowledge. However, such knowledge is largely overlooked in the development initiatives of this community. Drawing from the perspective of deliberative democracy (Kadlec and Friedman, 2020), this study concludes that rural development should be democratized.

Mabheleni is faced with various socio-economic issues which includes poverty, unemployment, and lack of access to basic services. These socio-economic issues are not unique to Mabheleni as previous research shows that poverty and unemployment, in particular, are nationwide and global problems (Francis and Webster, 2019; Fransman and Yu, 2019; Ronaghi and Scorsone, 2023). Clearly, indigenous knowledge could play a key role in the efforts to address these issues. Unfortunately, however, indigenous knowledge is generally overlooked in the development activities of Mabheleni. This study discovered that local people do not directly and actively participate in the planning, implementation, and management of development activities such as community gardening projects. It was reported by all community members that they only receive invitations to participate in community meetings where they will be told about the municipality plans regarding development initiatives, a practice which overlooks their local knowledge and wisdom. This practice does

not only deny local people an opportunity to participate in their development and get empowered, but it also translates to the failure of many development initiatives implemented in the community. While local people understand the value of their indigenous knowledge and how it can be applied for their development, their wisdom generally does not count in the development agenda, which was often driven by Umzumbe municipality. Evidently, the rural development practice in Mabheleni does not consider the importance of deliberation and participatory decision making as proposed in the deliberative democracy theory (Kadlec and Friedman, 2020). As a result, rural development practice in this community generally subject local people to exclusion in development activities. Accordingly, indigenous knowledge, which could be valuable towards the development of Mabheleni, is currently not recognized. If meaningful rural development in Mabheleni were to be realized, direct deliberative democratic methods that seeks to enhance the participation of local people in their development should be used. This is in accordance with the premise of deliberative democracy (Curato et al., 2017).

Despite numerous previous studies (see for example, Etchart, 2017; Makondo and Thomas, 2018; Mistry and Berardi, 2016) proving the value of indigenous knowledge towards rural development, this study discovered that indigenous knowledge is sidelined in Mabheleni owing to two factors. Firstly, evidence shows that indigenous knowledge is often not recognized in favor of Western scientific knowledge. Secondly, the use of a top-down approach by government officials in decision making about development initiatives often excludes indigenous knowledge in rural development initiatives. These issues undermine the participation of local people in their development, which is the essence of deliberative democracy (Farrell and Suiter, 2021) and thus implies the exclusion of indigenous knowledge in rural development practice. To improve the quality of decision making over rural development, both Western scientific knowledge and indigenous knowledge should be integrated in participatory rural development processes. While the results indicate that local people in Mabheleni recognize and use their indigenous knowledge in sustaining livelihoods, it does not apply in the overall community development initiatives. This therefore undermines the principles of participation and empowerment in rural development practice. This study therefore concludes that indigenous knowledge has limited contribution to rural development in the context of Mabheleni as it only plays a role towards households' livelihoods instead of

wider community development initiatives. While the results of this study largely concur with the results of the previous studies (see for example, Parsons et al. 2017; Smith, 2011), this study is unique because it applies the lenses of deliberative democracy (Farrell and Suiter, 2021) in explaining the importance of deliberation in the process of rural development. In particular, this study suggests that in order to enable the contribution of indigenous knowledge in rural development, local people must actively participate in decision making about development initiatives. The study concludes that direct democracy (Linder and Mueller, 2021) is crucial to promote effective use of indigenous knowledge in rural development.

5.4. Recommendations

This section draws from the results to make informed recommendations that can lead to better use of indigenous knowledge in participatory rural development. The recommendations presented in this section includes recommendations for future research.

5.4.1. Bottom-up rural development

This study discovered that government officials generally use a top-down approach in decision making, panning, and implementation of development initiatives. This practice excludes indigenous people in their development. Therefore, this study recommends the appropriate application of a bottom-up approach to decision making, planning and implementation of development initiatives which can ensure that indigenous knowledge is considered.

5.4.2. Deliberative democracy in rural development

This study discovered that one of the issues leading to the failure of development initiatives in Mabheleni is the lack of participation of indigenous people in those initiatives. This study therefore recommends that local government in particular should encourage and create platform for deliberation in rural development initiatives. In this regard, government should ensure that indigenous people influence policy, programme, and project decisions through substantive deliberation processes.

5.4.3. Research and documentation of indigenous knowledge

This study also discovered that indigenous knowledge in Mabheleni is not researched and documented. This is also a problem in many other rural contexts though indigenous

knowledge research is increasingly supported. It is therefore recommended that local government in particular must collaborate with research institutes and universities in supporting and promoting research and documentation of indigenous knowledge in rural areas.

