Cape Peninsula University of Technology

PRESERVATION OF INDIGENOUS KNOWLEDGE AMONGST THE HLUBI NATION THROUGH SOCIAL MEDIA TECHNOLOGIES

by

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DECLARATION

I, Akhona Ndlela, declare that the contents of this thesis represent my own unaided work, and that the thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

July 2022

Signed **Date**

ABSTRACT

Indigenous knowledge (IK), diverse narratives and heritage of marginalised communities in the institutions of memory, such as cultural archives, are inadequate. The lack of diversification and inclusion of the archive result in a risk of information loss and inconsistency in the archive. It is unclear how social media can effectively be used to digitise cultural activities and history of marginalised indigenous communities.

The study focused on answering the following research questions: i) What are the challenges faced by indigenous marginalised communities in using social media technologies (SMTs) for the preservation of IK? ii) How can SMTs be used to enhance the preservation of IK?

The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives. An interpretivist epistemological paradigm was followed. The study used an exploratory methodology. The target population (19) of this study were members of the Hlubi nation organised under the Mthimkhulu Cultural Institute (MCI) based in the Eastern Cape, South Africa. Using non-probability sampling, the sample frame comprised members of the community affiliated to MCI. Data were collected using semi-structured interviews and the data were analysed using a thematic analysis method.

The study followed strict ethics to guarantee that integrity and moral standards were upheld throughout, as mandated by CPUT. The MCI and the research subjects both gave their written consent to participate in the study.

The study contributes to existing knowledge on cultural preservation discourse. The study provides information to social scientists and policymakers to better understand how traditional rural marginalised communities can use SMTs in the preservation of their IK, culture and histories.

The results indicate that although social media technologies provide the benefits of being able to capture, store and disseminate indigenous knowledge, the findings show that the implementation of SMTs may require major technological and skills development and investment before the benefits of SMTs can be realised by indigenous communities.

Keywords: Social media technologies, indigenous knowledge, digital preservation.

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- My family and friends to whom I have been an absent figure; I have missed most of my family and friends' gatherings, as well as church events, while conducting this research; thank you for your patience and understanding.

DEDICATION

I dedicate this thesis to three special people who have meant so much to me and continue to do so. The first is in remembrance of Bishop Dr M Panduva (D.Div). Despite the fact that you have ascended into spiritdom, you have served as a role model, a mentor, and a father to me, and your memories and lessons continue to guide my life.

Anje and Lethu, aka “The Galz”, are the next two people to whom I dedicate my thesis; you two have been my biggest sources of encouragement in obtaining this Master’s degree. I want to demonstrate to you, by action and proven results, that regardless of one’s background or the challenges that one faces in life, the open secret to success in our lives is hard work, relentless commitment, focus and an unwavering devotion to prayer.

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ABBREVIATIONS AND ACRONYMS

SMT	Social media technology
IK	Indigenous knowledge
ICT	Information and communications technology
KM	Knowledge management
ISAZIMZI	A traditional ceremony made for instruction of a newly built house to introduce and invite the spirit of the ancestors to protect the house
IMBELEKO	The traditional ritual of introducing a child to the ancestors
Statista	The top internet-based statistics provider, specialising in consumer and market data

CHAPTER 1: INTRODUCTION

Figure 1.1: Chapter 1 layout

1.1 Introduction

The preservation of cultural and historical memory in South Africa continues to favour domination of colonial methods and approach in the archives. The aim of the study was to explore the role that social media technologies (SMTs) can play in the preservation of the indigenous knowledge (IK) of the Hlubi nation for the future and further use in representation

of the cultural archives. Figure 1.1 depicts the layout of the chapter. The perspectives of indigenous communities is neglected in the social memory of the country (Ngoepe & Netshakhuma, 2018). According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2018:1), “indigenous peoples are a living manifestations of cultural diversity, repositories of thousands of rare languages, and essential partners in building knowledge societies and achieving the 2030 Agenda for Sustainable Development”. The South African Department of Sport, Arts and Culture is mandated with the preservation, protection, promotion and development of the artistic, cultural, heritage and linguistic diversity, and legacy of South Africa (The Department of Arts and Culture, 2017). However, the department does not seem to be living up to this mandate. Ngoepe (2019) found that the public domain is not accommodating of indigenous models of knowledge production and diverse cultural heritage of indigenous communities. The marginalisation and neglect of rural communities places South Africa in danger of not meeting the 2030 Agenda of the Sustainable Development Goals.

In the age of technology where SMTs and modernisation are rapidly growing, indigenous cultures and knowledge are at risk of being lost. It has become more urgent for researchers to conduct research that answers critical questions around the exclusion of the IK of marginalised communities in the archives. The answers to questions should provide for sustainable solutions that facilitate inclusivity and collaboration in the building of archives that seek to provide redress of South Africa difficult past of segregation. This study sought to provide a response to such questions. Recent academic literature has explored the potential use of social media technologies (SMTs) in preserving indigenous knowledge (IK) (Nkuna & Mhlanga, 2021; Ngulube et al., 2020). For instance, Nkuna and Mhlanga (2021) found that Facebook provided a platform for the Vhavenda people in South Africa to share their knowledge and preserve their cultural heritage, while Ngulube et al. (2020) discovered that YouTube allowed the Zulu people to showcase their cultural practices and traditions. However, careful consideration must be given to the ways in which technology is used and who has access to it, as Selematsela et al. (2021) highlighted the challenges of using SMTs in the preservation of indigenous knowledge in South Africa, including issues of access, ownership, and control. Similarly, Mavhunga (2021) emphasized that while mobile technologies can help to democratize access to information and empower marginalized communities, issues of ownership, control, and privacy must be taken into account.

The rationale for the current study was born out of the fact that the preservation of IK as a valuable cultural commodity has become urgent. Modernisation and the introduction of SMTs provide opportunities to better equip marginalised communities to enable them to undertake preservation processes. This qualitative study contributes to existing knowledge in cultural

preservation discourse and provides information to social scientists and policymakers to better understand how traditional rural marginalised communities interface with technology. This study also focuses on qualitative findings in order to gain an in-depth understanding of how SMTs can aid in the preservation and restoration of IK. This study provides information for future researchers who wish to study the integration and use of modern technologies to aid development of rural marginalised communities.

Finally, the case for this research was the Hlubi nation. AmaHlubi are of eMbo descent and they constitute the greatest formation of the eMbo nation, who were part of the downward migration from central Africa to settle in areas of what is now known as KwaZulu in the 1500s (Wright & Manson, 1873). The Hlubi group is the oldest, predating the amaZulu and amaXhosa. The factor that distinguishes amaHlubi from the amaZulu and amaXhosa peoples is their *tekela* dialect, rituals and different clothing code (Rudwick, 2006), as seen in Figure 1.2. They are thought to have descended from the Shubi, who can still be found in Congo, Rwanda and Tanzania.

Figure 1.2: Africa: men of the Hlubi tribe eating

(Albumen print: Wellcome Collection)

The Hlubi people's story is one of land dispossession, displacement and loss of identity. Since 1870, when King Langalibalele became the first traditional leader to be imprisoned by colonial officials, the Hlubi's land has been seized and given to the Zulu monarch, with areas remaining under the control of the Natal colony (Peires, 2014). According to the amaHlubi declaration to the Nhlapo commission, Langalibalele I, king of the amaHlubi until his capture and deposition

in 1873, died as a prisoner in house captivity in 1889. As a result, none of his heirs ever ascended to the throne. As a result, his successor, Ingonyama Muziwenkosi, Langalibalele II, is recognised by national and provincial governments as a chief within the KwaZulu-Natal province, making him and his people in Natal (and elsewhere) legal subjects. When the British colonial authority issued a statement in 1873 removing amaHlubi King Langalibalele's powers, his people lost more than just their sovereignty. Many amaHlubi adopted other languages in fear of being identified as subjects of the ousted monarch and punished as a result of the move that saw Langalibalele imprisoned on Robben Island.

Figure 1.3: Picture of King Langalibalele I

(Source: South African History Online)

AmaHlubi are working hard to conserve their original language and identity, which is on the verge of extinction and is only spoken in a few parts of the Eastern Cape, KwaZulu-Natal and Lesotho.

Figure 1.4: AmaHlubi men who graduated from initiation school in Moroka, Mount Fletcher

(Source: Lulamile Feni)

Chapter 1 (as set out in Figure 1.1) includes content on: i) an introduction and context of the study; ii) the research problem; iii) the problem statement; iii) the research questions; iv) research aim; v) the research objectives; vi) research methodology; vii) the research approach; viii) research strategy; ix) data collection; x) data analysis; xi) delineation; xii) ethics; xiii) research findings; xiv) research contributions; xv) conclusion; xvi) summary; and xvii) layout of thesis.

1.2 Research problem

IK, diverse narratives and heritage of marginalised communities in the institutions of memory, such as cultural archives, are inadequate. Caswell et al. (2017) said that marginal communities are being shut out of dominant historical narratives created by mainstream memory institutions. Where the histories exist, they are often distorted or not in line with what the communities consider a valid representation of themselves, their history and their cultural heritage (Stichel et al., 2019). It is a challenge to capture the information of the cultural environments and history of these marginalised communities and store it in such a way that future generations have access to it.

The omissions and distortions in the historical records have resulted in skewed and stereotyped narratives about marginalised groups by outsiders (Stichel et al., 2019). The is also a risk of information loss and inconsistency when indigenous cultural groups compete for archive space alongside mainstream Western cultural systems (Dissanayake & Cook, 2018). The lack of archival diversification and inclusion has had a traumatic effect on communities as

a result of what Roberts et al. (2017) describe as a loss on the transformational influence of digital historical resources on community regeneration, community cohesiveness and potential socioeconomic benefits to communities.

Although the developments in information and communications technologies (ICTs) have provided successful techniques for the digitisation of heritage, some of these techniques have been shown to be less effective than others (Shimray & Ramaiah, 2018). Botangen et al. (2017) recommend an extensive impact evaluation on the use of SMTs in the preservation of IK. According Roberts et al. (2017), critical questions must be asked, the different uses and benefits of technologies across diverse rural groups must continue and should consider rurality and digital inclusion. Dissanayake and Cook (2018) suggest that further research must be conducted to investigate a sustainable, low-cost approach to the digital preservation of culture and heritage for indigenous communities.

1.3 Problem statement

It is unclear how social media can effectively be used to digitise cultural activities and history of marginalised indigenous communities.

1.4 Research questions, objectives of the questions and methodology

Table 1.1 presents the research questions (RQs) and the research sub-questions (RSQs) posed in order to explore the research problem.

RQ1 is, What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK? The are two RSQ presented under RQ1. RSQ1.1 what is the current process of preserving IK? and the objective of RSQ1.1 is to determine the process and stakeholders involved in the preservation of IK and the methodology that is used is Interviews Semi-structured questionnaires. The second RSQ under RQ1 is RSQ1.2 presented as What are the challenging factors in preserving IK? The objective of RSQ1.2 is to examine the challenging factors in the preservation of IK and the methodology that is used is Interviews Semi-structured questionnaires.

RQ2 is how can SMTs be used to enhance the preservation of IK? The are two RSQ presented under RQ2 which is RSQ 2.1 how should technology be used to capture and store knowledge, traditions and customs? the objective of asking RSQ2.1 is to determine the best inclusive practice for the use of technology in the preservation of traditions and customs? and the methodology that is used is Interviews Semi-structured questionnaires. The second RSQ under RQ2 is RSQ2.2 which is how can the gap in perceptions of SMTs be narrowed? The

objective of askingRSQ2.2 is to investigate ways in which to manage stereotypes and myths on the SMTs. and the methodology that is used is Interviews semi-structured questionnaires.

Included in the table below are the objectives of the RSQs and the methodology applied to answer these questions.

Table 1.1: The RQs, RSQs, objectives and methodology

RQ1	**What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK?**		
	Question	**Objective**	**Methodology**
RSQ 1.1	What is the current process of preserving IK?	To determine the process and stakeholders involved in the preservation of IK.	Interviews Semi-structured questionnaires
RSQ 1.2	What are the challenging factors in preserving IK?	To examine the challenging factors in the preservation of IK.	Interviews Semi-structured questionnaires
RQ 2	**How can SMTs be used to enhance the preservation of IK?**		
	Question	**Objective**	**Methodology**
RSQ 2.1	How should technology be used to capture and store knowledge, traditions and customs?	To determine the best inclusive practice for the use of technology in the preservation of traditions and customs?	Interviews Semi-structured questionnaires
RSQ 2.2	How can the gap in perceptions of SMTs be narrowed?	To investigate ways in which to manage stereotypes and myths on the SMTs.	Interviews Semi-structured questionnaires

*RSQ - research sub-question

1.5 Aim of the study

The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives.

1.6 Objectives of the study

The main objectives of the study were:

i) To identify contributing factors that lead to attitudes and perceptions on the use of social media by the Hlubi Nation.

ii) To examine the effectiveness of social media as a tool to capture, store, preserve and disseminate IK of the Hlubi nation.

1.7 Research methodology

1.7.1 Introduction

The research approach employed for this study is described in Chapter 3. Because of the nature of the research and the participants' different frames of reference, subjectivist ontology was used in this study. A qualitative approach was employed to gain an understanding of

personal experiences, current difficulties and recommendations. The methodology utilised in the study allowed for a thorough inquiry to be done in the natural setting where the participants lived.

1.7.2 Research philosophy

1.7.2.1 Ontology

Ontology is “a set of beliefs about the nature of reality, ontological beliefs influence how you observe and examine your research items” (Saunders et al., 2019:133). According to Hiller (2016), ontological ideas, often known as assumptions in philosophy, determine the sort of questions a researcher could ask about how the world works or how individuals act or interact. There are two types of ontology: objectivism and subjectivism (Cruickshank, 2007). The former assumes the presence of a real world, independent of human knowledge, while the latter indicates a socially and discursively produced reality.

i) Objectivism

According to Böhme et al. (2012), researchers might oversimplify reality by using objectivist methodological assumptions and by relying too much on mathematical analysis, resulting in rigorously developed theories and suggestions that are not relevant to the researcher. This research does not follow the objectivist ontology.

ii) Subjectivism

Subjectivist ontology maintains that people generate experiences of reality in the brain through thoughts and ideas, and that this reality is accessible to a broad range of interpretations, where there are no hard laws regarding how reality is or may be experienced (Hiller, 2016). According to Holden and Lynch (2006:10), researchers are “unable to distinguish themselves from what is being observed, the study’s subject matter, or the research methodology; in other words, the researcher’s knowledge, social position, interests, perspectives, attributes, principles, and resources all contribute to their biasness”. Because of the exploratory character of the research, this study employed subjectivist ontology.

1.7.2.2 Epistemology

Epistemology pertains to ideas about knowing; what defines appropriate, relevant and authentic knowledge; and how we might transmit information to others (Callaghan, 2017). According to Neuman (2014:95), epistemology is “the question of how we know the world around us or what makes a claim about it accurate”. Epistemology is also “concerned with constructing a philosophical foundation for determining what forms of knowledge are conceivable and how we may assure that they are both sufficient and valid” (Scotland, 2012:9). There are two major views in epistemology, namely, i) positivism and ii) interpretivism.

i) Positivism

A positivist epistemology is largely based on objectivism and highlights the use of scientific research procedures as a philosophical perspective (Kivunja & Kuyini, 2017). According to Park et al. (2020), positivism employs the hypothetic-deductive technique to test a priori ideas, which are frequently articulated quantitatively and from which functional correlations between causation and explanatory factors may be deduced.

ii) Interpretivism

“Interpretivism is based on subjectivisms, and that interpretivism method helps researchers to have a far better understanding of a phenomena and its complexity in its specific context” (Pham, 2018:3). The researcher in this study situated himself within the boundaries of the interpretivist epistemological discourse.

1.7.3 Research approach

Deductive and inductive analysis are the two most common forms of analysis employed in research (Soiferman, 2010:3). Soiferman (2010) argues, however, that there appears to be some dispute between researchers about the appropriate strategy to utilise when conducting research and obtaining data. These two approaches are not mutually exclusive and frequently address the same subject using different approaches.

1.7.3.1 Deductive approach

Deductive theorists believe in a single reality that can be reliably and properly measured using scientific standards (Soiferman, 2010:4). This study did not follow the deductive approach because it was not a suitable approach for the study.

1.7.3.2 Inductive approach

The induction research technique entails moving from the specific to the general, such as when making actual observations about a topic of interest and developing conceptions and theories based on them (Woiceshyn, 2017). The inductive technique was employed in the study because of the interpretive epistemology chosen, and interviews were used to add to the understanding of individual, group, organisational, social, political and related phenomena.

1.7.4 Research strategy

1.7.4.1 Introduction

Sönmez (2013:308) defines a research strategy as “a collection of established logical stages or some type of blueprint plan that instructs on how the investigation is to be carried out”. According to Bryman (2017), qualitative research is usually associated with participant

observation, semi-structured and unstructured interviews, focus groups, the qualitative assessment of texts and various language-based methodologies such as conversation and discourse analysis.

Given the nature of the research questions and the interpretivist philosophical construct of this study, the exploratory methodology was chosen as the best approach. This allowed for data collection through the use of in-depth interviews, allowing the researcher to gain a thorough understanding of the phenomenon.

1.7.4.2 The strategy

Wedawatta and Amaratunga (2011:1) state that research strategy "gives the general direction of the study as well as the procedure by which the research is executed". Saunders et al. (2019) note the various research strategies include experimental research, survey, archival research, case study, ethnography, action research, grounded theory and narrative enquiries.

The overarching strategy for this research was that of a case study. Schell (1992:2) defines a case study as "an empirical investigation of a current phenomenon in its real-world environment, where the boundaries between phenomenon and context are blurred and numerous sources of data are considered". A case study can also been seen as a strategy for studying a single occurrence of a phenomenon in a natural context using a range of approaches to get in-depth information. It may accommodate a number of research methodologies and is often employed when an in-depth understanding of a phenomenon is required (Wedawatta & Amaratunga, 2011).

1.7.4.3 The unit of analysis

A unit of analysis is the item about which the researcher wants to say something at the conclusion of the research and is considered the focus of research (DeCarlo, 2018). The unit of analysis of this research was the use of SMTs to enhance and preserve the heritage of the Hlubi nation constituted under the Mthimkhulu Cultural Institute (MCI).

1.7.4.4 The unit of observation

The item (or items) being observed, measured or gathered while attempting to learn something about the unit of analysis is referred to as a unit of observation (DeCarlo, 2018). Unlike units of analysis, units of observation are generally defined by the type of data collection used to address the research question (Sheppard, 2020a). The units of observation of this study were the selected members of the Hlubi nation as participants in the study. Ten seniors members of the MCI (older than 35 years old) and nine youth (younger than 35 years old) were non-randomly and conveniently selected.

1.7.4.5 Sampling

The process of selecting observations to be studied for research purposes is known as sampling. To put it another way, sampling is the process of picking a subset of a group of interest and extracting conclusions from that subset (Sheppard, 2020b). There are two main sampling methods, namely probability sampling and non-probability sampling. The probability sampling method includes simple random sampling, systematic sampling, stratified sampling and cluster sampling (Turner, 2020). Probability sampling was not used in this study. This study used a non-probability sampling technique where 19 participants (Chapter 3, section 3.3.5; Chapter 4, section 4.3) were selected based on the age and gender representatively characteristic (Taherdoost, 2018:20). The sample was non-randomly, purposively and conveniently selected.

1.7.5 Data collection

Data collection is the "act of acquiring and measuring information on variables of interest in a systematic manner that allows one to answer specified research questions, test hypotheses, and assess outcomes" (Bijayalaskhmi, 2017:202). The purpose of any data gathering is to capture high-quality evidence, which translates to rich data analysis. The rich data enables the construction of a persuasive and credible solution to the questions addressed (Fry et al., 2009). The data was collected through the conducting of interviews utilising a semi-structured questionnaire within the context of an Interview guide (Appendix F). There were 19 interviews conducted. All interviews were recorded. The participants gave their permission for the interviews to be recorded.

1.7.6 Data analysis

Data analysis is critical since it has a significant impact on the outcomes of each study (Reich, 1994). Data analysis is "a set of methods and procedures through which a researcher converts obtained data into some kind of explanation, understanding, or interpretation of the people and situations that the researcher is investigating" (Chowdhury, 2015). The recorded interviews in this study were transcribed and the transcription of a particular participant was returned to the participant to confirm and, if necessary, correct the transcription. The transcriptions were examined once they had been verified. The analysis was carried out via coding, summarising, categorising and, eventually, developing themes.

1.8 Delineation

According to Simon (2011), delineations may be thought of as specific criteria that are under the researcher's control in order to project the study's bounds. Delineations can also include characteristics such as the geographic region and organisation covered by the investigation. The study was done in the Cala area of the Sakhisizwe Municipality. The Sakhisizwe Municipality is one of the six local municipalities located in the Chris Hani District of the Eastern Cape, as shown in Figure 1.5. Despite the fact that the Hlubi people are found all across Africa, the population of the study was limited to Hlubi nation in Cala area. Participants included members of the MCI. Hlubi's from other parts of the South Africa are not included.

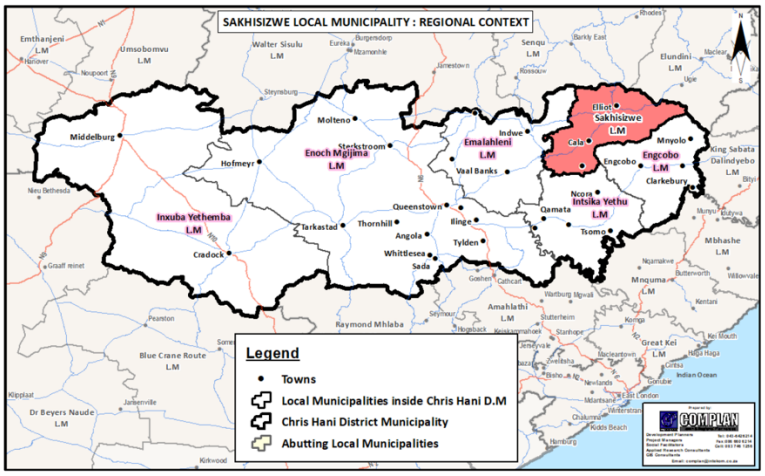

Figure 1.5: Map of Sakhisizwe Municipality within the Chris Hani District (Chris Hani District website)

1.9 Ethics

Resnik (2015:1) defines ethics as "norms of conduct that distinguish between acceptable and unethical activity". This study followed all of the ethical requirements established by the Cape Peninsula University of Technology's Faculty Research Ethics Committee Business and Management Sciences (Chapter 3, section 3.6). The certificate of ethics approval is shown in Appendix E. Although there were no recognised hazards associated with participation in this study, the researcher accepted that research practice requires researchers to acquire informed permission from all research participants. In the study, all ethical criteria were properly followed.

The study's goals and objectives were thoroughly described to all individuals who volunteered and agreed to participate in the study. Prior to conducting the interviews, the researcher collected consent forms from all participants and advised the participants that they could withdraw from participation in the study if they so wished. It was explained to the participants that withdrawal could take place at any time during, and even after, the interview. The

researcher also ensured the anonymity and confidentiality of all participants by using code names and generic names on the transcripts, instead of the participants' names.

1.10 Research findings

The findings in terms of the Hlubi nation and the use of SMTs is that the Hlubi nation recognised the following areas as challenges to properly establish a preservation programme for the nation using SMTs. These challenges are: i) a flawed knowledge management system within the Hlubi nation; and ii) poor ICT infrastructure, a situation that is widespread in rural areas. The study furthermore found iii) concerns about data security and sovereignty. The use of Hlubi IK data is a major reason for the reluctance to use SMTs in the preservation of Hlubi IK processes. A further finding is that SMTs can be highly beneficial for the preservation of IK.