5.4.4. Preservation of indigenous knowledge

This study discovered that indigenous people living in Mabheleni still rely on traditional methods to preserve and share their indigenous knowledge. There is a chance that indigenous knowledge in this community is slowly lost due to various factors such as death, sickness, and memory loss. To ensure that indigenous knowledge is not lost, and it is accessible to future generations, digital preservation methods should be applied in this digital era. Such methods may include the use of digital libraries to keep indigenous knowledge, for instance. In addition, the local government, in particular, must play a key role in facilitating education programmes where elderly can share indigenous knowledge with the youth. This is important to ensure that indigenous knowledge reaches the younger generation.

5.4.5. Recommendations for future research

This small qualitative study only relied on semi-structured interviews and focus group discussion to explore the role of indigenous knowledge in participatory rural development. While it generated in-depth insights on the phenomenon, its scope is limited to one rural context. It is therefore recommended that future nationwide quantitative study should be conducted on the similar topic. This study sample only included elderly. Thus, the perspectives of youth were not elicited. Therefore, future research on the relevant topic should be conducted amongst the youth. Digitalization of indigenous knowledge is a relatively new concept. Therefore, future research should also be directed towards exploring this phenomenon, particularly its associated challenges within isolated rural communities like Mabheleni.

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Appendix A: English Interview Guide

1. What is your view regarding the level of development at Mabheleni?
2. What can you describe as the key development issues at Mabheleni?
3. How do you think the development issues at Mabheleni can be addressed?
4. Tell me about the development initiatives you are aware of that are taking place at Mabheleni.
5. In your view, what role is the of these development initiatives in the development of Mabheleni?
6. Tell me about the agricultural projects you are aware that are taking place at Mabheleni.
7. In your view, what role is the role of these agricultural projects in the development of Mabheleni?
8. What is your understanding of indigenous knowledge?
9. In general, how would you describe the importance of indigenous knowledge in development?
10. What role do you think indigenous knowledge can play in addressing development issues at Mabheleni?
11. What is the role of indigenous knowledge in the current development initiatives at Mabheleni?
12. In your view, how indigenous knowledge can be used in the development initiatives taking place at Mabheleni?
13. What are some of the key challenges that impedes the use of indigenous knowledge in the development initiatives taking place at Mabheleni?
14. How do you think the challenges impeding the use of indigenous knowledge in development initiatives can be addressed?
15. What is the role of indigenous knowledge in the agricultural projects at Mabheleni?
16. In your view, how indigenous knowledge can be used in the agricultural projects taking place at Mabheleni?
17. What are some of the key challenges that impedes the use of indigenous knowledge in the agricultural projects taking place at Mabheleni?
18. How do you think the challenges impeding the use of indigenous knowledge in agricultural projects can be addressed?
19. What is the level of participation by rural people in development initiatives, particularly agricultural projects, at Mabheleni?
20. How do you think indigenous knowledge can enable rural people to participate in development initiatives, particularly agricultural projects, at Mabheleni?
21. How the municipality promotes the use of indigenous knowledge in the development of rural communities?
22. In your view, how indigenous knowledge is developed at Mabheleni?
23. In your view, how indigenous knowledge can be preserved and shared within Mabheleni?
24. Overall, what else can you say about indigenous knowledge in rural development?

Appendix B: Zulu Interview Guide

1. Uthini umbono wakho mayelana nezinga lentuthuko eMabheleni?
2. Yini ongayichaza njengezingqinamba zentuthuko eMabheleni?
3. Ucabanga ukuthi zingaxazululwa kanjani izingqinamba zentuthuko eMabheleni?
4. Ngitshele ngezinhlelo zentuthuko ozaziyo ezenzeka eMabheleni.
5. Ngokubona kwakho, yiliphi iqhaza lalezi zinhlelo zentuthuko ekuthuthukisweni kwemiphakathi yasemakhaya eMabheleni?
6. Ngitshele ngezinhlelo zezolimo ozaziyo ezenzeka eMabheleni.
7. Ngokubona kwakho, iliphi iqhaza lalezi zinhlelo zezolimo ekuthuthukiseni imiphakathi yasemakhaya eMabheleni?
8. Kuyini ukuqonda kwakho ngolwazi lwendabuko?
9. Ngokuvamile, ungakuchaza kanjani ukubaluleka kolwazi lwendabuko ekuthuthukisweni komphakathi?
10. Ucabanga ukuthi ulwazi lwendabuko lungabamba liphi iqhaza ekuxazululeni izinkinga zentuthuko eMabheleni?
11. Yiliphi iqhaza lolwazi lwendabuko ezinhlelweni ezikhona zentuthuko eMabheleni?
12. Ngokubona kwakho, ulwazi lwendabuko lungasetshenziswa kanjani ezinhlelweni zentuthuko ezenzeka eMabheleni?
13. Yiziphi ezinye zezinselelo ezithiya ukusetshenziswa kolwazi lwendabuko ezinhlelweni zentuthuko ezenzeka eMabheleni?
14. Ucabanga ukuthi zingaxazululwa kanjani izinselelo ezivimbela ukusetshenziswa kolwazi lwendabuko ezinhlelweni zokuthuthukisa umphakathi?
15. Iyini indima yolwazi lwendabuko ezinhlelweni zezolimo eMabheleni?
16. Ngokubona kwakho, ulwazi lwendabuko lungasetshenziswa kanjani ezinhlelweni zezolimo ezenzeka eMabheleni?
17. Yiziphi ezinye zezinselelo ezithiya ukusetshenziswa kolwazi lwendabuko ezinhlelweni zezolimo ezenzeka eMabheleni?
18. Ucabanga ukuthi zingaxazululwa kanjani izinselelo ezivimbela ukusetshenziswa kolwazi lwendabuko emisebenzini yezolimo?
19. Lingakanani izinga lokuhlanganyela kwabantu basemakhaya ezinhlelweni zentuthuko, ikakhulukazi ezolimo, eMabheleni?
20. Ucabanga ukuthi ulwazi lwendabuko lungabasiza kanjani abantu basemakhaya ukuthi babambe iqhaza ezinhlelweni zentuthuko, ikakhulukazi izinhlelo zezolimo, eMabheleni?
21. Umasipala ukugqugquzela kanjani ukusetshenziswa kolwazi lwendabuko ekuthuthukiseni imiphakathi yasemakhaya?
22. Ngokubona kwakho, ulwazi lwendabuko luthuthukiswa kanjani eMabheleni?
23. Ngokubona kwakho, ulwazi lwendabuko lungacina futhi lwabiwe kanjani eMabheleni?
24. Sesiphetha, yini enye ongayisho ngolwazi lwendabuko ekuthuthukisweni kwezindawo zasemakhaya?

Appendix C: English Focus Group Guide

Welcome and introduction.

1. Firstly, I would like to hear from you about the level of development at Mabheleni.
2. How do you think the development issues at Mabheleni can be addressed?
3. What are the development initiatives you are aware of that are taking place at Mabheleni.
4. What role is the of the existing development initiatives in the development of rural communities at Mabheleni?
5. Tell me about the agricultural projects you are aware that are taking place at Mabheleni.
6. What is the role of the agricultural projects in the development of rural communities at Mabheleni?
7. Tell me about your understanding of indigenous knowledge.
8. What is the importance of indigenous knowledge in development?
9. What can be the role of indigenous knowledge in addressing development issues at Mabheleni?
10. Can you tell me about the role of indigenous knowledge in the current development initiatives at Mabheleni.
11. How indigenous knowledge can be used in the development initiatives taking place at Mabheleni?
12. What are some of the key challenges that impedes the use of indigenous knowledge in the development initiatives taking place at Mabheleni?
13. How do you think the challenges impeding the use of indigenous knowledge in development initiatives can be addressed?
14. What is the role of indigenous knowledge in the agricultural projects at Mabheleni?
15. In your view, how indigenous knowledge can be used in the agricultural projects taking place at Mabheleni?
16. What are some of the key challenges that impedes the use of indigenous knowledge in the agricultural projects taking place at Mabheleni?
17. How do you think the challenges impeding the use of indigenous knowledge in agricultural projects can be addressed?
18. What is the level of participation by rural people in development initiatives, particularly agricultural projects, at Mabheleni?
19. How do you think indigenous knowledge can enable rural people to participate in development initiatives, particularly agricultural projects, at Mabheleni?
20. How the municipality promotes the use of indigenous knowledge in the development of rural communities?
21. In your view, how indigenous knowledge is developed at Mabheleni?
22. In your view, how indigenous knowledge can be preserved and shared within Mabheleni?
23. Overall, what else can you say about indigenous knowledge in rural development?

Concluding remarks and vote of thanks.

Appendix D: Zulu Focus Group Guide

Nginyanamukela kulomhlangano.