The use Facebook and YouTube are the most preferred SMT platforms for preserving the Hlubi people's IK. The two platforms were chosen because they were both accessible and simple to use. Twitter, WhatsApp and Instagram were all named as the least preferred SMT platforms.

1.11 Conclusion

The purpose of this project was to explore how SMTs could aid in the capture of IK for the future and for representation in cultural archives. The findings indicate that SMTs have several advantages for IK capture, storage and distribution. However, further findings indicate that SMT adoption may necessitate significant technology and talent development expenditure before the SMT benefits can be realised.

1.12 Contribution

This work is important for both practical and theoretical reasons because it attempted to improve knowledge of the factors that prevent the implementation of SMTs in the IK preservation processes of the Hlubi nation. These factors give some insights into the difficulty that indigenous rural South African communities experience in retaining their cultural identities, IK and traditions in the face of a rapidly changing world dominated by ever advancing technology.

This study also contributes to a better understanding of social media adoption in underserved rural areas, which have previously been excluded. This study's findings could also assist the government to plan and develop inclusive policies that enable improved relations and collaboration between the government and indigenous groups when dealing with issues of cultural preservation and restoration.

1.13 Summary

Chapter 1 focused on the research problem, research questions, research sub-questions, the study's aim and the study's objectives. In the chapter, the researcher expanded on the justification for doing the study by commenting on its contribution and relevance to the body of research. An introduction to the research methodology was presented, as well as a description of how the research was carried out.

The research took an interpretive paradigm and inductive approach to the study. The data gathering technique used was interviews with 19 participants who were purposely selected from the membership of the Hlubi nation as the units of observation, with the MCI as the unit of analysis. Semi-structured interviews were used to obtain data from the 19 participants. The responses to the questions were transcribed, evaluated and analysed in order to find relevant themes.

The problem statement is: It is unclear how social media can effectively be used to digitise cultural activities and history of marginalised indigenous communities.

The following are the primary research questions that the project intends to answer:

RQ1: What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK?

RQ2: How can SMTs be used to enhance the preservation of IK?

The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives.

1.14 Thesis layout

The research is divided into the following chapters:

Chapter 1: Introduction

In the introduction, the researcher briefly discusses the background of the research issue and the study's objective. The research problem, research goal (the reason for the study) and goals (how the researcher planned to accomplish the goal) are next presented, followed by the research questions. This is followed by a conceptualisation of critical concepts in the context of this investigation. The study's definition and planned contributions, the thesis framework and a conclusion are specified.

Chapter 2: Literature Review

In this chapter, the researcher presents a thematic analysis of the extant literature. The chapter contains an examination of indigenous disadvantaged populations, IK, digitisation, rurality and digital inclusion, and SMTs, including sections on Facebook, TikTok, Instagram, Twitter and WhatsApp. The final section of the review deals with indigenous data sovereignty.

Chapter 3: Research Methodology

In this chapter, the researcher introduces the study's theoretical foundations as well as its importance to SMT research.

Chapter 4: Findings

In this chapter, the researcher discusses the data collection technique, as well as the context in which data was gathered and the thematic analysis process. The emergent themes from the transcribed material are arranged and presented in accordance with the research's main questions.

Chapter 5: Discussion

In this chapter, the researcher examines and evaluates the outcomes of the study, as well as the use of SMT theory and literature to address the research problem and identify connections between new theoretical frameworks.

Chapter 6: Conclusions, recommendations and reflections

This is the final chapter. In this chapter, the researcher supports the study findings by citing the rationale for conducting the study and how the researcher's philosophical stance influenced the study's conclusion. The chapter concludes with research-based recommendations, as well as the researcher's observations and reflections on the research process.

The literature is reviewed in the next chapter.

CHAPTER 2: LITERATURE REVIEW

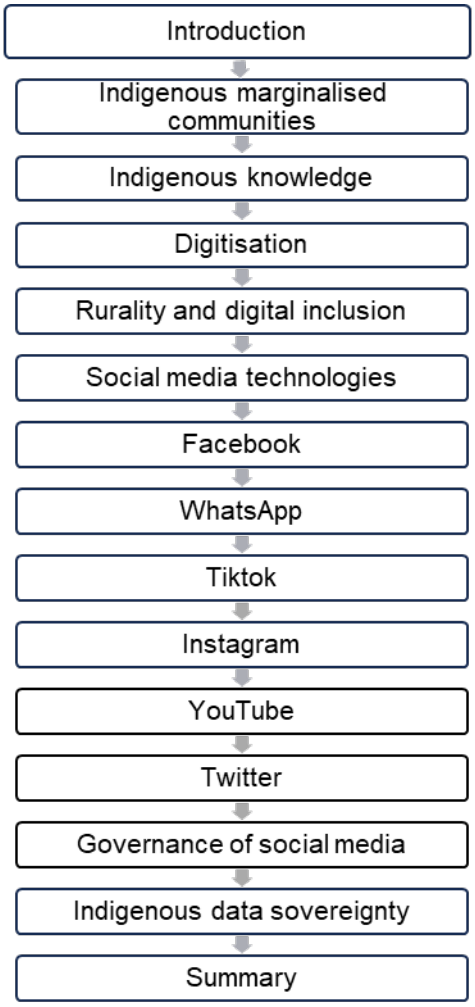

Figure 2.1: Chapter 2 layout

2.1 Introduction

It is unclear how social media technologies (SMTs) can effectively be used to digitise cultural activities and the history of marginalised indigenous communities. The study endeavoured to explore the potential contribution of SMTs to the long-term preservation of the Hlubi nation's indigenous knowledge (IK) and its subsequent representation in cultural archives. The main objectives of the study were as follows: i) to identify contributing factors that lead to attitudes and perceptions on the use of social media by the Hlubi Nation; and ii) to examine the effectiveness of social media as a tool to capture, store, preserve and disseminate IK of the Hlubi nation.

This literature review is guided by the study's title, problem statement, research question, aim and objectives of the study. Keywords and concepts were identified and then used to search the online databases in the library of the Cape Peninsula University of Technology. Databases such as Google Scholar, Research Gate, SAGE Publishing and Wiley Online Library were

used. This literature review is presented as follows: i) introduction; ii) indigenous marginalised communities; iii) IK; iv) digitisation; v) rurality and digital inclusion; vi) SMTs; vii) governance of social media; viii) indigenous data sovereignty; and ix) summary of the chapter.

2.2 Indigenous marginalised communities

Indigenous peoples are an ethnic population who practice early customs and culture, and are the original residents of a certain geographic area, as opposed to a population who recently arrived and established itself in a geographic area (Koea & Ronald, 2020). Hart and Vorster (2015) argue that most of Africa's poor communities are rural, and largely rely on agriculture for their livelihoods. But African agriculture is slow growing or stagnating, held back by low yields, poor infrastructure, environmental change, HIV/AIDS and civil conflict. Mehra et al. (2020) suggest that indigenous communities are marginalised as a consequence of a lack of economic opportunity, a lack of information technology development, poor information literacy and geographical isolation. Koea and Ronald (2020) argue that indigenous communities have experienced significant cultural trauma as a result of colonialism, including the loss of customary territories, resources, communal self-determination and influence of world religions. Religion is an inseparable aspect of African society and, as a result, religious manifestations and rituals are frequently intertwined with political and socioeconomic activity (Agbiji & Swart, 2015). Krüger (2020) states that indigenous traditions and culture have survived despite Christian indoctrination, and in some cases, their survival is due to mixing Christianity with other religious traditions. Masoga et al. (2020) argue that there have been many projects that have researched technology usage scenarios in the context of rural knowledge.

These projects have been undertaken in order to encourage community participation in combating marginalisation and bridging rural digital divides. Unfortunately, many of these projects are done in such a way that they undermine the indigenous communities (Smith, 2016). Kaya and Seleti (2014) stress that is no longer acceptable to conduct research and knowledge creation with indigenous populations as if their opinions are unimportant or that their lives and personal experiences, including their encounters with the research process, are unimportant. Lee (2018) conducted research to determine how indigenous groups use social media to express their cultural goals and indigenous ways of being. According to the findings of that study, social media allows indigenous people to represent a worldview that includes cultural, political and social interests. The study also observed the dangers of using social media for indigenous communities, citing how distortion, commercialisation and exploitation of the indigenous culture and traditions are exacerbated by using social media to reinforce colonial ideas and the continuous process of colonisation (Churchill, 1998; Lee, 2018).

2.3 Indigenous knowledge, SMTs and IK preservation.

IK refers to the knowledge belonging to a specific ethnic group that is unique to that ethnic group, society or culture. It is knowledge based on the "social, physical and spiritual understandings which have informed the people's survival and contributed to their sense of being in the world" (Ghimire, 2021:1). When it comes to finding solutions to society challenges, IK and practices are overlooked, and the world misses out on the depth of this knowledge and traditions, as well as the role they may play (Müller-Mahn & Kioko, 2021). It has been argued that IK in Africa and the rest of the globe is decreasing, as are the indigenous languages spoken for the transmission of any indigenous knowledge (Kantiza et al., 2021). According to Akinwale (2012:5), IK can take many forms, including "cultural heritage in the form of traditional songs, dances, stories, ritualistic practises and ceremonies that reflect the beliefs systems". Nduka and Oyelude (2019) add that IK is held in the memories of the elders within a society and is conveyed mostly in oral form, such as in folktales.

IK is also known as "Traditional Knowledge (TK) the substance of traditional know how, inventions, information, practices, skills, and learning of traditional knowledge systems such as traditional agricultural, environmental, or medical knowledge" (Ghimire, 2021:1). The essence and application of such IK and its manifestations are transmitted intergenerationally to preserve and perpetuate the identity, well-being and rights of the indigenous peoples (UNESCO, 2001). The significance and the value of IK can be captured in its ability to provide fertile ground to nourish a community's outlook on its ethics, value systems, behaviour and morals, and its peoples' future (Botangen et al., 2017). Owiny et al. (2014) note that the preservation of IK is faced with many challenges. These include: i) erosion of traditional knowledge and skills due to memory loss or death of elders; ii) the rise in formal education; and iii) the advance of technology. These challenges lead to a loss of interest in indigenous knowledge, particularly among younger people. Botangen et al. (2017) assert that exposure to the predominant mass media culture and SMTs has a gradual influence on the decay of peoples' indigeneity. Summer and Nelson (2020) suggest the need to address this by conducting further studies. These studies could include an exploration of technologies that improve inclusivity, engage and bridge the gaps in relationships in local communities, as well as the implementation of digital IK preservation projects.

Although mass media and SMTs have been blamed for the gradual decay of IK, Owiny et al. (2014) suggest that the growing use of social media and mobile technologies opens up the potential for local and worldwide collaborations to help in the creation, management, preservation and sharing of knowledge and skills that are unique to African communities. McGinnis et al. (2020) investigated the skill sets required for the technological application of knowledge among indigenous populations in the Pine Creek tourism destination of the

Aboriginal community in Australia. The study's findings showed that by integrating traditional and modern methods of information sharing, digital tourism solutions could empower local indigenous populations participating in tourism. At the same time, this could educate residents and visitors about the need for preserving IK. However, McGinnis et al. (2020) warn that digital solutions based on local culture can only be viable if all players participating in the production of the tourist sector understand how to utilise SMTs and have access to expertise. According to a study by Arévalo et al. (2019), SMTs can be used to preserve IK by providing a platform for community members to share their knowledge and experiences. The study found that Facebook groups were particularly effective for this purpose, as they allowed community members to communicate and collaborate in real-time. However, the study did not examine the use of SMTs in marginalized communities specifically. Dagnino et al. (2017) explored the use of SMTs for IK preservation in a rural community in Argentina. The study found that SMTs were effective for documenting and sharing IK, but their use was limited by factors such as lack of internet access and low literacy rates. The authors argue that efforts to promote SMTs for IK preservation must take into account the unique needs and challenges of marginalized communities. Gómez et al. (2018) investigated the use of SMTs for IK preservation among the Bribri people of Costa Rica. The study found that while SMTs were effective for documenting and sharing IK, they were not sufficient on their own. The authors argue that SMTs must be integrated with other forms of IK preservation, such as community-based education and oral tradition, to ensure the long-term preservation of IK. The existing research suggests that SMTs can be an effective tool for IK preservation, but their use in marginalized communities is limited by factors such as lack of internet access and low literacy rates. Efforts to promote SMTs for IK preservation must take into account the unique needs and challenges of marginalized communities, and should be integrated with other forms of IK preservation to ensure long-term preservation. Further research is needed to explore the effectiveness of SMTs for IK preservation in diverse contexts.

2.4 Digitisation

Digitisation and digitalisation are often confused and are said to be synonyms, with the two conceptual terms often used interchangeably (Korhonen et al., 2021). Brennen and Kreiss (2016:1) distinguish between the two terms and define digitalisation "as the way many domains of social life are restructured around digital communication and media infrastructures". Digitalisation refers to the increase in human-computer contact, often known as information and communication technology (ICT) (Ghimire, 2021). It was discovered that the terms digitisation and digitalisation were synonyms for the phrase "digital transformation" (Korhonen et al., 2021). Ebert and Duarte (2018) argue that digital transformation is a realistic, gradual transformation of a society via the use of digital technology. Despite the importance of IK digitalisation for socioeconomic growth and good administration, it can be argued that in

today's technologically advanced world of digital transformation, IK is frequently overlooked (Ghimire, 2021). On digitalisation, Valenduc and Vendramin (2017) suggest that the development of new digital technologies, together with automation and artificial intelligence, is enabling a new generation of smart societies, a topic that still needs to be researched in the future.

On the other hand, digitisation is defined as "the material process of converting analogue streams of information into digital bits" (Brennen & Kreiss, 2016:1). Digitisation is the act of converting analogue information into zeroes and ones so that computers can store, process and transmit this information (Houghton, 2021). Digitisation is the activity of turning physical information into a digital (computer-readable) format by modifying the current structure and by improving the efficiency of an organisational process, promoting dependability and quality (Chisita et al., 2021). Digitisation can be defined "as a tool that can be used to provide long-term preservation and global access to IK" (Akinwale, 2012:1). Digitisation is utilised to preserve rare and delicate materials and items through the use of computers, electronic equipment, mobile phones, digital cameras, recorders and digital displays (Shimray & Ramaiah, 2018). The UNESCO (2021) policy asserts that technology is naturally integrated into digital preservation as a way of digitising, storing, describing, accessing, presenting and disseminating digital artefacts. Technology, on the other hand, changes rapidly and, if not carefully managed, technical obsolescence threatens the preservation and accessibility of documentary heritage. This confirms what Van et al. (2015) and Hardilla and Cahyo Nugroho (2018) observed, i.e., that the present challenges with digitisation revolve around the obsolescence of the application software and operating systems used in the process, insufficient storage, organisation, administration and analytics for digital material. Van et al. (2015) have concerns about in what form and how data on certain IK should be collected and stored. The UNESCO (2021:3) policy identifies four significant challenges to digital preservation as a list of priorities to be address in order to achieve traction in the implementation of successful digitisation. The list of priorities is as follows:

i) Obsolescence of digital technology

Despite the fact that digitisation programmes throughout the world and the scattered attempts in Africa appear to have had some form of success, Adu and Ngulube (2017) argue that permanent access to information and the longevity of digital recordings remain major challenges. Obsolescence occurs when "technology, software, storage medium, or file formats do not endure long enough to allow long-term access to digital information" (Bowen, 2018:28). Culturally significant digital content becomes unavailable or lost before memory institutions have finished selecting and preserving it because of the short technological cycles and quick obsolescence of digital technologies (Antoniazzi, 2021).

Antoniazzi investigated the sustainability of a digital preservation of films in the film industry. The film heritage institutions (FHIs) have roughly ten years of digital cinema content. However, because of the information technology sector's instability and its persistent strategies of planned obsolescence, FHIs still struggle to provide long-term sustainable and trustworthy solutions to safeguard the digital materials that they acquired through digitisation. Antoniazzi (2021) links the difficulties to the costs of maintaining digital preservation systems. Durham (2019) as well as Pendergrass et al. (2019) view the challenge of the obsolescence of digital technology from the perspective of sustainability. Pendergrass et al. (2019) argue for example that digital preservation: i) is dependent on ICT ii) and also require awareness of the environmental impacts of digital preservation; and iii) has significant negative environmental consequences for global warming. Pendergrass et al. (2019) recommend doing impact studies to prohibit certain activities in the preservation process, such as limiting digital preservation standards that need excessive energy usage and the use of physical hardware that contains components toxic to the environment.

ii) Ambiguity in leadership roles and responsibilities in digitisation

The UNESCO (2021) policy highlights concerns about the merging of conventional and non-traditional organisations as guardians of digital preservations. Traditional digitisation functions are those that a curator or librarian may perform in order to manage collections of such objects (Almahasheer, 2018). However, in recent times, commercial corporations have been entrusted with storing digitised content for long periods of time. This is happening even though there are no statutory or regulatory frameworks in place to ensure that such service types correspond to the principle of universal human rights to information (UNESCO, 2021). The shift of the obligation to maintain digitisation projects to big technology companies is a great risk (Bowen, 2018). Öhman and Aggarwal (2020:1) pose the question, "What if Facebook goes down? Ethical and legal considerations for the demise of big tech". Öhman and Aggarwal (2020) argue that the over-reliance on big technology companies without adequate governance frameworks to manage the potential loss of data should any of the big tech companies close, to be a big risk. Öhman and Aggarwal (2020:11) make recommendations in the following areas: i) need to build a regulatory framework for systemically significant technology institutions; ii) need to increase legal methods for users to govern their own data in circumstances of platform insolvency or closure; and iii) need to strengthen legal protection for dead users' data and privacy.

iii) Compromised quality of digitise material

Conway (2011) impressed the need for reliable digital archives which has the technological capability to capture, maintain, and disseminate digital material on a long-term basis. The UNESCO (2021) policy indicates that the tasks of selection and preservation are becoming

increasingly difficult because of the wide spread of misinformation. Misinformation is untrustworthy or misleading information that is "deliberately disseminated in order to manipulate public opinion and deny individuals access to real, authoritative, and unbiased information; in effect, to corrupt public discourse and deny people their human rights" (Kalsnes, 2018:3).

During the "ubiquity, pervasiveness, diversity, and fluidity of such information", Rieger (2018:7) raises a number of concerns regarding the role of research libraries and archives in digital preservation. Such concerns include: i) ambiguity of responsibilities; ii) unclear role of research libraries; and iii) confusion about new preservation services. Velte (2018) alludes to data corruption, media and software failures, and insufficient metadata as consequences of technological progress, leading to the compromise of the digitise material. Conway (2011) argues that while significant work has been done to assure the stability of repository systems and infrastructures, less attention has been paid to the quality and usability of the preserved information.

iv) Impact of global economy on funding

Even though archives are free to access, they are expensive to develop and maintain, and the lack of both full core expenses and a direct funding source through payment-for-use is a significant financial challenge. This is compromising the future of archives and the digital collections they house. Digitising frequently requires the compilation of massive volumes of data, which necessitate archival methods that are both inexpensive and practical throughout and after the project's lifespan (Blaylock et al., 2017). The present economic crisis caused by the Covid-19 pandemic left memory institutions underfunded at a time when it is important to compile a precise and complete record of the pandemic's worldwide experiences and the international efforts in the face of the pandemic (UNESCO, 2021). Kitchin et al. (2015) propose a number models for how memory institution can be funded, including core funding, which largely depends on the state funding, content licencing and private partnerships. Tsabedze and Ngoepe (2021) argue that the state and funding agencies must be able to offer such finance as well as coordinate their approaches, policies and even legislation. There must be the political will to not just support the concept of open access but also to fund it in practice. On the other hand, there has been a claim that the widespread use of new digital technologies for recording, preserving and displaying cultural heritage assets provides inexpensive and dependable methods of carrying out preservation projects (Belhi et al., 2018).

v) Natural disasters

Natural and man-made calamities pose a persistent danger to digital preservation efforts, necessitating immediate responses (UNESCO, 2021). Climate change, with increasing sea

levels and extreme weather events, has the potential to destroy unique heritage. Armed conflicts and societal instability result in the destruction of cultural assets through looting and illegal trade. Durham (2019) recommends that cultural heritage institutions develop a comprehensive disaster preparedness plan that includes physical collections, digital assets and the places they occupy. Concerns have also been raise about the inadequate measures put in place in South Africa to safeguard its cultural assets (News24, 2022). These concerns were raised when fire damaged approximately seven million pages of rare and fragile library material, including books, the Hansard, artworks, microfiche, photographs and maps. The value of digitising is that users of the digitised content will benefit from easier information interchange and improved accessibility as a result (Ghimire, 2021). Digital assets from galleries, libraries, archives, and museums may be exploited to unlock new value by considering large-scale cultural heritage data as an economic resource on which to develop new goods and services in the context of cultural and creative industries (Terras et al., 2021). The value of digitised content includes socioeconomic and political benefits.

UNESCO is an organisation that seeks to promote peace through international cooperation in education, science and culture by implementing programs that aid in the achievement of the Sustainable Development Goals outlined in the 2030 Agenda. The agenda was adopted by the United Nations General Assembly in 2015 (Singh & Singh, 2011). The UNESCO General Conference in 2015 approved the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions (Burri, 2013). The convention's goals are to strengthen culture as a bridge to long-term social, economic and human development by encouraging creativity, cultural industries, cultural heritage in all its forms, social cohesion and mutual understanding among peoples and cultures, thereby creating new opportunities for international cooperation (UNESCO, 2010:6). To underscore and further extrapolate on the significance of the convention and its broader consequences, it is important to highlight the objectives and the guiding principles as capture in the convention. The goals of this convention are as follows:

i) To protect and promote the diversity of cultural expressions.
ii) To create the conditions for cultures to flourish and freely interact in a mutually beneficial manner.
iii) To encourage dialogue among cultures in order to ensure wider and more balanced cultural exchanges in the world in favour of intercultural respect and a culture of peace.
iv) To foster interculturality in order to develop cultural interaction in the spirit of tolerance.
v) To promote respect for cultural expression diversity and raise awareness of its value at the local, national, and international levels.

vi) To reaffirm the importance of the link between culture and development for all countries, particularly developing countries, and to support national and international efforts to secure recognition of the true value of this link.
vii) To recognise the distinctive nature of cultural activities, goods, and services as vehicles of identity, values, and meaning.
viii) To reaffirm States' sovereign rights to maintain, adopt, and implement policies and measures deemed appropriate for the protection and promotion of the diversity of cultural expressions on their territory.
ix) To strengthen international cooperation and solidarity in a partnership spirit, with a particular focus on enhancing the capacities of developing countries to protect and promote the diversity of cultural expressions.

While there is widespread agreement that the convention has been largely complied with and implemented to a significant extent by member nations, the success of the UNESCO convention in safeguarding and enhancing cultural variety is less certain, particularly for the developing world (Burri, 2013; Caust & Vecco, 2017). For instance, Rosetti et al. (2022) examined whether UNESCO had incorporated people-centred methods and involvement into international heritage management legislation and guidelines. The study focused on the roles and types of involvement that are advocated in international declarations, conventions, guidelines and policy documents. The findings of the research came to a negative conclusion, stating that meaningful public participation does not find expression in the documents, further highlighting that low incidence of decisional forms of participation confirm that the struggles of power-sharing do exist. The implications of these outcomes are such that two of the guiding principles of the UNESCO convention are being undermined, particularly the seventh principal, which relates to equitable access to a rich and diversified range of cultural expressions, and the eighth principle of the convention that makes reference of openness. Saric et al. (2019) argue that the benefits of collaboration, project financing and research for accomplishing the Sustainable Development Goals proclaimed in these agreements favour high-income nations. Saric et al. (2019) further argue that this challenge results in poor research governance and skill infrastructure development, and is restricting regional global progress.

The African Union (AU) Charter for the Renaissance of African Culture was ratified by the South African government in 2013. The AU Conference of Ministers of Culture in Nairobi, Kenya, approved the Charter for African Cultural Renaissance in December 2005. The AU Assembly then endorsed it at its sixth regular session in Khartoum, Sudan, in January 2006 (African Union, 2010). According to the AU (2010), the African Cultural Renaissance Charter is a tool designed to empower member states to promote Pan-Africanism, cultural renewal

and identity, as well as strengthen national policies and other cultural instruments, all of which will help the continent to achieve socioeconomic and cultural integration, long-term peace and poverty eradication. The aims and aspirations of the charter are centred on African cultural variety, identity and rebirth. The charter also covers the usage of African languages, the role of media in cultural development, the protection of African creative goods and services and intra- and inter-African cultural collaboration. From an African perspective, it has been argued that despite ratification of the AU Charter by member states, the implementation of the charter has been rather dismal (Masenya & Ngulube, 2020). In South Africa, for instance, Mabe and Potgieter (2021) discovered that finance for digitalisation initiatives was a significant issue. In addition, the lack of collaborative digitalisation policies and financing was cited as a barrier to collaborative partnerships for the purpose of digitising. Mabe and Potgieter (2021) concluded that collaboration might significantly relieve challenges linked with digitisation, the most obvious of which is the expense involved. In different studies, Netshakhuma (2022) and Masenya and Ngulube (2020) asserted that the challenges, which include a lack of institutional commitment and involvement; a lack of established digital preservation standards, policies and procedures; insufficient resources; a lack of skills and training; and technological obsolescence, are but few of the reasons why digitisation projects are not successful in Africa. Masenya and Ngulube (2020) acknowledge that the transition to a digital world has brought important and pressing concerns, particularly in academic libraries, about how to organise, access and preserve digital assets in perpetuity. The Charter on the Preservation of Digital Heritage was established by UNESCO's recognition that the world's cultural and educational resources are increasingly generated, transmitted and accessible in digital form, necessitating dedicated preservation techniques (UNESCO, 2021).

2.5 Rurality and Digital inclusion

According to Real et al. (2014:8), digital inclusion is a valuable paradigm for understanding the relevance of providing persons with access to digital technology as well as the resources to learn how to utilise those technologies. It consists of policies and initiatives that address the important interconnected issues of the digital divide and digital literacy (Thomas et al., 2017). In order to comprehend digital inclusion, Real et al. (2014:8) suggest further definitions of the following three concepts:

i) **Digital divide** refers to the difference between people who have easy access to the internet and those who do not, regardless of their socioeconomic standing, education, location, age, ability, language or other characteristics.
ii) **Digital literacy** covers the knowledge and skills required to use technology once it is accessible, including the ability to comprehend the language and the requisite hardware and software to do so.

iii) **Digital inclusion** policies aim to bridge the digital gap and encourage digital literacy in order to increase outreach to underserved communities and indigenous people.

Mehra et al. (2020:2) suggest that digital inclusion of all people "is a complicated challenge and depends on many factors such as availability, accessibility of ICTs, such as bandwidth, content services, and digital literacy skills, for successful community use". This is especially true for the South African context. Development of South Africa is unequal, with most people in the rural regions of the country relying on agriculture for their living (Chisango & Lesame, 2017). According to research, South Africa remains a severely unequal country, particularly in terms of ICT's contribution to poverty eradication and inequality reduction (Republic of South Africa, 2016). Despite the availability of a government project for the provision of public broadband access, the National Broadband Policy and Strategy (SA Connect), a large portion of the South African population is still not connected to the internet in a productive manner (Terzoli et al. 2018). People who lack reading and writing abilities, and those who can read and write easily have a considerable disparity between them in internet adoption. Individuals with limited or no reading and writing abilities are less likely to utilise the internet in South Africa (Deen-Swarray, 2016).

SA Connect was designed in 2013 to improve government, corporate and citizen digital connection (Manda & Backhouse, 2017). SA Connect is the government's effort to achieve the goals of the National Development Plan's (NDP) aim of a seamless information infrastructure by 2030, allowing for a more inclusive, equitable and successful information society and knowledge economy (National Planning Commission, 2010). The NDP states that the three important pillars for enabling inclusive digital transformation are digital inclusion, digital access and public service reform. In order to encourage inclusive digital transformation, policy and legislative measures are being adopted (National Planning Commission, 2010). Manda and Backhouse (2017) commend the government's intentions, stating that policy implementation is an important step towards realising the goal of a more inclusive digital society. The authors, however, do advise that an integrated approach to policy execution must be provided and that inadequate monitoring and assessment, a lack of political leadership support, governance issues and power and politics in policy priorities all make implementation for the policy challenging.

Yaacoub and Alouini (2020) argue that despite the fact that wireless backhaul technology offers several opportunities for rural community connectivity, it is important to remember that the cost of backhaul deployment is a big barrier to bringing access to rural and underserved areas. Wireless backhaul is "the use of wireless communication technologies to transport data between the internet and sub-networks, in which the organisation or mobile network avoids

the need for physical cable by delivering signals between access points using microwaves or radio waves" (Tezergil & Onur, 2021:3). Yaacoub and Alouini (2020) argue that in rural areas, the hurdles of building an energy network, which is a necessity for deploying communication networks, are enormous. They conclude that there is no single solution that can solve all rural connectivity problems. Building gradually on current achievements to achieve ubiquitous connectivity, while taking into account the unique characteristics of each region and tailoring the solution accordingly, appears to be the most appropriate path to take. It has been proposed that remote rural connectivity may have benefited from a more thorough consideration of inclusivity with preceding and current networks generations of mobile communications. Statista (2021) recorded that in 2020, 84.9% of citizens in first-world countries were using the Internet, compared to just 29.5% of citizens in developing countries, with an estimated 50.2% in urban Africa and 15.1% in rural Africa. Much hope is placed in the forthcoming 6G wireless communication technology to bridge the digital divide and deliver wireless connectivity to remote areas (Sharma et al., 2021; Yaacoub & Alouini, 2020).

Most parts of the world, including Africa, are getting access to mobile phones and the internet with mobile phones becoming increasingly popular (Onyango & Kesa, 2018). In contrast to first-world nations, where desktop connections still account for the majority of internet traffic and mobile connections accounting for only 48.49% of total web traffic, in Africa, mobile devices produced over 69% of website visit traffic (Statista, 2021). Onyango and Kesa (2018) assert that mobile phones, aside from being inexpensive and simple to use, do not need much literacy or numeracy in order to be used; mobile phones provide a plethora of interactive options through applications, text messaging calling, and internet surfing. Cell phones provide an opportunity for people who have traditionally been left behind to gain access to the internet. However, when compared to individuals also using personal computers, mobile-only use is not necessarily associated with a more complete digital inclusion process because it has been linked to lower levels of skill and fewer forms of internet usage (Correa et al., 2020). Chohan and Hu (2022) assess that when combined with digital literacy, e-government ICT training programmes for people can have a positive influence in poor countries, such training initiatives that may help to bridge the digital gap, expand citizens' potential and encourage a more equal use of public resources. Gillwald et al. (2018) argue that despite having much more internet users than other African nations, half of South Africa's population stays offline. However, even though internet-based services offer less expensive communication choices, data services and goods remain out of the reach of more than half of the country's population who are affected by costly data use.

Garmendia and Karrera (2019) claim that linguistic and socioeconomic barriers, among others, are substantial barriers for marginalised communities such as ethnic minorities to

access and use SMTs. According to Summer and Nelson (2020), the over-reliance on new technology and a failure to allow public inclusion pose key obstacles when creating information systems for public history preservation in underprivileged regions. According to Robinson et al. (2020), co-creation with communities is a successful technique for generating community engagement, investment and control. The ramifications of the argument presented by Robinson et al. are that there is a significant probability of failure when implementing digital preservation programmes if underprivileged people are not included.

The present South African approach to implementing digital IK management systems has been criticised for not being sufficiently inclusive in the creation of ICT systems for IK preservation (Chamunorwa et al., 2018). This highlights a gap in the literature, which this study aimed to address. The first research objective of this study was to identify contributing elements that influence attitudes and views about the usage of social media in rural areas.

2.6 Social Media Technologies

Online platforms that facilitate connectedness, communication, and cooperation are known as social media (Zincir, 2016). A social networking site is a website that allows people to share their activities with family, friends and co-workers, as well as their interest in a specific issue (Montenegro, 2019). The usage of social media continues to rise (Chugh & Ruhi, 2018). Social networking sites are divided into many market groups and unique purposes including blogs, vlogs, instant messaging, virtual communities and social networking sites are just a few ways that social media may be viewed (Chugh & Joshi, 2016). Access to social media ranges from the urban youth with computers and high-speed Wi-Fi, to the older generation, semi-rural and rural users with inexpensive mobile phones for Facebook and WhatsApp access (Tapsell, 2020). In Africa, because of low rural internet penetration, social media usage is currently concentrated in urban areas (Olabode, 2018). Internet penetration rates are rather low (40%) across the African continent (Oxford Analytica, 2021).

Wyche et al.'s (2013) exploratory study of Facebook usage in rural Kenya reported that the costs associated with using the internet, limited access to computers and smartphones and unreliable electricity were all barriers to online participation. Apart from the technological infrastructure limitations, Onitsuka (2019) argues that rural areas are disadvantaged by their remote location and, as a consequence, social media offers a lot of potential to promote social development by allowing remote communication, yet social media adoption in rural areas is low due to an aging and dwindling population. Onitsuka’s (2019) study on social innovation revolving around social networks revealed that poor rural populations are slow to join social media and that the majority of those who join do not expand their social networks. Wyche and Baumer (2016) argue that even among non-social media users who are unsure how to utilise

social media or fully comprehend what it is, the desire to be a part of a global network is strong. Mobile-based information technology systems have opened up new avenues for rural communities to gain knowledge and information about rural challenges, difficulties and applications for growth (Wijerathna et al., 2020). With the widespread use of social media, the concept of a SMTs has become common. Facebook, Twitter and other social media platforms encourage users to connect online and, over time, develop relationships with others. The SMT network of connections brings assistance, support, opportunities and even a sense of well-being that would otherwise be unavailable (Scott, 2020). SMTs have been observed as viable platforms to promote and revitalise IK, having the ability to capture and transmit the different cultural elements in various media forms (Botangen et al., 2017).

Urien et al. (2019) praise SMT platforms for their affordability, extensive availability and ability to accommodate the use of ethnic languages. However, Maros et al. (2020) criticise SMTs platforms for their lack of integrity, arguing that more studies on the growing trend of misinformation spread via social media are needed. Rice et al. (2016) examined the available literature to get a better understanding of how indigenous Australian adolescents utilise digital technology and social media, as well as the positive and negative consequences thereof. Indigenous people, according to the study's findings, benefit from a strong cultural identity as well as community and family bonds, which may be strengthened through social media. This research also discovered that indigenous young people demonstrated confidence when it came to utilising social media. Rice et al. (2016) did, however, recommend that future studies may look at measures to reduce the abuse of social media, while maximising its positive potential in the lives of indigenous young people; they also advised that future studies should concentrate on the positive applications of social media. Social media is a fast growing subject, with new case rules pertaining to its use being introduced on a regular basis (Lam, 2016).

2.6.1 Facebook

Facebook is free and the most popular social networking site, with more than 2.89 billion individuals using it on a monthly basis all across the world. Facebook allows users to create profiles, post photographs and videos, send messages and communicate with friends and family (Kuyucu, 2021). Facebook has been confronted with data privacy issues, particularly when it made 14 million people's private postings public and revealed that it was sharing people's data with Chinese companies (Kuyucu, 2021). Privacy settings on Facebook have proven to be ineffective. Nyoni and Velempini (2018) argue that Facebook's privacy settings should be made easier to comprehend by users and given more prominence so that they are used. It has also been argued that the negligence or lack control of users data has been a deliberate strategy that benefitted Facebook financially by selling users data to marketers (Dance et al., 2018). Kuyucu (2021) suggests that the reasons why companies such as

Facebook manage to exploit user data is because the regulators are not enforcing regulations that protect users' data. However, it is not only negative insights that can be drawn from available literature concerning Facebook. Botangen et al. (2017) investigated the use of Facebook groups to promote indigenous knowledge among Igorot peoples in the diaspora. Despite the problems of assimilation into a different geographic community, the study found that SMTs could enable migrants of the Igorot indigenous group to strengthen their connection to their traditional culture. Botangen et al. (2017) further found that social media plays an important part in the transfer, revival, practice and learning of indigenous culture, and serves as an excellent platform to support preservation initiatives.

Öhman and Watson (2019) argue the difficulties associated with managing the profiles of the departed; they believe that the profiles of dead people are becoming part of our societal collective memory, and that future generations may find them to be useful. The authors suggested the curating such a large collection necessitates a collaborative effort and further emphasised the need for having a qualitative understanding of how different cultures view death and the internet when developing a future curation strategy. To address the difficulty of society's increasing reliance on data-rich "Big Tech" platforms and social networks such as Facebook, Öhman and Aggarwal (2020) ask the question, "What if Facebook goes down? What are the ethical and legal implications of Facebook's demise?" Öhman and Aggarwal discovered that Facebook's downfall remains a high risk and low probability event for the foreseeable future and that if Facebook fails, societies and governments must ensure that a robust governance structure is in place to minimise systemic and individual harm.

2.6.2 WhatsApp

WhatsApp is a Facebook-owned encrypted instant messaging application that allows users to send and receive text messages, images and voice conversations over the internet (Cheeseman et al. 2020). The simplicity with which audio-visual material may be created and shared makes this platform accessible to people with little conventional and digital literacy (Prabhakar & George, 2019). WhatsApp employs synchronous and private communication channels that enable users to converse more intimately, imitating in-person conversations and facilitating intimacy and a sense of connection (Karapanos et al., 2016). The WhatsApp platform has proven to be impactful as collaborative knowledge sharing platform (Pimmer et al., 2019). Sanusi et al. (2020) researched how rural communities in Nigeria prepared for future knowledge sharing, as well as the infrastructure and resources that could assist indigenous peoples. Sanusi et al. (2020) report that SMTs such as WhatsApp could be used to create knowledge sharing programmes for the benefit of rural communities, in order to combat rising illiteracy rates in rural areas. Similarly, Silfa (2021) and Aysegul (2019) observed that conversations in WhatsApp groups may stimulate users' active participation physically,

psychologically and emotionally, making it simpler to offer an understanding of a historical event study, which, in turn, leads to an understanding of students' historical awareness about their nation's history.

However, Resende et al. (2019) as well as Maros et al. (2021) raise concerns that the WhatsApp group chats function has been praised for its potential to encourage information exchange between interested parties, however, there have been reservations regarding the circulation of disinformation on WhatsApp. Because of the encrypted nature of chat applications such as WhatsApp, Resende et al. (2019) argue that archiving of the information on the application generates is great challenge. Individual consent and openness, access to information and individual safety, centralisation and access are among the challenges. However, the authors conclude that archiving material on chat applications provides the possibility for alternative ways of addressing those challenges and suggest that without undermining encryption, establishing a WhatsApp archive might prove useful in understanding and eliminating disinformation on such apps. The discussion above illustrates evidence in the literature that although SMTs provide a promising outlook for building indigenous ICT-based systems, there is a gap in the literature and the further research is needed within the field.

2.6.3 TikTok

TikTok is a mobile short video app that is popular among younger users because of its ease of use, simple editing, easy sharing and low need for professional abilities (Feng et al., 2019). A TikTok short video is a mobile internet transmission technology that spreads quickly, usually within five minutes of its broadcast (Xu et al., 2019). The short video is distributed to an audience with the main content being entertainment, science, singing and fashion, in order to capture the audience's attention (Yang et al., 2019). These videos are generally made by people serving as both producers and receivers of content (Yang et al., 2019). According to Xu et al. (2019), the majority of TikTok users are young females. TikTok users are mostly (69%) under the age of 24.

Yang (2022) looked into how the establishment of social media platforms is influencing cultural practices and communication behaviours, and stated that TikTok has an impact on everyday communication practices in entertainment behaviours, our self-concept, the communication concept, communication styles and community youth culture. The study was conducted in China. Yang (2022) suggests that the findings should not be considered generalisable and that more research needs to be conducted to include different cultural situations throughout the world. Karizat et al. (2021), Simpson and Semaan (2021) and Barton (2010) contend that the algorithmic procedures used to show content on social media platforms might be biased toward marginalised cultures. For instance, Karizat et al. (2021) propose that TikTok

algorithms interact with individuals' identities in many ways. According to their findings, the algorithm deliberately suppresses material relating to marginalised social identities based on race and ethnicity, body size and physical appearance, ability status, class status, LGBTQ identity and involvement in political and social justice organisations. They further argue that the algorithmic systems impact users' experiences, behaviours, feelings of belonging and perceived ability to be seen, heard and appreciated by others, which has a catastrophic effect on marginalised populations. Carlson and Frazer (2021) make a counter-argument, claiming that while some social media platforms are clearly platforms for hate, violence and a variety of forms of indigenous eradication, they are also spaces where indigenous people share their love, creatively express themselves through memes, reaction GIFs and jokes, and, most importantly, make fun of each other and the colony. Carlson and Frazer (2021) assert that social media is frequently a free arena in which content of indigenous communities may be accepted.

2.6.4 Instagram

Instagram is a mobile photo-sharing social networking platform (Scott, 2017). Users can 'follow' other people's accounts and use hashtags to search for specific content (Tiggemann & Anderberg, 2020). Teenagers and young millennials are the primary users of Instagram (Scott, 2017). In 2021, the number of active Instagram users in the world was about one billion (Statista, 2021). In Africa, South Africa has the second largest number of active users of Instagram, after Nigeria (Ngonso, 2019). Kocak et al. (2020) studied what drives Instagram usage, user motivation and personality characteristics. The primary goal was to identify the important context-specific usage motives of Instagram and to determine personality trait variations among Instagram user groups. According to the study's findings, Instagram users are classified as enthusiastic, distant or spectator users, based on their usage motivations. These usage reasons have been shown to significantly vary between these groups as a result of openness to experience, social interaction anxiety and fear of unfavourable appraisal. In the article, "*Networked remembrance in the time of insta-memories"*, Serafinelli (2020) studied the practice of photo sharing on Instagram and how Instagram is influencing the way individuals think about and practice visual memory retention. The primary goal of the article was to investigate how Instagram promotes the creation of new and innovative ways of organising visual memories of the past. According to the study, Instagram's ability to allow users to share visual narratives has resulted in the establishment of "networked archives" of both personal and community memories. In addition, new mediated ways of viewing images online have been noted in the usage of hashtags and geo-tags as a tailored means of accumulating personal visual memories and a linked technique for accessing communal memories (Serafinelli, 2020).

Blackfishing is a term for “when cultural and economic actors appropriate Black culture and its aesthetics in order to profit from Black communities” (Cherid, 2021:360). According to Stevens (2021), Instagram’s unique platform affordances, such as racial affordances and neoliberal logics that promote cultural ideas of employment, promote ways by which Black identity is converted into a valuable commodity in terms of influencing. Karsgaard and MacDonald (2020) argue that Instagram provides a visible, geographical and networked place for political discourse through use of the technical functions that the platform permits or denies its users, Karsgaard and MacDonald (2020) further argue that the capabilities and constraints of Instagram determine how users perceive the issue of indigenous knowledge and their ability to respond to it, which encourages users to take particular actions.

2.6.5 YouTube

Budzinski et al. (2021) state that the way people consume audiovisual material is rapidly changing, while traditional television (TV) continues to dominate the consumption of audiovisual material by older audiences. Younger audiences are increasingly using internet streaming services and video portals such as YouTube to consume audio visual content ,also referred to as video-on-demand. According to Pires et al. (2021), YouTube has grown to become one of the world’s largest platforms for watching, finding, sharing and creating video content. According to Montero Sánchez (2021:1), YouTube is a participatory video platform that uses video technology to foster community and raise critical awareness through a range of activities in which laypeople collaborate to create a guided, collaborative film on a topic of their choice. In Enugu State, Nigeria, Azor et al. (2020) conducted research into the impact of YouTube audiovisual films on students’ achievement and interest in history. There was a substantial difference in accomplishment and interest between students taught history using YouTube audiovisual documentaries and students taught without YouTube audiovisual documentaries. Based on the findings of the study, Azor et al. (2020) offer recommendations for teachers’ empowerment by governments on how to use YouTube audiovisual films when teaching a history class.

Mohammed and Mohammed (2021) investigated whether YouTube allows for the representation and presence of Pakistan’s oppressed indigenous tribes. The study showed that male participants outnumbered females in enjoying more screen time watching the videos, while audiences sometimes responded differently to male and female participants. The study concludes with a consideration of whether such representation and presence in internet media constitutes a significant step toward enabling rural areas to be represented.

2.6.6 Twitter

Twitter is a microblogging website that allows users to read and send brief messages, known as tweets. According to Carley et al. (2015), Twitter is one of the most popular and frequently used free online microblogging platforms. It allows users to view or send brief text messages of up to 280 characters in length. Twitter is available through a web interface and mobile device applications, and the users may interact in real time using a number of devices, technologies and applications (Asadi & Kalijaga, 2021). Individual Twitter users are assigned a “handle”, which is symbolised by the @ symbol. Users can mention other users by using their handle, or they can join in bigger debates by using an indexing phrase marked by a hashtag or # (Mills et al., 2019). Twitter is open to the public and, when users join up for the service, they explicitly agree to the organisation’s conditions and terms of usage (Fondren & McCune, 2018). Wijerathna et al. (2020) conducted a study on the performance of a mobile-based Twitter information distribution service. The results of the study show that Twitter can be informative, simple to use and cost-effective, indicating the potential for such systems to meet the information demands of rural areas. Phillips et al. (2018) researched the role of social media in rural farmer knowledge exchange. They posed questions to better understand the role of social media in farmer decision-making and agricultural innovation. According to Phillips et al.'s (2018) findings, social media platforms such as Twitter can play an important role in agricultural information sharing activities.

It is also reported that that farmers use Twitter to form new worldwide networks and are eager to participate in social learning processes that result in transformation and shared cognitive meanings. Mills et al. (2019) came to the same conclusions, with the difference being that Mills et al. argue that Twitter works better for individuals who are actively seeking information as opposed to passive consumers of new information. As a result, it is advised to utilise Twitter in conjunction with other forms of face-to-face engagement as part of a blended knowledge sharing strategy of SMTs and personal interaction.