1. Okokuqala, ngithanda ukuzwa kunina ngezinga lentuthuko eMabheleni.
2. Nicabanga ukuthi zingalungiswa kanjani izinkinga zokugqoza kwentuthuko eMabheleni?
3. Yiziphi izinhlelo zentuthuko enizaziyo ezenzeka eMabheleni.
4. Iliphi iqhaza lezinhlelo ezikhona zentuthuko ekuthuthukisweni kwemiphakathi yasemakhaya eMabheleni?
5. Ngicela ningitshela ngezinhlelo zezolimo enizaziyo ezenzeka eMabheleni.
6. Ngokubona kwenu, zidlala yiphi indima izinhlelo zezolimo ekuthuthukiseni imiphakathi yasemakhaya eMabheleni?
7. Ngicela ningitshela ngokuqonda kwenu ulwazi lwendabuko.
8. Yini ukubaluleka kolwazi lwendabuko ekuthuthukisweni kwemiphakathi?
9. Kungaba yini iqhaza lolwazi lwendabuko ekuxazululeni izinkinga zentuthuko eMabheleni?
10. Ngicela ningitshela ngeqhaza lolwazi lwendabuko ezinhlelweni ezikhona zentuthuko eMabheleni.
11. Ulwazi lwendabuko lungasetshenziswa kanjani ezinhlelweni zentuthuko ezenzeka eMabheleni?
12. Yiziphi ezinye zezinselelo ezithiya ukusetshenziswa kolwazi lwendabuko ezinhlelweni zentuthuko ezenzeka eMabheleni?
13. Nicabanga ukuthi zingaxazululwa kanjani izinselelo ezivimbela ukusetshenziswa kolwazi lwendabuko ezinhlelweni zokuthuthukisa?
14. Iyini indima edlalwa ulwazi lwendabuko ezinhlelweni zezolimo eMabheleni?
15. Ngokubona kwenu, ulwazi lwendabuko lungasetshenziswa kanjani ezinhlelweni zezolimo ezenzeka eMabheleni?
16. Yiziphi ezinye zezinselelo ezithiya ukusetshenziswa kolwazi lwendabuko ezinhlelweni zezolimo ezenzeka eMabheleni?
17. Nicabanga ukuthi zingaxazululwa kanjani izinselelo ezivimbela ukusetshenziswa kolwazi lwendabuko emisebenzini yezolimo?
18. Lingakanani izinga lokuhlanganyela kwabantu basemakhaya ezinhlelweni zentuthuko, ikakhulukazi ezolimo, eMabheleni?
19. Nicabanga ukuthi ulwazi lwendabuko lungabasiza kanjani abantu basemakhaya ukuthi babambe iqhaza ezinhlelweni zentuthuko, ikakhulukazi izinhlelo zezolimo, eMabheleni?
20. Umasipala ukugqugquzela kanjani ukusetshenziswa kolwazi lwendabuko ekuthuthukiseni imiphakathi yasemakhaya?
21. Ngokubona kwenu, ulwazi lwendabuko luthuthukiswa kanjani eMabheleni?
22. Ngokubona kwenu, ulwazi lwendabuko lungagcinwa futhi kwabelwane ngalo kanjani eMabheleni?
23. Sekukonke, yini enye eningayisho ngolwazi lwendabuko ekuthuthukisweni kwezindawo zasemakhaya?

Amazwi okuphetha kanye nevoti lokubonga.

Appendix E: English Informed Consent Form

Dear Participant,

My name is Zethembe Mseleku (210541645). I am a Masters candidate studying at the University of KwaZulu-Natal, Howard College. The title of my research is: Indigenous knowledge and participatory rural development in Mabheleni, Umzumbe Municipality, KwaZulu-Natal, South Africa. The aim of the study is to explore the contribution of indigenous knowledge towards participatory rural development at Umzumbe. I am interested in interviewing you so as to share your experiences and observations on the subject matter.

Please note that:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalized for taking such an action.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take about 30 to 60 minutes long.
- The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisors. After a period of 5 years, in line with the rules of the university, it will be disposed by shredding and burning.
- If you agree to participate, please sign the declaration attached to this statement (a separate sheet will be provided for signatures)

I can be contacted at: School of Social Sciences, University of KwaZulu-Natal, Howard College Campus, Durban. Email: 210541645@stu.ukzn.ac.za;
Cell: 0789843392; 0720305524

My supervisor is Prof Sagie Narsiah who is located at the School of Social Sciences, Howard College Campus, Durban of the University of KwaZulu-Natal. Contact details: Email: narsiahi@ukzn.ac.za; Phone number: 031 260 2470/2628

The Humanities and Social Sciences Research Ethics Committee contact details are as follows: Email: HSSREC@ukzn.ac.za, Phone number/s: 031 260 3587/4557/8350.