Further findings reveal that in indigenous communities, Twitter usage appears to be concentrated in specific nations, but Mills et al. (2019) anticipate that as technology becomes more available, the Twitter community will increase, with chances to share expertise across countries and continents. Twitter has played an important part in the growth of archiving community cultures and history (Xie & Stevenson, 2019). Twitter could be improved so as to encourage more productive involvement. Accessible information must be provided in the information category to assist those with disabilities, such as the blind, visually impaired and hearing-impaired to access the archives. Gunton and Davis (2012) investigated how Twitter archives could be used for community development as well as its role as a source of information. They reported that the Twitter space is available for information experiences, and

archives should seek to understand the nature of those information experiences if they are to utilise Twitter. Although the use of Twitter has shown promising support for indigenous archive services, Mnzava (2020) states that it is also important for rural archivists to be aware of the necessary factors for Twitter to be used effectively. These factors include specific social media skills and knowledge of social media research, modelling and computer programming languages. Questions have been raised about how privately owned social media platforms such as Twitter are regulated and how the content is being used on their platforms (Fondren & McCune, 2018). Madhava (2011:33) offers the following tips for running Twitter: i) organisations must use social media to their benefit; ii) organisations must preserve their social media accounts and websites; iii) more than simply postings are typically included in social media files; iv) gather, maintain and assess internet data using APIs; v) customised social media archiving solutions are required; vi) consider the setup or installation requirements; vii) the archive must have excellent search capabilities; viii) aim for real-time data collection; and x) think about how legal holds material will be restricted or excluded the archive. Madhava (2021) concludes that the importance of preservation, review and production cannot be overstated.

2.7 Governance of social media

To get an understanding of rules and prescripts that govern the use of social media, it is crucial to examine certain pieces of legislation and prescripts of law that enable the implementation of social media on the Africa continent and specifically in South Africa. Ray (2007) argues that SMTs have an influence on a wide range of human rights and public policy concerns that include discrimination, privacy, data protection, access to information, freedom of speech and freedom of assembly and association. The ability to express oneself freely on the internet is crucial to grasping the potential of ICTs to improve global human rights protection (Benedek & Kettemann, 2014). Recent literature suggests that the need for rural education on issues of cybersecurity is urgent as indigenous communities throughout the world slowly obtain robust access to the internet and the problems that come with such access (Plosker & Srivastava, 2021). Indigenous communities lack the information, education and preventative skills needed to defend themselves from the security threats linked with the usage of SMTs (Huey & Ferguson, 2022).

Important topics such as cyberbullying, human trafficking, and securing sensitive information on social media are understudied, with limited research conducted. Inadequate cybersecurity awareness among indigenous communities in South Africa may lead to insecure technology. More research is needed to understand the nature, extent, and prevention strategies of cyberbullying and human trafficking, and to secure sensitive information on social media. The South African government emphasizes the need for greater cybersecurity awareness and

training for historically disadvantaged groups. Addressing these issues requires targeted interventions and effective solutions, which necessitate further research (Patchin & Hinduja, 2018; UNODC, 2020; Kaur & Singh, 2020; Department of Communications and Digital Technologies, 2021). In this case, the internet infrastructure in South Africa may be left open to intrusions, posing a serious risk to the country's security and perhaps harming people outside of those directly engaged. Criminals and terrorists are exploiting the anonymity and interconnectivity of cyberspace to commit identity theft and financial fraud, conduct espionage, disrupt critical infrastructures, facilitate terrorist activities, steal information and plant malicious software (malware) and Trojans that can be exploited in various ways (Hodge et al., 2017). Plosker and Srivastava (2021) argue that there is a significant economic value in IK in the fields of health research and medicine that makes it vulnerable to cyberhackers on SMT if the issue of indigenous cybersecurity education is not addressed.

The relevance of applying law and regulations to deal with illegal acts in cyberspace has been documented by Terriss (2020) and Ogunlana (2019). Ogunlana (2019) argues that the quality of the social media ecosystem, particularly the unique ability to connect people and share knowledge, and do so faster than ever before, may allow for both great good and catastrophic evil. Terriss (2020) posits that hackers exploit online and social media technologies to instil fear and disseminate violent beliefs, endangering public safety. Extremist groups and foreign governments have utilised components of our SMTs to radicalise and misinform, under the fictitious flag of freedom of speech (Terriss, 2020). For ethical, legal and practical considerations, Terriss (2020) mentions that censoring social media platforms is unlikely to be a viable option, but that regulating platform algorithms that have a radicalising effect might be a possible alternative. In conclusion, Terriss (2020) advocates for more research to identify the best strategy for providing information literacy programmes that involve the community, multi-stakeholder internet ownership and the empowerment of individuals. Terriss (2020) also challenges librarians to utilise extreme and propagandist techniques against them in order to educate the public.

Ogunlana (2019) states that a new generation of terrorists who are more technologically sophisticated are emerging, cybersecurity technologies are effective and bilateral/multilateral collaboration is required to stop the spread of terrorism in cyberspace. Ogunlana's study focused on the function of technology in reducing the spread of terrorism in cyberspace and, according to him, a more quantitative study is needed to assess the efficiency of cybersecurity technology on the African continent. The United Nations (UN) (2003) invited member states and world regional bodies to create a global culture of cybersecurity legislative frameworks, taken into consideration that: i) governments, businesses, other organisations and individual users are becoming increasingly reliant on information technologies for the delivery of

essential goods and services; ii) the need for cybersecurity grows as countries increase their participation in the information society; and iii) gaps in access to and use of information technologies by its member states reduce the effectiveness of international cooperation in combating criminal misuse of information technology. Further considerations include: i) the importance of international cooperation in achieving cybersecurity through the support of national efforts aimed at improving human capacity; ii) increasing learning and employment opportunities; iii) improving public services; iv) improving quality of life by leveraging advanced, dependable, and secure information and communication technologies and networks; and v) promoting universal access. There are international and regional conventions addressing cybercrime, but the international community has yet to adopt a global cybercrime treaty (Van Nguyen et al., 2022).

Despite the fact that the UN is enforcing cyber conflict and crime rules, its role in efforts to address ICT and cybercrimes have been criticised for not being sufficient (Joshua et al., 2020). Van Nguyen et al. (2022) list worldwide agreements that address a broad variety of criminal activities, but fail to address specifically cybercrime or cyber-related offenses. Such agreements include the United Nations Convention against Transnational Organised Crime and the United Nations Convention on the Rights of the Child. Segal (2020) argues that the Budapest Convention of the Council of Europe is the only international treaty with human rights safeguards that criminalises computer crimes, including fraud and child pornography, and forbids unauthorised access and interception, data and system tampering and intellectual property theft. According to Segal (2020), there are diverging views on the convention, other than the treaty only being a regional convention, it also breaches the ideals of national sovereignty and non-interference. Walker (2019) argues that the UN's difficulty in combating cybercrime stems from to a lack of clarity among governments and stakeholders; while nations agree that cybercrime is a global concern, they lack a clear grasp of how to tackle it via collaboration. This lack of uniformity in worldwide reaction is connected to an increasing lack of trust between governments, commercial enterprises and citizens regarding how cyberspace should or might be managed – even at the national and regional levels.

There appears to be a contest at the international level on how the matter of cybercrimes should be handled (Flonk et al., 2020). Segal (2020) and (Walker, 2019) state that the basic principles of the UN system, national sovereignty and human rights, particularly the right to privacy and freedom of expression, are critical to the diverging approaches concerning who should regulate cyberspace, have access to data and regulate online content, which is why there is no agreement on how the convention should be structured. While the disagreements continue on the international stage, in the African context, in 2014, the AU adopted the AU Convention on Cyber Security and Personal Data Protection. The Organisation of African

Unity (OAU) was founded on May 25, 1963, and its present name and structure were approved in 2002, The goals of the AU include speeding up the continent's political and socioeconomic integration, as well as policy coordination and harmonisation between existing and future regional economic communities (Karbo & Murithi, 2019). The AU Convention on Cyber Security and Personal Data Protection intends to harmonise African countries' legislation on electronic commerce, data protection, cybersecurity promotion and cybercrime management. Member states are required under the convention to create national legal, policy and institutional governance frameworks for cybersecurity (Kamtuze & Matanzima, 2014).

The South African government developed the National Cybersecurity Policy Framework (NCPF) in 2015, with the goal of creating a cybersecure environment that aids in the protection of key information infrastructures by: a) measuring national security in terms of cyberspace; b) assessing solutions for combating cyberwarfare, cybercrime and other cyber evils; c) creating, examining and modifying existing substantive and procedural legislation to ensure alignment; and d) measuring confidence and trust in ICT security (Sutherland, 2017). The gazetting for the policy framework enabled the government to enact certain laws concerning the combating of cybersecurity. There are over 11 pieces of legislation to that are relevant but, for the purposes for this research, I will discuss the more relevant legislation, which are as follows:

- Protection of Personal Information (POPI) Act 4 of 2013
- Cybercrimes Act 19 of 2020
- The Electronic Communications and Transactions Act 25 of 2002
- Regulation of Interception and Monitoring of Communications and Provision of Communication-Related Information Act 70 of 2002 (RICA)
- Films and Publications Act 65 1996 (FPA)

2.7.1 Protection of Personal Information (POPI) Act 4 of 2013

The POPI Act safeguards people's right to privacy. Under the Act, SMT companies are required to use reasonable security measures to secure personal information. Personal information in this legislation pertains to demographics (age, gender and race), history (medical, financial and criminal), biometric information, personal beliefs and so on (Republic of South Africa, 2013). POPI consists of eight information processing concepts. One of the principles, security safeguards, is relevant to this study. It states that the responsible party must safeguard personal data integrity by putting in place organisational safeguards to prevent loss, damage, destruction and unauthorised access to or processing of personal data.

It further places the burden on the responsible party to follow generally accepted information security policies and procedures, as well as any industry or professional standards and

legislation that may apply (Jideani, 2019). Although the POPI Act has made provision for information regulator in order to ensure data privacy, Sutherland (2017) argues that the POPI regime is being implemented slowly and has far too many exclusions for national security. In terms of cybersecurity regulations, government cooperation, business and citizen involvement and educated labour availability, South Africa lags behind leading countries. It loses the information and experience obtained from faster-moving countries, as well as the adjustments they have made to their policies and, more significantly, their implementation, as a result of the delays. It has been said that some of the limitations are due to a shortage of criminal justice professionals who are familiar with cyber-related issues, among other things. Furthermore, it has been said that South African regulation on cyber-related crime is insufficient to dissuade cybercriminals from committing crime. Further reasons for the failure of POPI to be fully implemented are attributed to individual victims who frequently fail to report the crime because of ignorance. Businesses frequently hesitate to disclose cybercrime in order to preserve their brand (Ezeji et al., 2018; Sutherland, 2017).

2.7.2 Cybercrimes Act 19 of 2020

According to Jideani (2019), the Ministry of Justice and Correctional Services issued the Cybercrime and Cybersecurity Bill in December 2016. The goal of this law is to make cybercrime punishable, to provide the state with the right to investigate incidents of cybercrime and to make electronic communication service providers and financial institutions obligated to cooperate in the investigation of cybercrime. The Republic of South Africa (2021) states that the intention of the Cybercrimes Act 19 of 2020 is to achieve national cybersecurity by making provisions in law for:

i) Unlawful access to a computer system or computer data storage medium.
ii) Unlawful interception of data and/or processing of unlawfully intercepted data.
iii) Unlawful use or possession of a software or hardware tool.
iv) Unlawful interference with data or computer program.
v) Unlawful interference with a computer data storage medium or computer system.
vi) Unlawful acquisition, possession, provision, receipt or use of password, access code or similar data or device.
vii) Cyber fraud: where a person—unlawfully and with the intention to defraud—makes a misrepresentation by means of a data or computer program or through any interference with data, computer program, computer data storage medium, or computer system which causes actual or potential prejudice to another person.
viii) Cyber forgery and uttering: where a person defrauds by making false data or a false computer program to the actual or potential prejudice of another person or passes off false data or a false computer program to the actual or potential prejudice of another person.

ix) Cyber extortion.
x) Theft of incorporeal property.
xi) Malicious communications: data messages which incite damage to property or violence or which threaten persons with damage to property or violence and including unlawful distribution of intimate images.

2.7.3 Electronic Communication and Transaction Act 25 of 2002

The Electronic Communication and Transaction Act was passed in 2002 with the goals of facilitating and regulating electronic communications and transactions; developing a national e-strategy for the Republic; promoting universal access to electronic communications and transactions and the use of electronic transactions by small and medium-sized businesses; and providing for human resource development in electronic transactions (Steytler, 2005).

2.7.4 Regulation of Interception and Monitoring of Communications and Provision of Communication-Related Information Act 70 of 2002 (RICA)

In South Africa, RICA regulates the interception of any direct or indirect communication via an electronic communications system, the law prohibits the interception of communications (including by the government), unless an interception direction is obtained from a designated judge in accordance with RICA's procedures (Republic of South Africa, 2003).

2.7.5 Films and Publications Act 65 of 1996 (FPA)

The Films and Publications Act 65 of 1996 (FPA) governs the development, production, possession, The FPA covers the creation, production, possession and distribution of films, video games and some hardcopy and electronic publications. The FPA requires internet service providers (ISPs) to register with the Film and Publication Board and to take all reasonable steps to prevent their services from being used for the hosting or distribution of films containing child pornography, war propaganda, incitement of imminent violence, or advocating hatred based on an identifiable group characteristic, which constitutes incitement to cause harm (Republic of South Africa, 1996).

2.8 Indigenous data sovereignty

Indigenous data sovereignty is "an expression of the rights and interests of indigenous peoples in connection to data about them, their territory, and their ways of life" (Carroll et al., 2020:3). Indigenous data is acknowledge as "a cultural and economic asset that provides Indigenous communities with the knowledge they need to establish their own ambitions, make sound decisions, and identify their strengths and weaknesses in cause of developing themselves" (Walter et al., 2021:10). Indigenous peoples' data include information on and about indigenous

peoples' and territories collected by indigenous peoples, and by governments and other authorities, as well as information on indigenous communities and the people that live within them, both indigenous and non-indigenous (Carroll et al., 2020). Kukutai and Taylor (2016:39) explain that the term "data sovereignty" is "an expression that mainly comes from the explosive growth of information associated with the internet and the spread of mobile phone technology".

Ibarra (2014:2) states that "indigenous data sovereignty encompasses a wide range of problems, from legal and ethical concerns regarding data storage, ownership, access, and permission, to intellectual property rights and practical considerations about how data are utilised in research, policy, and practice". It has been argued that inadequate data, incorrect data or the incorrect approach to data are not only a waste of resources, but they can also have an adverse economic and human well-being impact on indigenous communities (Walter et al., 2021).

Kukutai and Taylor (2016) posit that while indigenous peoples have long claimed sovereignty over their lands and territories, discussions regarding data sovereignty have largely been driven by national governments and international businesses concerned with legal difficulties. Indigenous peoples' inherent and fundamental rights and interests relating to the collection, ownership and interpretation of data concerning their people, their ways of life and regions have been excluded from those conversations. Johnson-Jennings et al. (2019) acknowledge that data collected by colonisers and data collected by indigenous peoples can create dramatically different outcomes in terms of decision-making, policy development, outcome assessment and accountability. The digital and social media ecosystems have raised serious concerns about the collection, control and exploitation of indigenous peoples' data shared on social platforms. According to Walter et al. (2020), indigenous peoples are frequently unwilling participants in the collection and use of indigenous data about them. Walter et al. (2021) further states that indigenous peoples are significantly disenfranchised from the use of data and the exploitation of such data within policy power channels in a data landscape.

The existing data landscape and infrastructure do not acknowledge indigenous participation, belief systems or data requirements. Krøvel (2021) argues that the appropriation of cultural knowledge and intellectual property, the exploitation of land and other natural resources, and the perpetuation of discrimination, stigma and ongoing marginalisation are all examples of violations of indigenous data sovereignty that occur on SMTs. Indigenous data governance and sovereignty on SMTs are critical components in rebuilding strong native nations.

Nyoni and Velempini (2018) argue that inadequate awareness on protection tools designed to protect indigenous data means that indigenous communities face the risk of losing their data and their privacy. Nyoni and Velempini (2018) suggest that consideration be given for the

implementation of effective measures that are designed to ensure that the privacy and safety of users are protected. However, Carroll et al. (2019) advise that financial backing and technological knowledge have become increasingly more important to the goal of achieving data sovereignty as indigenous communities extend their data systems. Carroll et al. (2019) caution that indigenous data sovereignty is unlikely to be completely achieved without investments in people and infrastructure. To remedy the challenge of indigenous data sovereignty, Krøvel (2021) also suggests that serious investment in the consideration of indigenous communities growing their own data competency, infrastructure initiatives such as server and software development, human skill development and creating a partnership with indigenous communities to lead data governance. Carroll et al. (2019) conclude that identifying the essential components that need to be carefully considered in relation to data sovereignty must lead with the indigenous core values of communities. The components include: i) dialogue based on multiple ways of knowing and utilising data of community; ii) the supporting of existing tribal data governance protocols and procedures; and iii) engaging and promoting indigenous education.

2.9 Summary

The objective of this chapter was to review current literature on how SMT can be used effectively to digitise the cultural activities and history of marginalised indigenous communities with the goal of the long-term preservation of IK and subsequent representation in cultural archives. This literature review was guided by the study's title, problem statement, research questions, aim and objectives. Keywords and topics were chosen and then utilised to search the online databases of the Cape Peninsula University of Technology library. The key concepts discussed in this literature review include, inter alia: i) Indigenous marginalised communities; ii) indigenous knowledge; iii) digitisation; iv) digital inclusion; vi) SMTs; vii) governance of social media; and ix) indigenous data sovereignty.

A broader view of the key take aways from the literature review is that indigenous communities remain largely underserved as a consequence of a lack of economic opportunity, a lack of information technology development, poor information literacy and geographical isolation. The literature shows that because of the current context of indigenous communities, the preservation of indigenous knowledge of the communities continues to be neglected. Although international, regional, local institutions and governments have made commendable attempts to establish conventions, policy and legislation to combat the continued neglect for preservation of indigenous knowledge, sadly these attempts have been dismal in developing countries. As a result, an adverse economic and human well-being impact on indigenous communities is experienced.

Moreover, the literature also reveals the rapid introduction of SMTs poses a possible answer to the challenge of IK preservation. However, challenges still exist in the application of SMTs for indigenous communities. In this regard, the literature illustrates that although the SMTs provide positive outlook as tools for preservation, the worrying concerns are over issues of cybersecurity, misinformation and exploitation of indigenous data for commercial again by multinational corporations that own the SMTs. Furthermore, on close examination of the literature, much work still needs to be done to fill the lacuna that exists in terms of the right of indigenous peoples to claim ownership, management and distribution of indigenous data collected from them and about them on SMTs platforms.

In the next chapter (Chapter 3), the researcher outlines the research methodology used in this study, which includes the research philosophy, research approach, research strategy, data collection methodologies, and data analysis techniques.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

Figure 3.1: Chapter 3 layout

3.1 Introduction

In Chapter 3, the researcher discusses the research methodology used in the study as well as the disciplines that support it. The philosophical paradigm that was adopted, as well as research technique, design, strategy, data collection, data analysis, and ethics are provided.

The inadequate measures in the processes of indigenous knowledge (IK) preservation have resulted in loss of IK. This continues to be a challenge for underserved rural communities. The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives. The study was particularly designed to address two main research questions. The research questions are:

RQ1: What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK?

RQ2: How can SMTs be used to enhance the preservation of IK?

This study focuses on members of the Hlubi nation cultural group to investigate the elements that influence the adoption of SMTs in the processes of preserving IK. The research is inductive. Data was gathered through the conducting of 19 in-person interviews, which were transcribed and analysed. For data collection, an interview guide with semi-structured interview questions was used (Appendix F). Participants were interviewed in a non-random, purposeful manner. Coding, summarising, categorising and generating themes were used to analyse the data.

Zaeko et al. (1988:2) state that research is "the systematic collection and analysis of data in order to expand our understanding of a topic of interest". Research is defined as "the process of examining and extending scientific knowledge using a scientific approach" (Khan, 2014:225). Dellis et al. (2014) argue that it is critical to demonstrate that the knowledge system is founded on strong foundations and techniques in order to generate certainty and trust in research. Saunders et al. (2019:133) assert that in order to create assumptions and make assertions in research, it is necessary to: i) seek information on what reality knowledge reflects (ontology); ii) how knowledge is known (epistemology); iii) the value contained inside knowledge (axiology); and iv) the procedures used to gain knowledge (methodology). According to Gounder (2012:4), research is a process of gathering, evaluating and interpreting data in order to answer questions, and it must have specific qualities, namely:

i) **Controlled:** In real life there are many factors that affect an outcome. The concept of control implies that in exploring causality in relation to two variables (factors), you set up your study in a way that minimises the effects of other factors affecting the relationship.
ii) **Rigorous:** You must be scrupulous in ensuring that the procedures followed to find answers to questions are relevant, appropriate and justified. Again, the degree of rigor varies markedly between the physical and social sciences and within the social sciences.
iii) **Systematic:** This implies that the procedure adopted to undertake an investigation follow a certain logical sequence. The different steps cannot be taken in a haphazard way. Some procedures must follow others
iv) **Valid and verifiable:** This concept implies that whatever you conclude on the basis of your findings is correct and can be verified by you and others.
v) **Empirical:** Any conclusions drawn are based upon hard evidence gathered from information collected from real life experiences or observations.
vi) **Critical:** Critical scrutiny of the procedures used and the methods employed is crucial to a research enquiry. The process of investigation must be fool proof and free from drawbacks. The process adopted and the procedures used must be able to withstand critical scrutiny.

Saunders et al. (2019) proposed the research onion to simplify the stages that the researcher must take while deciding on the proper approach. The outer ring or layer begins with the research philosophy. This serves as the starting point for the research approach used in the second layer. The third layer presents the researcher with research strategy alternatives from which to choose. The logical horizon is indicated in the fourth layer. The fifth layer is where the data collecting and analysis process is handled. The research onion provides a better understanding of the processes that follow the various methods of data collection and analysis. The research onion of Saunders et al. (2019:130) was used to structure the chapter (Figure 3.2).

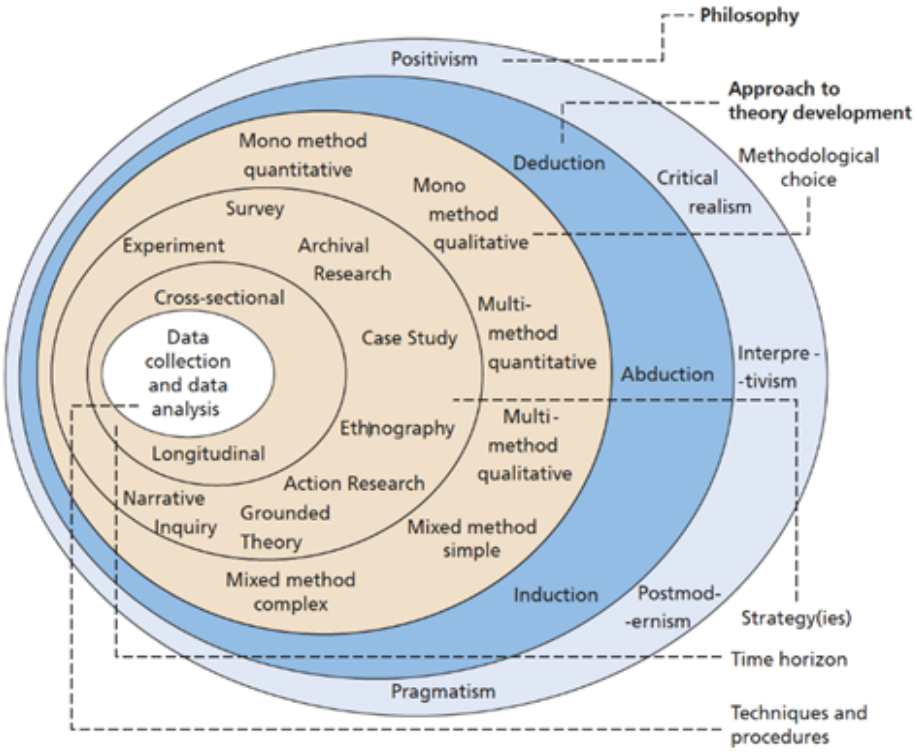

Figure 3.2: The research onion (Saunders et al., 2019:130)

3.2 Research philosophy

When pursuing a research project, a researcher must underpin the research with certain philosophical perspectives (Rehman & Alharthi, 2016). Saunders et al. (2019:130) argue that a research philosophy is "a set of ideas and assumptions regarding the evolution of knowledge". A philosophical perspective in its essence is a specific paradigm that foregrounds the research project. A paradigm is a conceptual perspective through which the researcher analyses the methodological characteristics of their research study in order to identify the research methodologies to be applied and how the data will be analysed (Kivunja & Kuyini, 2017:26). According to Ritchie and Lewis (2013), it is

beneficial for the researcher to be aware of the philosophical debates that have underpinned the development of social research, in general in, order to fully understand the various approaches utilised by researchers. Creswell and Poth (2016:15) argue that there are three philosophical methods for conducting research: ontology, epistemology and methodology, and that researchers must understand the appropriateness of using the methods in their research, although no method is intrinsically better than another. The choice of methods is critical because some methods are better suited to specific types of problems than others. Therefore, understanding the research philosophy selected assists in describing the research process' inherited assumptions and how these assumptions are suitable for the methodology used.

3.2.1 Ontology

Ontology is referred to as "a set of views and beliefs about the nature of reality, these beliefs and views influence how one perceive and analyse ones research materials" (Saunders et al., 2019:133). Ritchie and Lewis (2013:6) posit that the key ontological concerns are "whether there is a social reality that exists independently of human conceptions and interpretations, and if there is a common social reality or various, context-specific ones". According to Cruickshank (2007), there are two types of ontology: objectivism and subjectivism. Objectivism assumes the existence of a real world, independent of human knowledge, whereas subjectivism implies a socially constructed reality. Because of the exploratory nature of the research, this study assumes subjectivist ontology.

3.2.1.1 Objectivism

According Ritchie and Lewis (2013:4), objectivism is "founded on the assumption that there is an objective reality that exists regardless of people's perceptions of it and that there is a divide between the way the world is and the meaning and perception of that world that people have". The objectivists believe that "social phenomena and their meanings exist independently of social actors" (Bryman, 2004:16). Using objectivist methodological assumptions and leaning too much on mathematical analysis may result in rigorously produced hypotheses and proposals that are not relevant to an exploratory research (Böhme et al., 2012). This study did not follow objectivist ontology as the objectivism approach is not suitable for an exploratory research.

3.2.1.2 Subjectivism

Subjectivism can be understood as "the assumptions of the arts and humanities which argue that social reality is formed by people's perceptions and subsequent actions"

(Saunders et al., 2019:137). Wong (2014:131) states that subjectivism's ontology "proposes that truth is subjective, as opposed to positivists' singular and objective perspectives, and that truth is founded on people's perceptions of reality – truth is a construct that relates to a certain belief system held in a specific context". According to Ritchie and Lewis (2013:5), reality is "inherently mind-dependent can only be understood through the human mind and socially formed meanings and that no reality exists without them". This implies that people create reality and give it meaning, as opposed to it being created objectively and external. Because of the exploratory character of the research, this study used subjectivist ontology.

3.2.2 Epistemology

Saunders et al. (2019:137) define epistemology as "a discipline of philosophy that explores the nature of knowledge and what constitutes acceptable knowledge in the subject of study". The epistemological assumptions can be linked to the nature of knowledge and the ways by which that knowledge might be gained. Epistemology also entails "laying a philosophical framework for deciding what kinds of knowledge are possible and how to ensure that they are both appropriate and legitimate" (Scotland, 2012:9). Kivunja and Kuyini (2017b:27) argue that epistemology is also "concerned with the basic foundations of knowledge, its nature, forms, and how it may be gained and transferred to other humans". They further state that epistemology focuses on the nature of human knowledge and comprehension that a researcher or knower, may be able to gain in order to extend, widen, and deepen understanding in a field of study. Burrell and Morgan (1979:3) posit that in epistemology, there are two primary schools of thought, which are: i) positivism; and ii) interpretivism. This study was positioned within the parameters of a interpretivism epistemological discourse.

3.2.2.1 Positivism

Unlike interpretivism, the epistemology of positivism relies mainly on objectivism and places emphasis on deploying a scientific research method of investigation as its philosophical perspective (Kivunja & Kuyini, 2017). According to Saunders et al., (2019:144), "positivism relates to the philosophical stance of the natural scientist and entails working with an observable social reality to produce law-like generalisations". The positivist paradigm promotes the "use of quantitative research methodologies as the foundation for a researcher's capacity to be exact in describing the characteristics and correlations in data that is acquired, analysed, and interpreted in order to comprehend relationships contained in the data" (Kivunja & Kuyini, 2017:31). Positivism uses the hypothetic-deductive approach to examine a priori notions, which are typically stated

numerically and from which functional connections between causality and explanatory elements may be derived (Park et al., 2020). According to Kivunja and Kuyini (2017:30), the positivist research paradigm focuses on “deductive reasoning, hypothesis creation, hypothesis testing, operational definitions and mathematical equations, computations, extrapolations, and expressions to reach findings”. This research did not follow a positivism approach.

3.2.2.2 Interpretivism

The interpretivist stance was followed in this study since the goal of the research was to investigate the interpretation of social worlds and situations. Rehman and Alharthi (2016:55) posit that an interpretivist research environment allows the researcher to “observe, investigate, and understand the learning process, as well as gather and document the subtleties of learners’ experiences, using strategies such as participant observation, various written texts, face-to-face individual and focus-group interviews in the social and cultural context in which the learning occurs”. Pham (2018) asserts that interpretivism’s epistemology is based on subjectivisms, and that interpretivism assists the researchers to have a much better understanding of a phenomena and its complexity in its specific context. With interpretivism, humans and their social environments cannot be investigated in the same way that physical phenomena can, hence social sciences study must be distinct from natural sciences research. Cohen et al. (2000:21) argue that the interpretative paradigm’s core goal is to comprehend the subjective realm of human experience, to preserve the integrity of the phenomenon under investigation and attempts are undertaken to go into the individual and comprehend from the individual from inside. Interpretivist research seeks to “produce new, richer understandings and interpretations of social realities and settings” (Saunders et al., 2019:148).

3.3 Research approach

The link between paradigm and methodology is “particularly essential since the methodological implications of paradigm choice include the research questions, participant selection, data collecting devices and collection techniques, and data analysis” (Kivunja & Kuyini, 2017:36). According to Soiferman (2010:3), research methodology distinguishes between the two primary methodologies utilised in research, known as the “deductive and inductive approaches”. However, Soiferman (2010) argues that there appears to be some dispute among researchers as to the appropriate strategy to utilise when conducting research and collecting data. These two approaches are not mutually exclusive and they frequently address the same subject using different approaches. The inductive technique was employed in the study because of the interpretive epistemology

chosen, and interviews were used to add to collect data and for the understanding of individual, group, organisational, social, political and related phenomena.

3.3.1.1 Inductive methodology

The inductive research technique entails “moving from the specific to the general, such as when making actual observations about a topic of interest and developing conceptions and theories based on them” (Woiceshyn, 2017:186). Domegan and Fleming (2007) contend that since little is known about the topic, inductive research tries to examine and identify concerns concerning the subject at hand. There is usually uncertainty about dimensions and characteristics of problem. Saunders et al. (2019:17) state that “an inductive approach involves the development of a theory as a result of the observations of empirical data”. This study employed an inductive strategy, which entails the search for a pattern from observation, as well as questionnaires to aid in the creation of themes. The rational of using the inductive approach is informed by the objectives of this study. The inductive approach enabled the researcher to conduct in-depth interviews in order to explore the implications and experiences of participants with regard to the use of SMTs in the process of IK preservation in the Hlubi nation.

3.3.1.2 Deductive methodology

Deductive theorists believe in “a single reality that can be reliably and properly measured using scientific standards” (Soiferman, 2010:4). The deductive method establishes a hypothesis based on current theory and then designs a research strategy to test it (Ritchie & Lewis, 2013). A deductive approach may be employed in the positivist epistemology, which allows for the creation of hypotheses and statistical testing of projected findings to an acceptable degree of probability (Snieder & Larner, 2012). This study did not follow a deductive approach because it is not suitable approach for the study. Flowing from the aim of the study, which was to explore the usage of SMTs in the preservation of IK for the Hlubi nation, a qualitative approach based on the interpretivism philosophical construct was adopted.

3.3.2 Research strategy

According to Sönmez (2013:308), research design “can be understood as a set of predetermined logical steps or some form of a blueprint plan that guides on how the study is to be carried out”. Wedawatta and Amaratunga (2011:1) state that a “research strategy gives the general direction of the study as well as the procedure by which the research is executed”. Research methodologies include “experimental research, surveys, archival research, case studies, ethnography, action research, grounded theory, and narrative inquiries” (Saunders et

al., 2019:54). This study's research strategy was a case study. Baxter and Jack (2015:545) define a qualitative case study as "a research method that allows for the investigation of a phenomena in its context using a range of data sources, the method guarantees that the topic is not examined through a single lens, but rather through a multitude of lenses, allowing for the discovery and understanding of numerous aspects of the event". Wong (2014:135) classifies case studies as either explanatory, exploratory and or descriptive and even differentiates between single, holistic case studies and multiple-case studies. The type of case study adopted in this research was an exploratory case study, which was used to "explore those situations in which the intervention being evaluated has no clear, single set of outcomes" (Baxter & Jack, 2015:549).

3.3.3 Unit of analysis

A unit of analysis is the object about which you wish to make a statement at the end of your study, and it is also known as the research focus (DeCarlo, 2018). The unit of analysis is defined as the "who" or "what" for whom information is evaluated and conclusions drawn (Roy et al., 2015). The unit of analysis as "having categories namely individual level group level, organisational level and social artefacts and social interaction level" (Dolma, 2010:170). Of relevance to this study is the individual level unit of analysis that was the chosen unit for the study. The preservation of the history and culture of the Hlubi nation, as defined by the Mthimkhulu Cultural Institute (MCI), was the research's unit of analysis.

3.3.4 Unit of observation

Roy et al. (2015:214) defines the unit of observation as "the object (or items) being observed, measured, or gathered while seeking to learn something about the unit of analysis", and a unit of observation, also known as the unit of measurement, is defined as the "who" or "what" for whom data are gathered. Researchers base their conclusions on data that have been gathered and analysed, therefore, specific units of observation in a survey or other study can assist to clarify the valid conclusions that can be drawn from the data (Lavrakas, 2013). The unit of observation provides a snapshot of the population of interest at a specific period in time. The unit of observation can include individuals, homes, businesses, schools and nations (Longhi & Nandi, 2015). Units of observation, unlike units of analysis, are often specified by the type of data collection utilised to answer the research question (Sheppard, 2020a). This study's unit of observation was the study's participants, who were selected members of the Hlubi community (Chapter 4, section 4.3). Ten elders (those above the age of 35) and nine youngsters (people under the age of 35) were selected.

3.3.5 Sampling technique

Researchers are expected to “provide a cohesive statement on qualitative integrity to illustrate how their sample decisions are based on epistemology, theory, and data richness and quality” (Roy et al., 2015:243). A non-probability sampling technique was used where by participants (19) were selected based on their age and gender (Taherdoost, 2018:20). The sample was non-randomly, purposively and conveniently selected. Sandelowski (2000:249) state that random purposeful sampling is “the combination of probability and purposeful sampling that is typically used when there is a wide pool of potentially information-rich cases and no explicit reason to select one case over another”. The executive board of the MCI and other Hlubi community members were selected.

For the research participants in the study, 10 seniors members (older than 35 years old) of the community were selected, eight of whom were men and two of whom were women. The reason why the was a gender split is because study needed to get different perspective as women and men have different experiences of life in rural settings. The second category of participants in the study was made up of nine youth (younger than 35 years old), six whom were female and three of whom were men from the community. The reason why there was a split at the age of 35 is that at this age members of the Hlubi nation are accepted to have transitioned into adulthood. They have gone through all the mandatory cultural and customary rites, which gives them adult status in the Hlubi community in order to be able to comment or even have an opinion on Hlubi matters. The under 35 year old group was the group that had more experience with using SMTs, so it is important to get their views. With regard to the more senior participants within the group, that is 35 years and above, they are considered to be the custodians of the IK and it was equally important that their views were captured. This sample enabled the researcher to get the opinions of and stories from the senior members and obtain valuable input from the youth in terms of what they think is important and how such social media can be used. The saturation criterion was used to manage the processes of data collection and analysis.

3.4 Data collection

3.4.1 Data collection instruments

Devers and Frankel (2000:269) opine that “an open-ended methods of data collection are an appropriate consideration when the nature of a study is more exploratory or seeks to discover theories and concepts”. Thus, the study used semi-structured questionnaires and interviews for data collection. The interviews were conducted with cultural custodians of Hlubi nation.

The questions and answers were linked to the sub-research questions and presented in an interview guide (Appendix F). The interview guide was used during the interview to guide the researcher throughout the interview.

A pilot study was done with three participants in order to check the validity, relevance and clarity of the questions that were asked. This process was very insightful as the researcher quickly discovered that some interview questions were redundant. The researcher consulted with the supervisor and the questions were revised accordingly. As the result of the pilot study, the interviewer also had to adjust the interviewing technique to allow the respondents to give prompt and deliberate answers, rather than long winded responses that at times, had the potential to derail the interview with matters that fell outside the scope of the research.

3.4.2 Data collection fieldwork

The researcher first obtained letters of consent to conduct research with members of the Hlubi nation (Appendix A) from the organisation of MCI. Once permission from executive board of the MCI had been obtained, the participants were recruited via the secretary general of the MCI, who made an announcement to members of the MCI, requesting them to participate in the study. This was done on a voluntary basis. Phone calls were used to set up the dates of the interviews, which were followed up with emails (Appendix D). The participants were issued with the individual consent form that needed to be signed prior to the interviews, along with a summation of the study, including the problem statement, research questions and aim of the study as well as the interview guide with the interview questions (Appendix F).

Because of the Covid-19 pandemic influenced data collection, data was collected using a combination of face-to-face and virtual interviews hosted on the Microsoft Teams meeting platform. More or less 1GB data were given to the participants in order for them to connect to the platform. The virtual interviews were recorded via Microsoft Teams, and the face-to-face interviews were recorded on a mobile phone, as well as on a laptop audio recording application for back up purposes. The interviews were recorded with the expressed consent (Appendix B) of the participants. Immediately after the interview, the recording was played back to ascertain whether proper recording took place and then the file was uploaded to a Google folder to endure safety. All recordings an data were encrypted and password protected to secure the safety and privacy of the data and the participants. For the face-to-face interviews, the research travelled to the Eastern Cape to conduct the interviews over a period of three weeks. Primarily, the face-to-face interviews were done with the elderly members of the Hlubi nation. Each interview was done separately in single session interview. Except for the virtual meetings, all meetings

took place in the home of the participants. During all the interviews, the background and the aim of the research was thoroughly explained to the participants.

Flick et al. (2018) encourage social research that includes participants who come from diverse linguistic backgrounds, such as ethnic minority groups who are not fluent in the dominant research language. The elderly participants were interviewed in isiXhosa. Undertaking “multilingual qualitative research fosters inclusive social research and increasing cultural awareness of the researcher” (Flick et al., 2018:21). Although the interviews where conversational, it was not easy at first for the participants to open up. The participants kept on giving evasive half answers until the researcher explained that the research was not about an audit of explicit details of the culture but that it was about their perspectives on the use of SMTs within the culture. Only after the explanation (second explanation) would the interviewees become open and engage meaningfully. Each interview lasted about 45 minutes.

Interview questions ended with researcher thanking the participant for participation and outlining a way forward by telling the participant about what the next steps would be. They were informed that the interviews would be transcribed and sent back for validation. Once the research was done, the participants would be informed of the outcome of the study. The participants communicated appreciation that a study of this nature was finally taking place and that they could not wait to get the end results of the study.

3.5 Data analysis

Data was captured using a mobile recording device to ensure that important details were not lost. The participants were informed of the use of the devices. The recordings were then transcribed in Microsoft Word. The transcripts were presented to the participants to check the correctness of the transcriptions for validation purposes. Only after validation did the coding analysis start. According to Baralt (2012:2), coding is “a systematic method of condensing large data sets into smaller analysable units by creating categories and concepts drawn from the data and creating linkages between different parts of the data that are deemed to have common qualities”. Coding helped the researcher to breakdown transcripts into sizable chunks of related information. This was important as remerging similarities and categories began to emerge from the text.

For the interviews that were done in isiXhosa, the English as well as the isiXhosa transcripts were given to the participants for validation. Flick et al. (2018) suggest that initial coding is efficient when it is done in the language of the interviewer and only at the categories level must it be translated into English for use in the discussions phase. The

researcher did not have technical abilities in the language of isiXhosa, therefore the interviews where first translated into English, and the coding was done from the English transcripts.

A descriptive thematic analysis was this study's preferred approached to analyse the data as it provided scope for the development of themes. The transcripts were coded and summarised, and categories were defined. After this was done, a thematic analysis was executed. This was done by identifying and combining synonyms, similar meaning words and concepts. Table 4.4 shows how codes and concepts were identified and linked. Each interview question was distilled into one or more conclusions. Following that the findings were summarised and classified, and themes were generated (Chapter 4, section 4.6.1 & Table 4.6). In Chapter 5, the themes are used to guide the discussion are presented.

3.6 Ethical considerations

Resnik (2015:1) defines ethics as the "norms of conduct that distinguish between acceptable and unacceptable behaviour". Resnik (2015) argues that when people think about ethics, they immediately think about what is right or wrong. This study adhered to all the ethical guidelines of the Faculty Research Ethics Committee, Business and Management Sciences Faculty of the Cape Peninsula University of Technology. The ethics clearance certificate can be seen in Appendix E. Although there were no risks identified for participating in this study, it is required to obtain informed consent of all participants in the research. As the researcher was from the same Hlubi culture, special notice of the specific ethos, cultural and protocols was followed. The participants were informed of their rights and great care was be taken not to harm the participants. The participants were treated with respect and it was made clear that the participants could withdraw if they so wished. It was explained to the participants that withdrawal could take place at any time during and even after the interview. One participant did withdraw from the study after initially agreeing to participate; when the interview guide was sent to the participant, the participant felt that they were not sufficiently knowledgeable to speak on the subject matter of IK, therefore, the participant withdrew from the study and was afforded the opportunity to do so.

The participants were given the option of omitting questions that they were uncomfortable answering and, as a result, certain questions were not answered. One such a question related to gender participation as most participants, specially the male participants, felt uneasy responding to the question and they were offered the right to refuse to answer. Participants were informed that their information would be treated confidentially and, in the final thesis document, information would be presented anonymously. According to Resnik (2011:5), the following examples ethical standards are as follows:

i) Integrity: Researchers must disclose all findings honestly and not alter or invent data. This was accomplished by providing the transcribed interviews to the participants in order to confirm the substance of the interviews.
ii) Integrity: Keep all pledges and agreements made, including those made to interviewers or participants. This was accomplished by providing the transcribed interviews to the participants in order to check the accuracy of the transcriptions.
iii) Openness: The researchers should be open to criticism or new ideas.
iv) Confidentiality: Researchers must keep confidential data secure at all times. This was accomplished by keeping the data in a secure location and anonymising the participants by assigning each of them a code.
v) Animal care: Animals must be safeguarded and cared for if they are employed in research. There were no animals utilised in the study.

3.7 Delineation

According to Simon (2011:2), delimitations "can be thought of as certain characteristics that are within the researchers control so as to project the boundaries of the study, delimitations can also include factors such as geographic region and organisation covered by the study". This study was conducted in the in area of Cala within the Sakhisizwe Municipality in the Chris Hani District in the Eastern Cape. While the Hlubi nation is scattered over many parts of the African continent, this study focused on the Hlubi nation population situated in Cala. Participants included members of the MCI. The MCI is a cultural organisation that was established to handle matters relating to the Hlubis is the area of Sakhisizwe Municipality.

3.8 Summary

In Chapter 3, the researcher described the study's philosophy, methodology, technique and strategy, as well as the methods employed to gather and analyse data. Through ontology, epistemology and methodology, the researcher was able to investigate the usage of SMTs in IK preservation procedures in a live environment using philosophical methods.

Research paradigm: The ontological approach for this study was defined as subjectivist, and the epistemological perspective as interpretative.

Research approach: An inductive approach based on the interpretivism philosophical construct was adopted.

Research strategy: In-depth, semi structured interviews were adopted as the research strategy.

UOA: The unit of analysis for this research was Hlubi nation constituted under the MCI.

UOO: The units of observation of this study were the selected members of the Hlubi community as participants in the study. Ten seniors members (older than 35 years old) and nine of the youth (younger than 35 years old) were selected for participation.

Sampling: The sample was non-randomly, purposively and conveniently selected. This study used a non-probability sampling technique whereby participants (19) were selected based on the age and gender representative characteristics.

Data collection: The study used a qualitative methodology to gather data. Data was collected by means of interviews using a semi-structured interviews and an interview guide (Appendix F).

Data analysis: Interviews were conducted, recorded, transcribed and analysed. The responses were coded, summarised and categorised, and a theme analysis was performed.

The research met all of the ethical standards established by the Faculty of Business and Management Science and the institution.

CHAPTER 4: ANALYSIS AND FINDINGS

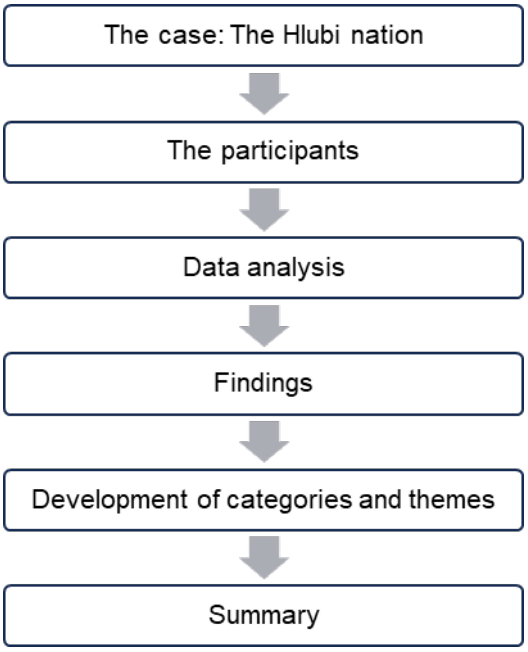

Figure 4.1: Chapter 4 layout

4.1 Introduction

In Chapter 4, the researcher presents the data analysis and research results. Data was collected using semi-structured interviews conducted with 19 participants. The participants were all members of an indigenous cultural group known as the Hlubi nation. The results and findings of the analysis are presented in relation to the aim and research questions of the study. Figure 4.1 presents the layout of Chapter 4 as follows: i) the Hlubi nation; ii) the participants; iii) data analysis; and iv) findings. For the convenience of the reader the research aim and questions are listed below.

The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives.

RQ1: What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK?

RQ2: How can SMTs be used to enhance the preservation of IK?