Thank you for your contribution to this research.

DECLARATION

I..... hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

I consent / do not consent to have this interview recorded (if applicable)

SIGNATURE OF PARTICIPANT

DATE

.....

Appendix F: Zulu Informed Consent Form

Sawubona,

Igama lami ngu Zethembe Mseleku (210541645). Ngingumfundi owenza iziqu ze Masters eNyuvesi yaKwaZulu-Natal, eHoward College. Isihloko socwaningo lwami sithi: Indigenous knowledge and participatory rural development in Mabheleni, Umzumbe Municipality, KwaZulu-Natal, South Africa. Inhloso yocwaningo ukuhlola igalelo lolwazi lwendabuko ekuthuthukisweni kwezindawo zasemakhaya eMzumbe. Nginentshisekelo yokuxoxisana nawe ukuze ngabelane ngolwazi lwakho kanye nokuphawulile ngesihloko.

Ngicela wazi ukuthi:

- Ulwazi olunikezayo luzosetshenziselwa kucwaningo lwesayensi kuphela.
- Ukuhlanganyela kwakho kungokuzithandela. Unokukhetha ukubamba iqhaza, hhayi ukubamba iqhaza noma ukuyeka ukubamba iqhaza ocwaningweni. Ngeke ujeziswe ngokwenza isenzo esinjalo.
- Imibono yakho kule nhlolekhono izokwethulwa ngokungaziwa. Igama lakho noma ubuwena ngeke kudalulwe nganoma iyiphi indlela ocwaningweni.
- Inhlolekhono izothatha cishe imizuzu engama-30 kuya kwengama-60 ubude.
- Irekhodi kanye nezinye izinto ezihlobene nenhlolekhono zizogcinwa efayeleni elivikelwe ngephasiwedi elifinyeleleka kimina kuphela nabaphathi bami. Ngemuva kweminyaka emi-5, ngokuhambisana nemithetho yenyuvesi, izolahlwa ngokusikwa nokushiswa.
- Uma uvuma ukubamba iqhaza sicela usayine isimemezelo esinamathiselwe kulesi sitatimende (iphepha elihlukile lizonikezwa ukuthi lisayinwe)

Ngitholakala kwiskile se Social Sciences, eNyuvesi yaKwaZulu-Natal, eHoward College Campus, Durban. I-imeyili: 210541645@stu.ukzn.ac.za;

Iselula: 0789843392; 0720305524

Umpathi wami u Prof Sagie Narsiah otholakala kwiskole se Social Sciences, eHoward College Campus, eThekwini, eNyuvesi yaKwaZulu-Natal. Utholakala kuleminingwano: I-imeyili: narsiahi@ukzn.ac.za; Inombolo yocingo: 031 260 2470/2628

Imininingwano yesigungo i Humanities and Social Sciences Research Ethics Committee ithi: I-imeyili: HSSREC@ukzn.ac.za, Inombolo yocingo 031 260 3587/4557/8350.

Ngiyabonga ngegalelo lakho kulolu cwaningo.

DECLARATION

Mina..... ngalokhu
ngiyaqinisekisa ukuthi ngiyakuqonda okuqukethwe kulo mbhalo kanye nohlobo lwephrojekthi yocwaningo, futhi ngiyavuma ukubamba iqhaza kuphrojekthi yocwaningo.

Ngiyacabanga ukuthi ngiyosungula uhlaka lombhalo kanye nohlobo lwesifundo socwaningo, ngiyavuma ukubamba ukuxhumana phakathi kwengxoxo yocwaningo futhi.

Ngiyavuma / angivumi ukuthi le nhlolokhono irekhodwe (uma ikhona)

Isiginisha yakho

Usuku

.....

Appendix G: Ethical Clearance Letter



02 February 2023

Zethembe Mseleku (210541645)
School Of Social Sciences
Howard College

Dear Z Mseleku,

Protocol reference number: HSSREC/00005180/2023

Project title: Indigenous knowledge and participatory rural development in Mabheleni community, Umzumbe Municipality, KwaZulu-Natal, South Africa.

Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 28 December 2022 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 02 February 2024.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

Postal Address: Private Bag X54001, Durban, 4000, South Africa

Telephone: +27 (0)31 260 8350/4557/3587 Email: hssrec@ukzn.ac.za Website: <http://research.ukzn.ac.za/Research-Ethics>

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

INSPIRING GREATNESS

Appendix H: Turnitin Report

Indigenous knowledge and participatory rural development in Mabheleni, Umzumbe Municipality, KwaZulu-Natal, South Africa

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