4.2 The case of the Hlubi nation

The history of amaHlubi is of eMbo origin and they form the largest formation of the eMbo nation who were part of the downward migration from central Africa to settle in parts of what

today known as KwaZulu-Natal (KZN) in the 1500s (Wright & Manson, 1873). The Hlubi group is the oldest in origin, much older than the amaZulu and amaXhosa. According to Rudwick (2006), what makes amaHlubi distinct from the peoples of amaZulu and amaXhosa is their *tekela* speech, customs and the distinct features of their dress code (Figure 4.2).

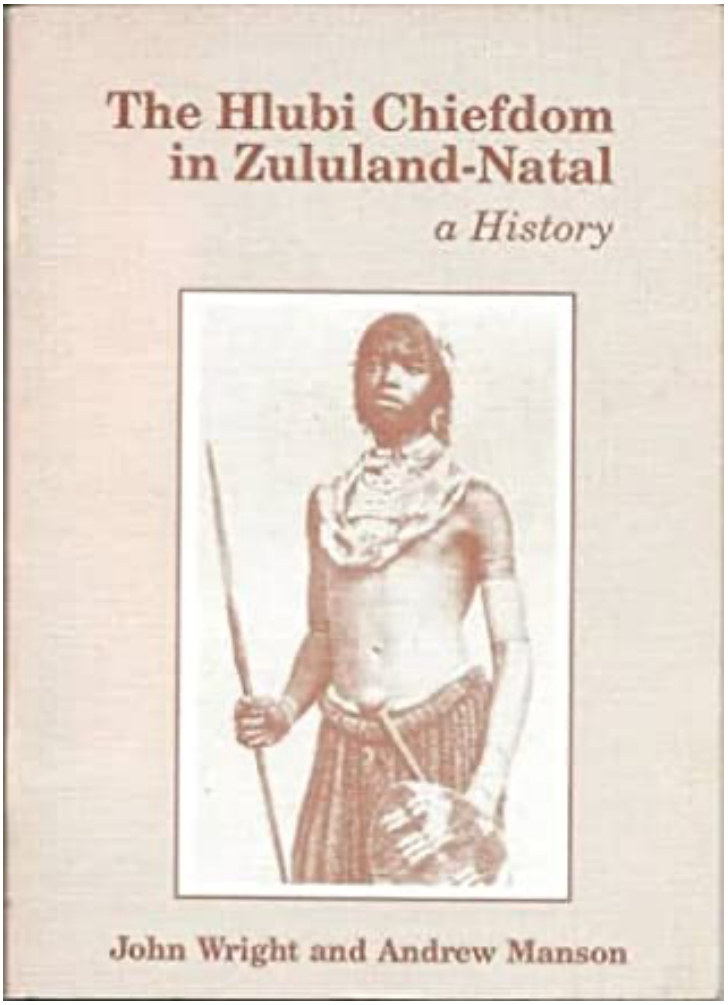

Figure 4.2: Image of Hlubi man dressed in tradition attire

(Source: Wright & Manson, 1873:1)

The story of the Hlubi nation is one of land disposition, displacement and loss of identity. History records that since 1870 when King Langalibalele was the first to be arrested by the colonial authority, the land of the Hlubis was annexed and given to the Zulu monarch with parts staying under the control of the Natal colony. Peires (2014) states that in terms of data presented to the Commission on Traditional Leadership and Claims, the Hlubi land would comprise of Charlestown, Volksrust, Newcastle, Madadeni, Utrecht, Wakkerstroom, Alckockspruit, Paulpietersburg, Vryheid, Dundee, Nquthu and other areas, up to Estcourt. According to Hlubi oral histories, the amaHlubi area included and extended beyond Pietermaritzburg. AmaHlubi are now found throughout the country, including in sections of

KZN and the Eastern Cape, with particular examples being the old Ciskei and Transkei homelands, and tiny parts of the North West and Mpumalanga provinces (Peires, 2014).

Figure 4.3 is a depiction of a map of Hlubi nation's would be territory.

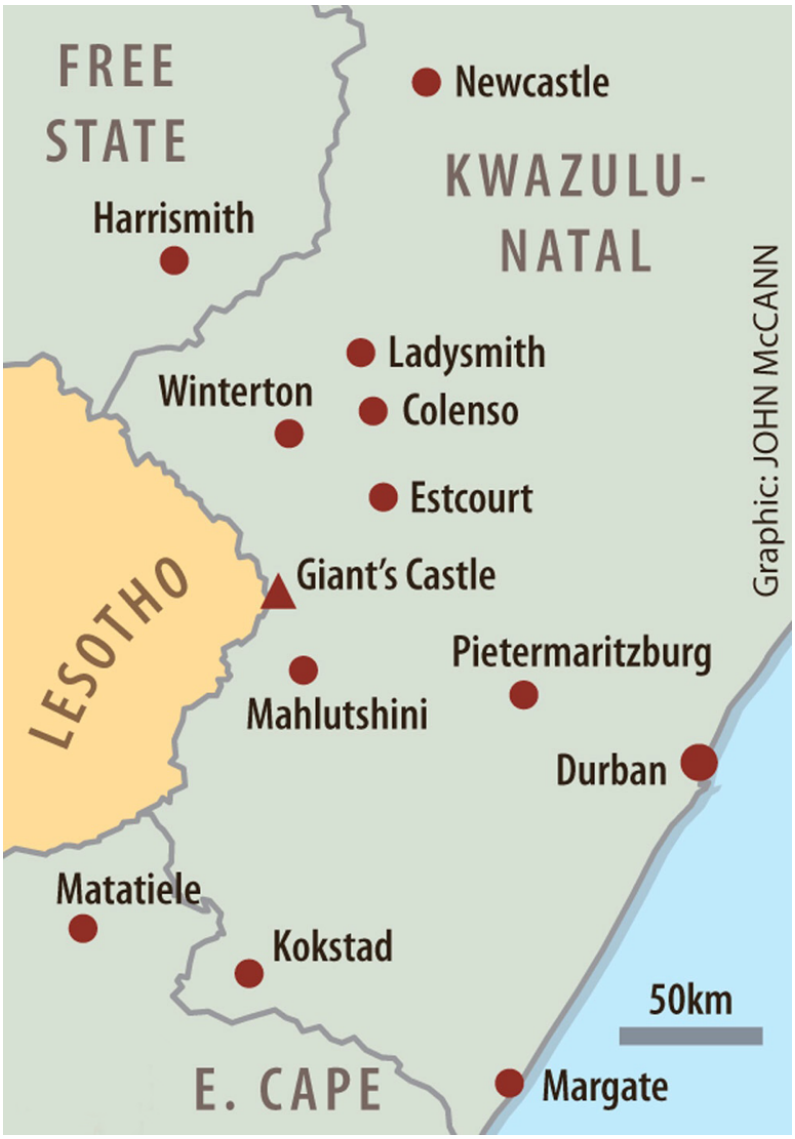

Figure 4.3: Depiction of a map of Hlubi nation's would be territory

(Source: John McCann)

In 2007, the amaHlubi nation made a submission to the Nhlapo Commission on Traditional Leadership Disputes and Claims. The commission was created under Chapter 6 of the Traditional Leadership and Governance Act 41 of 2003 to provide a platform for conflict resolution and claim settlement in any province of the Republic of South Africa. The commission's mandate was to look into the traditional leadership position when the incumbent's claim to the position or title was being challenged. According to Arndt (2018:15),

the end goal of Hlubi's participation in the commission was "to reunite under a single kingship more than thirty Hlubi senior traditional leaders and more than 2.5 million Hlubi subjects residing primarily in KwaZulu-Natal and the Eastern Cape". The submission of the Hlubi nation was that in 1870, King Langalibalele I of the eHlubi nation (Figure 4.4) became the first traditional leader to be imprisoned by colonial forces. Since then, the Hlubi's territory had been captured and given to the Zulu ruler, with certain areas still controlled by the Natal colony at the time (Peires, 2014). According to amaHlubi evidence to the Nhlapo commission, Langalibalele I, who reigned as king of the amaHlubi until his imprisonment and deposition in 1873, died in house captivity in 1889.

Figure 4.4: Statue of Langalibalele, King of amaHlubi, a Bantu tribe, former royal prisoner, Castle of Good Hope, Cape Town, South Africa (Alamy Stock Photo)

The Hlubi nation argued that because of this, none of the heirs of Langalibalele I ever succeeded him in the kingdom. Langalibalele II, his successor, was, therefore, acknowledged by the national and provincial governments as a chief within the KwaZulu/Natal province, making him and his people in Natal (and abroad) legal subjects. Yet another king disputed the

fact that he had a following of more than twenty (20) well-known traditional leaders in South Africa.

In 1873, amaHlubi King Langalibalele I's people lost more than just their sovereignty when the British colonial government declared that the king had no further status. Many amaHlubi learned other languages in order to avoid being identified as subjects of the deposed king and punished as a result of the move that resulted in the imprisonment of Langalibalele on Robben Island. Wright and Manson (1873) write that in order to avoid being identified as subjects of the deposed king and punished as a result of what happened that led to Langalibalele's imprisonment on Robben Island, many amaHlubi assimilated into other cultures, primarily Xhosa and the Zulu cultures, as illustrated in Figure 4.5 and Figure 4.6. Since then, the Hlubi nation has dispersed to many parts of South Africa.

Figure 4.5: Hlubi man who have assimilated into the Xhosa nation dressed in Xhosa traditional ceremonial attire (MIC)

Figure 4.6: Hlubi Man who have assimilated into the Zulu nation dressed in Zulu traditional ceremonial attire (Hlubi Kingdom)

There are ongoing efforts to restore the kingdom of the Hlubis and its traditions. According to Arndt (2018), in South Africa, tensions over land erupted in 2007 when Hlubi individuals challenged Zulu King Goodwill Zwelithini's exclusive kingship position by filing an independent kingship claim with the Nhlapo Commission. The Nhlapo commission eventually dismissed their claim. Arndt (2018) argued that there were two key reasons for the rejection. On the one hand, the commission supported its judgment by asserting that the Hlubi had lost their status as a sovereign kingdom far earlier than Langalibalele's capture through an indigenous political processes. The commission, on the other hand, contended that as a result of these indigenous processes, the Hlubi had lost their cultural and linguistic unity, making them ineligible for an independent kingship in the post-apartheid period of South Africa. Subsequent to the Nhlapo Commission, there have been many efforts made to get the commission's rejection overturned, including court cases.

Moreover, the Hlubi nation has organised itself to establish committees that focus on the restoration of the Hlubi nation to its kingship, restore its traditions and culture and conduct research about the Hlubi nation. Such committees include the establishment of the AmaHlubi National Youth Working Committee to promote "the revival, preservation, education, dissemination, promotion and celebration of the rich history, culture and heritage of amaHlubi amongst the youth of the said ethnic group" (Arndt, 2018:18). Another example is the IsiHlubi Language Board, which is tasked with recording, transcribing, researching, preserving and promoting this nearly extinct language (Arndt, 2018). The Mthimkhulu Cultural Institue (MCI)

is a body established by a grou of Hlubi people residing withing the Chris Hani district Municipality in the Eastern Cape the mandate of MCI is to coordinate and bring together all the Hlubi people living in the area. The day to day affair of MCI is managed by executive committee that is responsible for streamlining activities of the Hlubi nation in the Chris Hani area. This study contributes to the efforts towards restoration of the Hlubi identity an preservation of its indigenous knowledge.

4.3 The participants

The participants were grouped into two categories (Table 4.1), namely i) the youth (age of 35 and younger); and ii) the elders (35 and older). Hlubi nation recognises persons of up to age 35 as the official South Africa youth bracket. At this age, members of the Hlubi nation are accepted to have transitioned into adulthood and they are expected to have gone through all the mandatory cultural and customary rites that give them adult status in Hlubi community. There were 10 participants from each category. Of the 20 participants, one (1) youth participant withdrew from the study, citing inexperience to speak on issues of culture. The results presented in this section are from 19 participants, as show in (Table 4.1).

Participants are presented anonymously as listed in Table 4.1. Eight of the participants were female with two adult females in the group. All the participants gave written permission to participate in the research (Appendix B).

Table 4.1: Participants in the category age and gender

Code	Category	Gender	Age
P1	Youth	Male	Below 35 years
P2	Youth	Female	Below 35 years
P3	Youth	Female	Below 35 years
P4	Youth	Male	Below 35 years
P5	Youth	Female	Below 35 years
P6	Youth	Male	Below 35 years
P7	Youth	Female	Below 35 years
P8	Youth	Female	Below 35 years
P9	Youth	Female	Below 35 years
P10	Adult	Male	Older than 35 years
P11	Adult	Female	Older than 35 years
P12	Adult	Male	Older than 35 years
P13	Adult	Male	Older than 35 years
P14	Adult	Female	Older than 35 years
P15	Adult	Male	Older than 35 years

Code	Category	Gender	Age
P16	Adult	Male	Older than 35 years
P17	Adult	Male	Older than 35 years
P18	Adult	Male	Older than 35 years
P19	Adult	Male	Older than 35 years

*P - participants

4.4 Data analysis

The data analysis processes begun with transcribing the recorded interviews. The interview transcripts were presented to the participants for validation. The process of validation was undertaken to ensure the integrity of the data collected by getting confirmation from participants on whether their views were captured correctly in transcripts. Figure 4.4 shows is an example of validated interview transcript.

After having received a validated transcript, the study deployed a descriptive thematic analysis to analyse the transcripts in order to identify concepts and appropriate codes. Table 4.2 shows an example of a coded transcript, list of codes identified and the number of times they appear in the transcript. Each identified theme or concept in the transcript text was highlighted with a specific colour code. Each colour code was associated with a code as reflected in the middle column of the table. The far right column of the table is the number of times each code appeared throughout the transcript text. The result was arrived at by application of rigorous processes in order to make sure that all possible codes were identified and then similar concepts and codes were combined to create categories and themes. The result of the processed is summarised and presented in a narrative format, demonstrated in section 4.5 of this thesis.

Table 4.2: Example of validated interview transcript

INTERVIEW TRANSCRIPT: P3 - Female
CATERGORY: YOUTH

RQ1: **What are the challenges faced by indigenous marginalized communities in using SMTs for the preservation of IK?**
SQ1.1: What is the current process on preserving IK?
IQ1.1.1: Can you elaborate on what you think is the state of IK of the Hlubi nation? P3-Answer There's not much academic information around it, It's only based on family to family. You know there is no point of reference to validate, let's say if my mother tells me this is the tradition, I can't argue with her because that is what she's told me, and so I think at the moment the is not much written I mean there are things written but not academically, so it's not preserved well, I guess. For instance should I go online, or should I go to the library, my nearest library there is no book about the Hlubi nation and even if I Google, I will find something about the Hlubi culture, but there's no way of knowing that is correct information as I've never been exposed to an academic book regarding the Hlubi nation.
IQ1.1.2: How should indigenous cultures be preserved within the Hlubi nation? P3-Answer I think the best way is writing down cause that's how we refer to any histories from other nations, It appears writing and recording things down has worked. And yeah, I believe that is what we need. We need knowledge like we need our culture, cultural practises and traditions written down.
IQ1.1.3: What are the common methods that are being used to preserve IK of the Hlubi nation? P3-Answer I will say a little bit on the Internet, not so much. The only methods that I know to preserve culture is only through family members and I don't feel that they're structured family to family. I don't know of any other method honestly speaking.
SQ1.2: What are the challenging factors in preserving IK?
IQ1.2.1 In the current process of preserving IK in the Hlubi nation what are the challenges? P3-Answer We don't have facts, sometimes one can't weigh what one person tells you, It may be right or wrong or is it the correct way to say it, but there's no right or wrong. You know if someone tells you this is the tradition you can either agree or disagree, but there's no point where you can find facts you know, like The maybe missing, misinterpretation or even wrong information, who knows?

Table 4.3: Example of coded transcripts and list of codes identified and assigned

IQ1.1.2: How should indigenous cultures be preserved?	Codes Assigned	No #
Responses from P1: Okay, we as young adults we tend to not want to take part in the rituals that our forebears have told us about. For instance If the needs to be in an *imbeleko* for a child to be introduced to the ancestors, some the adults will attempt to question the relevance and significance of the ritual of *imbeleko*. The change should begin with us we should be the ones who take the stands and say, okay, let us preserve the cultures and everything by exercising them by doing them because they were done before, and we are the people that we are because of those rituals and those practises. I would like the rituals to be preserved by me seeing it being performed and me being part of it when it is being performed.	Platform preference: Technology	3
	Platform preference: Social Media:	1
	Platform preference: Facebook	1
	Platform preference: Google, website	2
Responses from P2: If maybe there would be a book that would be written. Sort of something we can call the Hlubi Bible it can be passed on to generations to come because for example not everyone likes to read for example if I could get the book and read it. I would share it with someone and then another person can uses it. I am very interested in reading the book and I shared it with someone else, so I think the information will keep on passing like that and everyone would be interested.	Platform preference: Facebook but must be moderated to avoid abuse	1
Responses from P3: think the best way is writing down cause that's how we refer to any histories from other nations, It appears writing and recording things down has worked. And yeah, I believe that's what we need. We need a wee need knowledge like we need our culture, cultural practises and traditions written down	Platform preference: Books	2
	Platform preference: Video	1
Responses from P4: The major thing that needs to happen is educating the younger generation I think that is the best way to preserve it, because they are othe ones that are going to have to carry out the knowledge, culture, and tradition related to the Hlubi nation, and they are the ones were going to have to pass it down through further generations. So I feel like educate the younger generation as much as possible.	Platform preference: Educational means	2
	Hlubi nation lack IT skills	1
Responses from P5: Definitely would have to make use of technology more, I think, so that people can use it as a frame of reference. And also, I think we should find ways in which we could make the youth interested in knowing about an asking and being inquisitive about their cultures, they would take the approach of social media because they're always on their phones.		
Responses from P6: As technology is progressive times of progress, we should be recording most of basically of most of the knowledge. A lot of things should be recorded in books. Basically, video recordings, audio recordings. There is a lot we can do. But yeah, I think basically a video is the media that we should be using.		
Responses from P7: I think the preservation issues can be resolved by people, I mean now you can learn, like, if you want to search for information you will find it online, I think there should be more platforms, open space, open platforms where we can teach each other and you can share their point of views by lesson.		
Responses from P8: For me if we can open a Facebook page, but they are so many Facebook pages. Or maybe on the internet where they tell us about the history because I think last year I googled the culture but there was not much information but they all that was there is clan name praises. So there is not much information about us. They should put more information on us. On Facebook you cannot say that you are protecting information because people can post misleading information so that Facebook has its own challenges anyone there can say anything they want to say without moderation. So the only option is to use google not to use social media.		
Responses of P9 For Amahlubi for instance the bigger picture is to have a website and for all the families to be listed and peoples family trees to appear in that website. We need people who have I.T background to volunteer service to help us find a way of archiving our story electronically for future generations where we can just google the Rhadebs in Cala.		

4.5 Findings

This section in the research expands on the findings obtained from the interviews. In this section, the information transcripts are presented in accordance with the research questions (RQ), research sub-questions (RSQ) and the specific interview question (IQ) linked to the RSQ.

4.5.1 RQ1: What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK?

4.5.1.1 RSQ 1.1: What is the current process of preserving IK?

IQ1.1.1: *Can you elaborate on what you think is the state of IK about the Hlubi nation?*

The objective for this question was to determine the current state of the IK preservation process within the Hlubi nation.

i) Youth results

There is little tangible IK available on the Hlubi as a nation. When IK is available, it is not kept in an accurate, secure, updated and accessible environment for people interested in the Hlubi nation. According to P6, “nothing has been really written down, information that is there is a bit scattered and not in depth” (Appendix G6). There is also no visible representation on media platforms about the Hlubi nation. P8 asserted that “we do not have sufficient knowledge and

in the media we are not told about the Hlubi culture, so that we know how diverse it is and how we are different" (Appendix G8). P3 argued that "the is not much, I say, academic information around it, the is not much. I've never been exposed to an academic book regarding the Hlubi nation" (Appendix G3).

Two participants (P6 & P9) argued that there are differences in the preservation process based on geographical location. P6 asserted that "the preservation of knowledge is very limited to certain areas and regions" (Appendix G6). This was further substantiated by P9, who stated that "at the moment this is difference with regard to the cultural practices that we observe, the difference is based on the movement and the difference is based also on certain elder having not transferred that knowledge full" (Appendix G9). Another disparity that exists in terms of preservation is between age groups. The youth are not culturally inclined. The elders are the holders of the IK that they share with the youth during gatherings. However, it seems that the youth are not receptive to IK. P2 argued that "as young people we don't pay attention to culture, we were very ignorant when it comes to culture and stuff" (Appendix G2).

Finding 1: There are no formal record-keeping systems in the Hlubi nation

Finding 2: There is no representation of knowledge about the Hlubi nation on the media platforms

Finding 3: The youth are not interested in the preservation of IK of the Hlubi nation

Finding 4: There are differences in the preservation process based on geographical location

ii) Adult results

The adult participants were in disagreement regarding the knowledge legacy of the Hlubi nation. Four participants (P12, P13, P17 & P19) stated that there are adequate preservation processes in place. P12 said that "since I grew up in the Hlubi nation I have not seen anything that we can do to add on this" (Appendix G12). P13 argued that "the level of preservation is high, although we may not be seen in all places like Cape Town, Durban and Joburg but where we come from we are very known and we preserve there" (Appendix G13). The same view was further collaborated by P19 in saying that "Indigenous knowledge regarding the Hlubi nation is very well conserved" (Appendix G19).

However, six participants (P10, P11, P14, P15, P16 & P19) stated that there is a big gap in terms of the knowledge transfer of the Hlubi nation's culture. P14 said: "I think the way we do things is not sufficient, I can say we are not doing enough … there is no uniformity in that practice of the 'Imbeleko' ritual even though we are all Hlubi" (Appendix G14). P16 agreed

with the view that “it is difficult to preserve the knowledge, currently you can find information in bits by bits but it’s not enough” (Appendix G16). P15 said: “We depend on the elderly as custodians of that knowledge and the elderly people and the custodians are perishing” (Appendix G15).

The is a high risk of loss of identity of the Hlubi nation; in fact the Hlubi traditional cultural practices have been have diluted with the traditional practices of other nations, as pointed out by P14: “Hlubis often steal and take certain practices of Xhosas culture and we dilute our own Hlubi culture with different ways of the practices” (Appendix G14). P17 expressed the same sentiment that “we have mixed with other cultures we tend to think low of our own identity and elevate or assume other identities” (Appendix G17). The loss of identity of the Hlubi nation is also be influenced by government’s involvement in traditional processes. P19 pointed out that “these are elements of integration with certain government regulations which they mix us with other cultures” (Appendix G19).

P10, P15, P17 and P19 all agreed that there is no singular point of reference accessible where IK is stored. P17 said: “I have nowhere that I store any information where I can say I have a record, we don’t have system” (Appendix G17). P10 stated the following: “There is no centralised space for storage of family information its according to each family” (Appendix G10). Similarly, P15 pointed out that “In Xhosa ways we do not have archives” (Appendix G15).

Finding 5: There is uncertainty regarding the adequacy of preservation processes of the Hlubi nation

Finding 6: Government involvement in Hlubi preservation processes has contributed to the loss of identity of the Hlubi nation

Finding 7: The Hlubi nation has assimilated aspects of other cultures

Finding 8: There is no centralised space for storage of Hlubi nation information

IQ1.1.2: *How should indigenous cultures be preserved?*

The objective for asking this question was to determine the preferred way of preserving the Hlubi nation’s IK.

i) Youth results

Youth participants (P2, P5, P6, P7 & P9) said that even though they are not necessarily interested in IK, they felt it would be encouraging to use electronic means and the internet as

the preferred way to preserve the IK about the Hlubi nation. P2 said: “Something must be done, someone who can write about it” (Appendix G2). According to P9, “or amaHlubi the bigger picture is to have a website and for all the families to be listed and peoples family trees to appear in that website” (Appendix G9). P5 also indicated: “Definitely would have to make use of technology more the approach of social media” (Appendix G5). P8 agreed but raised concerns about the protection of IK from abuse on the social media platforms, saying that “we can open a Facebook page, but they are so many Facebook pages and even on Facebook you cannot say that you are protecting information because people can post misleading information” (Appendix G8).

From the perspective of P1, P4 and P7, the most effective way of ensuring successful preservation is to focus on educational programmes in order to instil and transfer the traditions of the Hlubi nation to the youth. P4 stated: “The major thing that needs to happen is educating the younger generation, I think that is the best way to preserve it pass it down through to further generations” (Appendix G4). P7 said: “I think there should be more platforms, open space, open platforms where we can teach each other” (Appendix G7). While P3 and P6 still maintained that it is important to preserve IK in written word form, P3 said: “recording things down has worked, we need our culture, cultural practises and traditions written down” (Appendix G3). P6 said: “A lot of things should be recorded in books” (Appendix G6). P2 stated that “if maybe there would be a book that would be written. I am very interested in reading the book and I shared it with someone else, so I think the information will keep on passing like that and everyone would be interested” (Appendix G2).

Finding 9: The youth of the Hlubi are not interested in IK but the use of SMTs to preserved IK would be encouraging to them

Finding 10: The minority of youth want more educational programmes as means of transferring IK within the Hlubi nation

Finding 11: In addition to all other measures, books can still play a role in the preservation process of the Hlubi nation

ii) Adult results

Adult participants felt that preservation can be more effective if the culture moves from being informal and starts being formal in the establishment of organisations and institutions where the culture can be recorded. P14 stated: “If we were to meet in a formal way and get together that would be an opportunity to have those discussions about how we should be practicing rituals” (Appendix G14). P16 argued: “We can create institutions of the Hlubis where we can gather around in meetings and share cultures and traditions of the Hlubi membership of those

institutions and organisation must not be only limited to old people we must also involve the youth" (Appendix G16). P10 agreed that "we now need to start being formal because things get lost by being informal" (Appendix G10).

Even though the adult participants seem to be in favour of formation of formal organisations P14, P15 and P17 highlighted the lack experience and leadership skills to establish and run formal institutions. P15 stated the following:

> The[re] was disagreement amongst the rest of Hlubis the is a split in the Hlubis here the is a subgroup that want to change the cultural institute to things like a burial society however the other group want the institute to remain a cultural group that investigate further about the culture and looks after our wellbeing (Appendix G15).

P17 said that "this organisation was recently established to try to assist each other but a challenge is that we are far from each other we experience differences of opinions amongst each" (Appendix G17). Two adult participants (P19 & P12) objected to the use of SMTs in cultural processes of the Hlubi nation, stating privacy invasion and abuse of cultural content on SMTs as the reason. P12 said: "We could use technology but the Hlubis do not like their things to be published, according to the Hlubis they want things private, privacy is key in amaHlubi" (Appendix G12). P19 also argued that "to use digital things to record it, that means the secrecy or the pride is going to be taking away. The secrets and the pride of that knowledge if you are going to share it that means the value offered is going to diminish" (Appendix G19).

Finding 12: There is a need for the establishment of formal institutions to facilitate the preservation of Hlubi IK

Finding 13: There is a resistance to the use of SMTs in the preservation of Hlubi IK

Finding 14: The use of SMTs is viewed as an invasion of the privacy of the Hlubi culture

IQ1.1.3: *What are the common methods being used to preserve IK?*

The objective for asking this question was to establish the current methods used to preserve the Hlubi nation's IK.

i) Youth results

All the youth participants said that traditional verbal interaction of father to son transfer during cultural gatherings is the most common method of knowledge transfer used within the Hlubi nation. P5 said: "I think elders are passing on the knowledge from generation to generation especially when rituals are done" (Appendix G5). P7 added:

> I did my own research, I wanted to know about where did we originate from, I was even speaking to elders because mostly that's where you get the info because I feel like in our cultures knowledge is spread through the elders telling the younger about where you come from (Appendix G7).

P6 said: "I think basically we still use word of mouth more readily than any other form of preservation of knowledge" (Appendix G6). P4 stated the following: "I have heard or learned more about that Hlubi Nation through my older relatives sharing the knowledge" (Appendix G4).

All the participants agreed that the Hlubi nation still uses word-of-mouth more readily than any other form of preservation of knowledge. Four participants (P3, P4, P8 & P9) highlighted that they have come across some IK of the Hlubi on online platforms. P9 indicated: "There is information on the website that I managed to access we creating WhatsApp groups, there is a group for the Mrubatas and there is a group for the entire Rhadebes" (Appendix G9). P4 also said: "I think nowadays there's groups that we will find on social media platforms like Facebook where certain things are said about the nation" (Appendix G4). P8 answered: "Wikipedia, I know that is where I usually find information" (Appendix G8).

Finding 15: Traditional verbal interactions of father to son transfer during cultural gatherings is the most common method of knowledge transfer used within the Hlubi nation

Finding 16: The Wikipedia website and Facebook are being used to access knowledge about the Hlubi nation

ii) Adult results

All adult participants agreed that the main method used to preserve IK is the use of organised gatherings, seminars and designated ritual ceremonies. The elderly, primarily men and cultural expects, impart the knowledge to the younger generation through narration and practical demonstration as the main method of preservation in the Hlubi nation. P11 stated "preservation is dependent on elderly who pass this information to their sons who intern teach these to the sons as well so that the information is not lost, this this is according to generation human to human" (Appendix G11). P12 said: "Preservation is the burden of the men mostly because they are the ones that preserve, most ways that the men use, is through gatherings especially when we are at the bush that is when we really share a lot with each other" (Appendix G12). P14 stated that "the year before last year they had organised a cultural event on 24th of September where they invited Mr Nqevu the cultural expect on things of African culture and its customs" (Appendix G14). P17 also said: "We teach our kids so that when they grow, they can also do the same to their children. So, it is very important that these children I

taught these rituals and that is how pass the information from generation to generation" (Appendix G17). P18 argued: "You can get information from people who have made the research like Mr Nqevu the cultural expect but it is very scarce, and it is not easy to get the information" (Appendix G18).

The emergence of SMTs such as WhatsApp presents the nation with an opportunity to integrate preservation using SMTs but the nation is reluctant to make use of this technology in the cultural processes of the Hlubi nation. P18 stated: "You find some information on Google but not much" (Appendix G18). P13 said that "things such as WhatsApp but we do not use WhatsApp much because we like to keep our things private, we must be alone all Hlubis no one else even in those WhatsApp group we are strict in those things where we need to be by ourselves" (Appendix G13). P12 stated the following: "They are certain things we cannot share on public about IsiHlubi, that why you see that most people do not know about isiHlubi" (Appendix G12).

Finding 17: Organised gatherings, seminars and designated ritual ceremonies are the main methods used to preserve the IK of the Hlubi nation

Finding 18: Men are primarily holders and disseminators of the knowledge

Finding 19: There is reluctance in the use of SMTs as a preservation method

Finding 20: The preservation burden of isiHlubi IK is to be kept private, exclusively for the Hlubi nation

4.5.1.2 RSQ 1.2: What are the challenging factors in preserving IK?

IQ1.2.1: *In the current process of preserving IK in the Hlubi nation, what are the challenges?*

The objective for asking this question was to investigate the challenges experienced is current used method of preserving the Hlubi nation's IK.

i) Youth results

There is an acknowledge deficiency and knowledge erosion with the custodians of the Hlubi IK, particularly with elders. The elders do not possess the levels of knowledge that is required for effective preservation of Hlubi IK. Six participants (P1, P3, P5, P7, P8 & P9) agreed that there is knowledge deficiency in the Hlubi nation. P5 stated that "the challenge would be maybe the elder themselves don't know much about the nation or don't have enough knowledge about the about the culture" (Appendix G5). P1 argued:

> The notion that even our parents do not have the actual knowledge about the culture because If my dad doesn't tell me or my mom doesn't tell me why is something been done and where do we come from, I will not know and what will I teach the following generation? (Appendix G1).

P3 said: "We don't have facts, sometimes one can't weigh what one person tells you may be right or wrong or is it the correct way to say it, but there's no right or wrong" (Appendix G3). P8 stated that "from our side the Hlubis I discovered that our knowledge is not in depth when it come[s] to cultural things but our common thing amongst us are our beliefs are the same" (Appendix G8).

According to P1, P2, P3, P6 and P7, knowledge in the Hlubi nation is shared in a passive unstructured manner and, as result, knowledge is not retained and, when it is retained, it is not in a uniform state. P1 said: "So, in this family we can be passive about other things and even some family gatherings we don't even have to attend because we do not see the significance of it" (Appendix G1). P9 argued that "we need to be able to standardise our cultural praises and we need to know what cultural processes" (Appendix G9). P6 stated that "certain household are misinterpreting the traditional rights" (Appendix G6). P7 said:

> I feel It can get lost in translation. There's a lot of theories that I've heard some people say we were once part of the Zulu culture, and then there was a fight and then we moved away. The other says, No, we're never part of the Zulu culture. We've always been a kingdom (Appendix G7).

P4, P5 and P6 suggested that there is a disconnect with current preservation workflow between the youth and the elders in the preservation process of the nation. P6 stated: "You will find that some of the younger males are not even receptive to this information that is being passed down. it falls on deaf ears and it is not being recorded" (Appendix G6). P4 argued: "The focus of the younger generation is in terms of culture and tradition It's not the same as the older generation. It might be because of the different ways in which the generations have grown up, because things were different back then for the older generation" (Appendix 4G). P5 asserted that "elders thinking that children are too young to learn information. So they wait to a certain stage in order for them to let the young know more about the culture?" (Appendix G5).

Finding 21: The elders do not have the levels of knowledge required for effective preservation of Hlubi IK

Finding 22: Knowledge in the Hlubi nation is shared in a passive unstructured manner

Finding 23: Knowledge in the Hlubi nation is not standardised

Finding 24: The elders and the youth are not unified in implementing preservation processes in the Hlubi nation

ii) Adult results

According to P10, P11, P15 and P19, the health hazards and the mortality rates on the side of the elders is a threat to knowledge preservation in the Hlubi nation. P15 contended that "the[re] are things that we do not know that we are supposed to be knowing but don't know because we grew up without the elders to teach us these things" (Appendix G15). P11 mentioned: "The challenges are that people are dying, and people end up dying with knowledge that they have" (Appendix G11). P19 argued that "the hierarchy of the age is not sustainable especially with the current with the current way of living, which is got the COVID19 impact" (Appendix G19).

The impact of rural to urban migration has had a serious effect on the deterioration of the preservation processes within the Hlubi nation. P12 argued as follows: "If you could compare Hlubis from Cape Town and the ones from Rural areas you will see the Cape Town Hlubis do not practice original Hlubi. Some of the things they have forgone, so this creates a conflict" (Appendix G12). P15 said:

> We used to stay far from towns in the rural spaces open field we had kraals built, however now even if you yourself buy a house in cape town you will not be able to do cultural rituals you will be forced to come back to the eastern cape because the space in city do not allow for the building of the kraal and the ancestor are not with you (Appendix G15).

P19 said: "The[re] are challenges, especially now when you come in from let's say Cape Town you going to rural areas, they are things when you were younger you thought were okay but now you have got this different mentality and you know something can be done better" (Appendix G19).

Finding 25: Health hazards and the mortality rates on the side of the elders is a threat to knowledge preservation in the Hlubi nation

Finding 26: Rural to urban migration has had a serious impact on the deterioration of preservation processes within the Hlubi nation

IQ1.2.2: *How can challenges associated with the preservation of IK be addressed?*

The objective for asking this question was to identify ways in which the challenges experienced preserving IK for the Hlubis can be addressed.

i) Youth results

According to the youth participants (P1, P2, P5, P6, P7 & P9) the Hlubi nation must introduce the use of SMTs as a way to address the challenges facing knowledge preservation in the Hlubi nation. P1 explained: “We have this thing called It’s “trending”, you know with regards to youth I feel like there’s a lot of things we can do and then it translates on social media, I feel like we don’t do that like we don’t make our cultures trend” (Appendix G1). P5 said: “Definitely would have to make use of technology more, I think, so that people can use it as a frame of reference, we can take the approach of social media because they’re always on their phones” (Appendix G5). P9 argued: “We need people who have Information technology (IT) background to volunteer services to help us find a way of archiving our story electronically for future generations can just Google the Rhadebes in Cala” (Appendix G9).

Finding 27: The youth want of the Hlubi nation want the use of SMTs to be integrated into the preservation possess as way to address the challenges facing knowledge preservation in the Hlubi nation

ii) Adult results

Adult participants (P1, P17, P18 & P19) want to use technology as a means for the preservation of culture but caution over the in ability to control over information as Hlubi. P17 said: “It’s very important for each family’s information to be stored away in things such as USB, Laptops and Mobile phones” (Appendix G17). P11 mentioned: “I keep insisting that the computers can assist” (Appendix G11). However, P19 cautioned that “they must find a way to digitise it. but my worry with that is how are they going to control the sharing and to be copied not to be copied” (Appendix G19).

Finding 28: Adults want to use technology as means to preserve culture but caution over the inability to control information as Hlubi are private people

IQ1.2.3: *In your opinion, what is the impact of gender and age on the participation in the process of preservation of IK?*

The objective for asking this question was to assess the impact of gender in the processes of preservation within the Hlubi nation.

i) Youth results

All participants agreed that in the Hlubi nation gender patriarchy exists and the patriarchy translated into marginalisation of women and the LGBTI members of the community from participating in the processes of preservation. P2 stated:

> When it comes to cultures, males get the most recognition. It's as if what men know us as females, we can't know. It's what I have observed on things that deal with culture it is always man that leads in those things. And then women follow so I think because back in the day a woman would be led by a man (Appendix G2).

P3 noted that "in our traditions and when it comes to gender, mostly whatever the father or the man of the house says everyone listens to that" (Appendix G3). P5 said: "I think most information is passed on to the males. Yeah. So, leaving out the females out of the process? I think it's a negative thing. I think we should all be included in that. We all have a right to know about our culture, all of us" (Appendix G5). P3 indicated that "basically from my own experience you know there is no room mostly for homosexuals, but there's no room given to them there is some sort of criticism" (Appendix G3). P7 mentioned that "they are not inclusive in terms of accepting the whole change of, LGBTIQ… in our culture is still seen as taboo (G7).

On the other hand, the P4, P6 and P9 suggested that inclusivity is improving with the introduction of SMTs. P4 said:

> In those WhatsApp groups it is not just males preferred or only males can speak on certain issues it Involves every person that is in the group obviously the group is inclusive of males and females, so if anyone has an opinion on something that is being discussed that relates to the Hlubi nation, it is open to everyone (Appendix G4).

P6 stated that "In the social media platform women are the most participants, and they are saying the right things" (Appendix G6).

Finding 29: In the Hlubi nation, the is gender patriarchy and the patriarchy translate into the marginalisation of women and the LGBTI members of the community from participating in the processes of preservation

Finding 30: Inclusivity is improving with the introduction of social media technologies

ii) Adult results

Six adult participants (P12, P13, P14, P15, P17 & P18) insisted that there is no gender discrimination in the Hlubi nation; all stakeholders are given their roles to play and everyone is included when it comes to participation in the traditional practices of Hlubi rituals. P12 confirmed: "I want to stress that women do have their own role to play on things such cooking, the cooking of the Hlubi meals, traditional beer, and those things but their role ends" (Appendix G12). P14 said: "Certain rituals that require Paternal aunts to lead the ceremonies for instance when it's time to go the kraal the Paternal aunt are not left behind like all the other women" (Appendix G14). P15 argued that "the is no conflict with gender because women are allowed to participate in highly intricate rituals in-fact it is their right to do so they are more like man"

(Appendix G15). P18 was of the opinion that “In my view In terms of I gender I do not see it necessary to single out a specific gender I think anyone who has potential of bring research must be given an opportunity” (Appendix G18).

Finding 31: The is no gender discrimination in the Hlubi nation; all stakeholders are given their roles to play and everyone is included when it come participation in the traditional practices of Hlubi rituals

IQ1.2.4: *What do you think is the effect of access to digital resources or social media technological tools on the preservation of indigenous knowledge?*

The objective for asking this question was to discover the impact that internet connectivity and access to SMTs for on the preservation process of the Hlubi nation.

i) Youth results

The benefits of the use of SMTs IK preservation were recognised by the majority of the youth. P1 said that “I think that social media gives awareness to other people that there are certain type rituals because other people will ask questions about the event on social media because other people will be seeing by your attire” (Appendix G1). P3 stated that “social media gives that opportunity and writing things down gives us that opportunity to preserve culture or our should be traditions” (Appendix G3). However, these benefits are far from being realised due largely to limited bandwidth access for members of the nation and the availability of the digital tools to capture the IK. According to P6, “we have slow Internet, we can’t post videos so Yeah, I think technology must be at a certain level to be effective” (Appendix G6). P7 said: “We are still developing country and we know that the is a huge gap of inequality that could affect the preservation and the transferring of information because one can complain that could say that No! I do not have access to WhatsApp” (Appendix G7). P5 argued that “access to digital technologies playing an important role because in order for you to maybe use a cloud for storage for example, you have to have Internet connectivity and It could be also a problem because I’m in smaller towns rural internet connectivity is not that developed” (Appendix G5). P5 further explained that “not many people are into using smart phones other people are still stuck in old technology there are less smart phones, that could also affect the preservation in because less smart phones won’t give you access to social media and other spaces on social media” (Appendix G5).

Participants (P1, P6, P8 & P9) argued that unmoderated access to the use SMTs in preserving IK could be detrimental to maintaining the integrity of the knowledge that is being shared. Stringent measures should be put in place to avoid abuse of IK on digital platforms. P6 stated: “We cannot have information, just in public, when you share that knowledge of that information

publicly some people will use it for undermining the, the traditional or whatever. I hope you understand what I'm trying to get" (Appendix G6). P1 mentioned that "It goes back to how are we going to archive that documentary or that recording? And nowadays it's very much easy for information to be to be compromised and find itself into wrong hands" (Appendix G1).

The lack of a knowledge and skills base to use SMTs was highlighted as challenges by P3 and P9. P9 argued that "the secretary of the Hlubis is not on WhatsApp I need to call her via call and she need to still write the invites print them like dear so and so and these letters must be delivered from house to house" (Appendix G9). P3 asked: "Does Uncle know how to post a video on or send me a WhatsApp?" (Appendix G3:34). P2 surrendered: "I'm not very good with technology" (Appendix G2).

The economic factor is stumbling block in the implementation SMT preservation approach. P7 argued that "you could have a cell phone, but obviously, in terms of data, they do not have much money to buy data" (Appendix G7). P4 said: "I mentioned, potentially there being an app, so that obviously requires data and you know already that will constrain like a lot of people Financially, because that is expensive" (Appendix G4).

Finding 32: Unmoderated access to the use SMTs for preserving IK could be detrimental to maintaining the integrity of the knowledge that is being shared

Finding 33: Lack of a knowledge and skills base to use SMTs is highlighted as a challenge

iii) Adult results

According to P10, P13, P15, P16, P17 and P18, uncontrolled access to SMTs and the posting of non-moderated of content has caused the Hlubi nation customs to lose value. P16 argued:

> the sad thing about exposing the initiation process via social media is that it has a way of diminishing our culture because when this is exposed and someone else see the actual process it is as if it is torture, and that fuels the argument that traditional circumcision is not viable and that kills the tradition (Appendix G16).

P13 said:

> The are many things that we must be careful of what we say on Facebook, you cannot talk about boys initiating that is scared thing, when we refer to these things we normal use codes to talk about it so on social media it exceedingly difficult and we must be strict on those who splurge such information (Appendix G13).

P18 stated the following: "Well according to me I think the is certain information that can be accessible freely the is some type of information that can be kept I secret and secured tightly

so that when one requires access certain procedure and steps will be followed or make some form of application" (Appendix G18). P15 said:

> "I really do not like social media much because at times it confuses the way we do things, for instance if some has died from my family, the normal way for us is that people come to inform you in person but with these things of social media you can learn of death of the close randomly in undignified manner" (Appendix G15).

Finding 34: Uncontrolled access to SMTs and the posting of non-moderated content have caused the Hlubi nation customs to lose value

4.5.2 RQ2: How can SMTs be used to enhance the preservation of IK?

4.5.2.1 RSQ 2.1: How should technology be used to capture and store knowledge, traditions and customs?

IQ2.1.1: *What type of IK can be captured and in what form must it be captured via SMTs?*

The objective for asking this question was to discover the types of IK that can be captured and in what form should it be captured via SMTs for the preservation process of the Hlubi nation.

i) Youth results

Participants expressed the notion that they would like to see more knowledge about the history and genealogy of the of the Hlubi nation documented. P4 said: "The type of knowledge I would be interested in in being captured is I think the history of the Hlubi Nation" (Appendix G4). P5 stated that "the knowledge I'd like to be stored I the beginning of this Hlubi nation" (Appendix G5:46). P7 argued: "That would be a way of preserving having pages that speaks about hlubi [sic] Nation clans" (Appendix G7).

Video and audio podcasts seem to be the preferred SMT to be used for preserving the IK of the Hlubi nation. Participants P3, P4, P6, P8 and P9 agreed on these two formats. P1 said: "I think things like podcasts or sound, or voice recordings should also be kept preserving culture" (Appendix G). P2 said: "There are audio books which can be very useful so videos, audio books and then they can just be kept" (Appendix G2). P4 argued that "where they sort of Introduce your home to your ancestors, I think that would be interested to sort of see the process of it all on video" (Appendix G4).

Finding 35: There is a lack of knowledge being documented about the history and genealogy of the of the Hlubi nation

Finding 36: Youth prefer video and audio forms for the preservation of IK of Hlubi nation

ii) Adult results

The adult participants expressed the need for video technology to be used in preserving Hlubi indigenous knowledge. However, the adult participants shared the same sentiment that certain rituals needed to be prevented from SMT exposure and, instead, publishing books should be used to document the sensitive parts of Hlubi IK. P14 said: “I was saying they will copy there in those videos and listen to the oration and praise in the video then they will emulate as demonstrated in the videos” (Appendix G12). P12 indicated the following: “As I said I prefer YouTube video the parts that sensitive we can use the books although I am of the same view that even if it’s in the book because written word lives a lot to the imagination” (Appendix G12). P10 argued that “in the funeral there is the body viewing process but it will be a sensitive for recording of the actual corpse from the person that will be watching” (Appendix G10). P15 stated: “I prefer in matters that involving sacred rituals and custom I would prefer that to be written down on books and not to be placed on media” (Appendix G15).

Finding 37: Video format technology is the preferred format for recording

Finding 38: Sensitive knowledge, including the initiation process and funerals, must not be captured by SMTs but must rather be captured in books

IQ2.1.2: *In your view, how can local government play a role in the process of IK data preservation via SMTs?*

The objective for asking this question was to explore the role of government in the IK preservation process of the Hlubi nation.

i) Youth results

Four participants (P3, P4, P5 & P9) agreed that the role of government is to provide funding support for preservation projects and ICT infrastructure build programme. P3 said: “You know if we are moving onto a digital platform, we need the tools and so government can help to provide the tools” (Appendix G3). P9 argued that “If government can provide funding for preservation of culture, the people that have companies on IT it will be their duty to go and find those people and document their culture and claim back from government on the work they have done” (Appendix G9). P4 said: “I think the government can play a role by helping create a database to store the knowledge about these cultures” (Appendix G4).

P3, P4, P5 and P8 also believed that the government should be playing an active role is education and research project about the Hlubi nation. P8 stated: “Government must start from primary school with teachings” (Appendix G8). P2 pleaded that “we need the people to research because amaHlubi Nation is a big a community or group, so we need government’s

facilitation in terms of these studies" (Appendix G2). P4 argued that "supporting research projects such as this one and other different projects relating to it I think that's how government can step in" (Appendix G4).

Finding 39: The role of government is to provide funding support for preservation projects and an ICT infrastructure build programme

Finding 40: Government should be playing an active role in the facilitation of education and research projects about the Hlubi nation

ii) Adult results

There are disagreements in terms of what the roles of government can be. According to P13, P14 and P15, government has no role to play in the issues of cultures. Government is seen as the main cause of decay and dilapidation of the Hlubi culture. P13 said: "I do not see what government roles can be because things have been messed up lately" (Appendix G13). P15 argued as follows: "Government destroyed our culture so much if you look at what is going on everything has gone to the dogs you can even find children who can murder teach in schools this behaviour stems from the fact that government has destroyed our culture" (Appendix G15).

On the other side, P10, P12 and P18 argued that government's role should be the one of giving support to collect the information, for funding and availing resources for research. P10 said: "Yes, government can participate by a way of cultivating pride in the culture" (Appendix G10). P18 debated that, "I think government must play the role its role in terms of giving support to collect the information, for funding and availing resources for research because everything revolves around money and cost" (Appendix G18). However, P10, P12, P16 and P17 argued that government is ineffective in executing these roles. P12 said: "I am concern about what government is doing, because government just comes a tourist to see how Hlubi nation lives but they do not advise and sponsor to creative archives and preserve these They are not inclusive in terms of accepting the whole change of, LGBTQ, whatever you call it, but like men that are dating men, women that are dating women They are not inclusive in terms of accepting the whole change of, LGBTQ, whatever you call it, but like men that are dating men, women that are dating women They are not inclusive in terms of accepting the whole change of, LGBTQ, whatever you call it, but like men that are dating men, women that are dating women They are not inclusive in terms of accepting the whole change of, LGBTQ, whatever you call it, but like men that are dating men, women that are dating women cultures" (Appendix G12). P16 complained that "I do not see the government taking the initiative to restore dignities of people who have lost the cultures under apartheid" (Appendix G16). P17

said: “We do have departments of culture but in most instance these departments are inactive in terms of support” (Appendix G17).

Finding 41: The is no consensus on what the role of government should be

Finding 42: Certain elders do not want the involvement of government at all in the preservation of IK of the Hlubi nation

Finding 43: Certain elders want government to give support to the collection of information, for funding and availing resources for research into preservation of IK of the Hlubi nation but fear that government is incompetent in playing these roles

4.5.2.2 RSQ 2.2: How can the gap in perceptions of SMTs be narrowed?

IQ2.2.1: *In your view how can myths and stereo types around the use of technology and processes of IK be addressed?*

The objective for asking this question is find ways in which myths and stereotypes with regard to technology could be addressed?

i) Youth results

Mistrust and the lack of knowledge of SMTs are the main reasons for myths to flourish and the way to fix this is through education. P9 said: “People who are not technological advanced have mistrust of technology therefore they talk down on it” (Appendix G9). P3 stated that “those assumptions, stereotypes, myths, or whatever the only way I can think of addressing it is through social media education” (Appendix G3). P2 argued as follows: “We would need to really educate people on this new tool on what is it, How do you manage it we just help people better understand what social media is. The is a lack of knowledge on what social media is, hence most people will have those myths” (Appendix G2). P6 said: “There is also the thinking the people who using social media do not have much knowledge to be taken seriously we are just fooling around” (Appendix G6).

Finding 44: Mistrust and a lack of knowledge of SMTs is the main reason for myths to flourish

Finding 45: There is a lack of educational programmes on SMTs

ii) Adult result

P10, P11, P13, P15 and P19 declined to comment on the question. P19 did not explain why they decline but I suspect the framing of the question could have led the participant to thinking

that the question was leading them to reveal the secrets of the Hlubi. P19 was very a sensitive person on respect of the topic. P19 simply said: “No comment”. P11 stated: “No myths I can think of now” (Appendix G11). The rest of the participants identified the lack of education and familiarity with SMTs as the reason why stereotypical myths still persist in the Hlubi nation. P17 indicated that, “we are not educated, at times we even believe that if we have technology around, we cannot communicate with our ancestor, often technology can be confused to witchcraft we need to fix our minds” (Appendix G177). P17 suggested that “it must be explained that the presence of wifi [sic] in the house it does not mean that people will suddenly have bad dreams an elder will even think that WIFI is a device use to brainwash the brain” (Appendix XG17). P18 argued: “Other people are resistant to these changes because they come from a different error also others did not go to school and these things do not dwell well with them and on many occasions, they do not know how to use these technologies” (Appendix G18).

Finding 46: The lack of education and familiarity with SMTs is the reason why stereotypical myths still persist in the Hlubi nation

IQ2.2.2: *The best platform for yourself, according to you, that can be used to do this preservation of culture is?*

The objective for asking this question was to find out way on how the IK of Hlubi nation can be collected, stored and accessed.

i) Youth results

Among the participants (P2, P3, P5, P7 & P8), Facebook is the most preferred platform to store and access Hlubi IK because of Facebook’s many advantages. P3 said: “I would say Facebook because I mean we are dealing with a situation where you need Knowledge and Facebook is one of those from my personal experience where you can post a lot of in-depth discussions and culture is deep” (Appendix G3). P5 stated: “I think Facebook is more accessible to adult since they are already on the so they’d have access to it and they already know how it works” (Appendix G5). P8 said:

> I prefer Facebook because it’s for everyone, it has no class or differentiations. WhatsApp maybe not so much I still prefer Facebook because from Facebook the is the sharing function. This means even if one person is not part of the group the shared content could come to them then they will be interested and start reading (Appendix G8).

YouTube is placed second after Facebook to store and access IK of Hlubis. YouTube came ahead of Instagram because the participants did not have anything negative to say about

YouTube. P2 responded as follows: “I would love to say what YouTube will be the best to store all the information on YouTube videos even if I have stopped you tubing the video will always be available” (Appendix G2). P6 stated: “On YouTube I mean its videos, so you just search Hlubi nation and you find a couple of videos and you find subheadings and you can you watch, It’s accessible to anybody” (Appendix G6).

With Instagram there are different views on its suitability as a preservation platform of Hlubi IK two participants approved of it. P1 said:

> I think Instagram would be appropriate what I’ve noticed is Instagram is a collection of albums if I can see that is a collection of videos podcasts. People can even make use of hashtags, If I have an event or just use the hashtag Hlubi nation someone can search Hlubi Nation and will be redirected to my video (Appendix G1).

P5 said: “I think Instagram can also be used for pictures” (Appendix G5). However, P7 and P8 criticised Instagram for its lack of usability and for being financially exclusive, hence it ranked number three. P7 argued that “with Instagram there isn’t much interaction like for instance, maybe if I write something about Hlubis, can someone share it? unlike Facebook with someone can share and then the people can discuss it” (Appendix G7). P8 said: “with Instagram it’s for people who are in a certain level, and it has a class, so people do not feel confident enough to join Instagram” (Appendix G8). P8 further argued that:

> Instagram is expensive it’s not for everyone. Many people are not part of Instagram and the people that are on Instagram are people of class and you will find out that those people are not so much culture orientated I mean Instagram data is expensive because most people use data. There you can just upload few things and the data is finished (Appendix G8).

Twitter and WhatsApp received negative remarks and they are both placed as the least preferred platforms to store and access IK about the Hlubis. Twitter critic P1 said the following: “Twitter… I think that’s where you can be criticised for what you have uploaded or like the video that you took all the pictures that you took and then you put it up you, you get the criticism there as to the appropriateness of the video” (Appendix G1). P5 opined that “if I were to say Twitter, not everyone understands how Twitter works. And no, not everyone is on Twitter” (Appendix G5). Equally, WhatsApp received the least favourable remarks, for example, P8 criticised the platform by saying that “with WhatsApp again the disadvantage is it is virtual impossible to have everyone number so that you can add them in a group, meaning you will reach fewer people” (Appendix G8). P5 remarked:

> And I think WhatsApp wouldn’t capture the IK properly WhatsApp status you can’t exactly upload a picture and then have a caption Well, you could do that, but the

status is only out for 24 hours and I think we would like to have that information for a long time so it wouldn't work for that. Also messages get deleted (Appendix G5).

Finding 47: Facebook is the most preferred platform to use to store and access Hlubis' IK

Finding 48: YouTube is placed second as a preferred platform to use to store and access IK of Hlubis

Finding 49: Instagram is ranked number three as a preferred platform to use to store and access IK of Hlubis

Finding 50: Instagram lacks usability and is financially exclusive in that it uses a lot of internet data

Finding 51: Twitter and WhatsApp are not recommended as platforms to be used for storing and accessing IK of the Hlubis

ii) Adult result

Participants identified Facebook as the preferred way to receive IK content. P17 said that "Facebook is better because you can access information from people that you don't have mobile number of as opposed to WhatsApp where you first need to obtain a person's number before you access someone's information" (Appendix G17). P19 mentioned that "Facebook is the one because it has the element control you create a group Facebook is the preferred one because you can just vet people regarding your culture in order to be given to access on that group" (Appendix G19). P16 said: "On Facebook you can find lost family members from chatting, you see that one is good because we can be reunited with loved ones through social media" (Appendix G16). However, P13 warned that "on Facebook you can post something, but the message can reach wrong audience" (Appendix G13).

WhatsApp is the other notable platform that was spoken off, however, the platform received negative remarks P14 and P19 criticised it for its lack of reach. P19 said:

> WhatsApp is also particularly good but the problem with WhatsApp you will be chatting to the people are very closer to you so it is like the group settings will be Extremely limited like phone to phone yeah people they know people, but on Facebook you can just share that you can just what is (Appendix G19).

Finding 52: Among the adult participants, Facebook is the most preferred platform to store and access Hlubis' IK

Finding 53: WhatsApp is not recommended as platform to be used for storing and accessing IK of the Hlubis

4.6 Findings, category and theme development

A total of 53 finding were developed. Table 4.3 shows the 29 findings from the youth category and the 24 findings for the adult category (Table 4.4).

Table 4.4: Example of findings for the youth category (Appendix H)

RQ	RSQ	IQ	Finding No.	Finding
1	1.1	1.1.1	1	There are no formal record-keeping systems in the Hlubi nation
1	1.1	1.1.1	2	There is no representation of knowledge about the Hlubi nation on the media platforms
1	1.1	1.1.1	3	The youth are not interested in the preservation of IK of the Hlubi nation
1	1.1	1.1.1	4	There are differences in the preservation process based on geographical location
1	1.1	1.1.2	9	The youth of the Hlubi are not interested in IK but the use of SMTs to preserved IK would be encouraging to them
1	1.1	1.1.2	10	The minority of youth want more educational programmes as means of transferring IK within the Hlubi nation
1	1.1	1.1.2	11	In addition to all other measures, books can still play a role in the preservation process of the Hlubi nation
1	1.1	1.1.3	15	Traditional verbal interactions of father to son transfer during cultural gatherings is the most common method of knowledge transfer used within the Hlubi nation
1	1.1	1.1.3	16	The Wikipedia website and Facebook are being used to access knowledge about the Hlubi nation
1	1.2	1.2.1	21	The elders do not have the levels of knowledge required for effective preservation of Hlubi IK
1	1.2	1.2.1	22	Knowledge in the Hlubi nation is shared in a passive unstructured manner
1	1.2	1.2.1	23	Knowledge in the Hlubi nation is not standardised
1	1.2	1.2.1	24	The elders and the youth are not unified in implementing preservation processes in the Hlubi nation
1	1.2	1.2.2	27	The youth want of the Hlubi nation want the use of SMTs to be integrated into the preservation possess as way to address the challenges facing knowledge preservation in the Hlubi nation
1	1.2	1.2.3	29	In the Hlubi nation, the is gender patriarchy and the patriarchy translate into the marginalisation of women and the LGBTI members of the community from participating in the processes of preservation
1	1.2	1.2.3	30	Inclusivity is improving with the introduction of social media technologies

1	1.2	1.2.4	32	Unmoderated access to the use SMTs for preserving IK could be detrimental to maintaining the integrity of the knowledge that is being shared
1	1.2	1.2.4	33	Lack of a knowledge and skills base to use SMTs is highlighted as a challenge
2	2.1	2.1.1	35	There is a lack of knowledge being documented about the history and genealogy of the of the Hlubi nation
2	2.1	2.1.1	36	Youth prefer video and audio forms for the preservation of IK of Hlubi nation
2	2.1	2.1.2	39	The role of government is to provide funding support for preservation projects and an ICT infrastructure build programme
2	2.1	2.1.2	40	Government should be playing an active role in the facilitation of education and research projects about the Hlubi nation
2	2.2	2.2.1	44	Mistrust and a lack of knowledge of SMTs is the main reason for myths to flourish
2	2.2	2.2.1	45	There is a lack of educational programmes on SMTs
2	2.2	2.2.2	47	Facebook is the most preferred platform to use to store and access Hlubis' IK
2	2.2	2.2.2	48	YouTube is placed second as a preferred platform to use to store and access IK of Hlubis
2	2.2	2.2.2	49	Instagram is ranked number three as a preferred platform to use to store and access IK of Hlubis
2	2.2	2.2.2	50	Instagram lacks usability and is financially exclusive in that it uses a lot of internet data
2	2.2	2.2.2	51	Twitter and WhatsApp are not recommended as platforms to be used for storing and accessing IK of the Hlubis

*RQ- Research question; RSQ- Sub-Research Question; IQ- Interview question

Table 4.5: Example of findings for the adult category

RQ	RSQ	IQ	Finding No.	Finding
1	1.1	1.1.1	5	There is uncertainty regarding the adequacy of preservation processes of the Hlubi nation
1	1.1	1.1.1	6	Government involvement in Hlubi preservation processes has contributed to the loss of identity of the Hlubi nation
1	1.1	1.1.1	7	The Hlubi nation has assimilated aspects of other cultures
1	1.1	1.1.1	8	There is no centralised space for storage of Hlubi nation information

1	1.1	1.1.2	12	There is a need for the establishment of formal institutions to facilitate the preservation of Hlubi IK
1	1.1	1.1.2	13	There is a resistance to the use of SMTs in the preservation of Hlubi IK
1	1.1	1.1.2	14	The use of SMTs is viewed as an invasion of the privacy of the Hlubi culture
1	1.1	1.1.3	17	Organised gatherings, seminars and designated ritual ceremonies are the main methods used to preserve the IK of the Hlubi nation
1	1.1	1.1.3	18	Men are primarily holders and disseminators of the knowledge
1	1.1	1.1.3	19	There is reluctance in the use of SMTs as a preservation method
1	1.1	1.1.3	20	The preservation burden of isiHlubi IK is to be kept private, exclusively for the Hlubi nation
1	1.2	1.2.1	25	Health hazards and the mortality rates on the side of the elders is a threat to knowledge preservation in the Hlubi nation
1	1.2	1.2.1	26	Rural to urban migration has had a serious impact on the deterioration of preservation processes within the Hlubi nation
1	1.2	1.2.2	28	Adults want to be used technology as means to preserve culture but caution over the inability to control information as Hlubi are private people
1	1.2	1.2.3	31	The is no gender discrimination in the Hlubi nation; all stakeholders are given their roles to play and everyone is included when it come participation in the traditional practices of Hlubi rituals
1	1.2	1.2.4	34	Uncontrolled access to SMTs and the posting of non-moderated content have caused the Hlubi nation customs to lose value
2	2.1	2.1.1	37	Video format technology is the preferred format for recording
2	2.1	2.1.1	38	Sensitive knowledge, including the initiation process and funerals, must not be captured by SMTs but must rather be captured in books
2	2.2	2.1.2	41	The is no consensus on what the role of government should be
2	2.2	2.1.2	42	Certain elders do not want the involvement of government at all in the preservation of IK of the Hlubi nation
2	2.2	2.1.2	43	Certain elders want government to give support to the collection of information, for funding and availing resources for research into preservation of IK of the Hlubi nation but fear that government is incompetent in playing these roles
2	2.2	2.2.1	46	The lack of education and familiarity with SMTs is the reason why stereotypical myths still persist in the Hlubi nation
2	2.2	2.2.2	52	Among the adult participants, Facebook is the most preferred platform to store and access Hlubis' IK
2	2.2	2.2.2	53	WhatsApp is not recommended as platform to be used for storing and accessing IK of the Hlubis

*RQ- Research question; RSQ- Sub-Research Question; IQ- Interview question

4.6.1 Category development

The development of categories was done by merging the findings (29) from the youth participants and adult participants (24), which were coded then recoded to formulate the categories (7), as shown in Table 4.6. The categories are i) ICT infrastructure; ii) knowledge management; iii) strategy and stakeholder management; iv) sovereign privacy of the IK data; v) attitudes towards SMTs; vi) ICT skills development; and vii) government.

Table 4.6: Development of categories (7) from coded findings

	Findings	Recoding	Categories
1, 5, 39	• The are no formal record keeping systems in Hlubi nation, • There is uncertainty regarding the adequacy preservation processes of Hlubi nation • Role of Government is to provide funding support for preservation projects and ICT infrastructure build programme	ICT Infrastructure	ICT Infrastructure
4, 7, 10, 11, 15, 21, 23, 25	• Knowledge in Hlubi nation is not standardised, • The are differences in the preservation process based on geographical location • Traditional verbal interaction of father to son transfer during cultural gatherings is the most common method used to preserve IK of the Hlubi nation • The elders do not possess the levels of knowledge that is required for effective perseveration of the Hlubi nation • The minority youth want more educational programs as means of transferring IK • Health hazard and the mortality rate on the side of the elders is a threat to knowledge preservation in the Hlubi nation • Participants have expressed that they would like to see more knowledge about the history and genealogy of the Hlubi nation documented • In addition to all measures books can still play a role in the preservation process of the Hlubi nation • The Hlubi nation has assimilated aspects of other cultures	State of Preservation in Hlubi nation	Knowledge Management
3, 6, 20, 21, 39, 42	• The youth are not interested in preservation of IK of the Hlubi nation • The elders and the youth are not unified in implementing preservation processes in the Hlubi nation • The is no consensus on what the role of government should be • Certain elders do not want the involvement of government at all in preservation	Strategy/stake holder management	Strategy/stakeholder management
8,14, 20, 32, 34, 38	• uncontrol access to SMTs and the posting of non-moderated of content has caused the Hlubi nation customs to lose value. • The preservation burden of isiHlubi IK is to kept private exclusively to the Hlubi nation • Sensitive knowledge's including initiation process and funeral must be written on books • The unmoderated access to the use SMTs in IK preservation process IK is a challenge in maintaining integrity of Hlubi IK • Use of SMTs is viewed as invasion of privacy of the Hlubi culture • Adult want to be used technology as means preservation of culture but caution over the in ability to control over information as Hlubi was are private	Sovereignty Privacy of IK data on SMTs	Sovereignty privacy of IK data
2, 5, 19, 27, 36, 44	• The youth majority of the Hlubi nation want more IK to preserved through SMTs • The Youth of the Hlubi nation want the use of SMTs to be integrated in preservation process as way to address the challenges facing knowledge preservation in the Hlubi nation • Mistrust and lack of knowledge on SMTs is the main reason for myths to flourish • Youth prefer video and audio forms or preservation of IK of Hlubi nation • Certain adults are opposed to the use of SMTs in preservation of Hlubi IK • The is a reluctancy in the use of SMTs as preservation method • In the media platforms the is no representation of knowledge about the Hlubi nation	Attitudes toward SMTs	Attitudes toward SMTs
33, 44, 45	• Lack of education and familiarity with SMTs is the reason why stereo typical myths still persist in the Hlubi nation • Holding educational programmes on SMTs will help alleviate the myths around SMTs • The lack of knowledge and skills base to use SMTs is highlighted as a challenge	ICT skills development	ICT skills development
6, 40, 41,43	• Government involvement in Hlubi preservation processes have contributed to the loss of identity and culture of the Hlubi nation • Government involvement in Hlubi preservation processes have contributed to the loss of identity and culture of the Hlubi nation • Government should be playing an active role in facilitation of education and project about the Hlubi nation • Certain elders want government to give support to collect the information, for funding and availing resources for research preservation of IK of the Hlubi nation but fear that government is incompetent in effecting those roles	Role of government	Role of government
16, 36, 37, 47, 48, 49, 52	• Facebook is the most preferred platform to store and access Hlubi IK • YouTube is placed second after Facebook as the most preferred platform to store and access IK • Instagram is ranked number 3 after YouTube as the most preferred platform to store and access IK of Hlubis • Wikipedia, website and Facebook are also being used to access knowledge about the Hlubi nation • Amongst the Adult Ps Facebook is the most preferred platform to store and access Hlubi IK • Video format technology is the preferred format of recording	SMT preferred Platforms	SMT preferred Platforms
50, 51, 53	• Instagram lacks in usability and is financially exclusive. • Twitter and WhatsApp are not recommended as platform to be used in storing and accessing IK of Hlubi nation • WhatsApp is not recommended as platform to be used in storing and accessing IK of the Hlubis	SMT Not preferred Platforms	SMT Not preferred Platforms

*ICT- Information and communications technology; IK - Indigenous knowledge; SMT - Social media technology

4.6.2 Theme development

From the categories, five themes were developed. Table 4.7 illustrates the relationship between the findings, themes and interview questions. The five themes developed are: i) knowledge management, ii) ICT infrastructure, iii) sovereign privacy of IK data, iv) attitudes toward SMTs and v) role of government.

Table 4.7: Findings linked to the RQs, RSQs, IQs and themes

Findings	RQs	RSQs	IQs	Themes
1, 5, 39	1 & 2	1.1; 2.1	1.1.1; 2.1.2; 2.2.1	ICT Infrastructure and skills Development
3, 4, 6, 7, 9, 10, 11, 12, 13, 15, 17, 18, 20, 21, 22, 23, 25, 30, 32, 35, 39, 42	1 & 2	1.1; 1.2; 2.1	1.1.1; 1.1.2; 1.1.3; 1.2.1; 2.1.1; 2.1.2	Knowledge Management
8, 14, 20, 26, 28, 29, 32, 34, 38	1 & 2	1.1; 1.2; 2.1	1.1.2; 1.1.3; 1.2.2; 2.1.1	Sovereignty privacy of IK data
2, 5, 16, 19, 27, 33, 36, 37, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53	1 & 2	1.1; 2.1; 2.2	1.1.1; 1.1.2; 1.1.3; 2.1.1; 2.2.1; 2.2.2;	Attitudes toward SMTs
6, 40, 41, 43	1 & 2	1.1; 2.1	1.1.1; 2.1.2	Role of government

* RQ – Research question; RSQ - Research sub-question; IQ– interview question

4.7 Summary

The findings from this data analysis are based on a qualitative study with the aim to explore how SMTs can aid the capturing of IK for the future and representation in the cultural archives.

In Chapter 4, the researcher presented the findings based on the data collected from semi-structured interviews with 19 participants who are members of an indigenous cultural group of the Hlubi nation based in the Eastern Cape. All participants gave consent for data collection for this research (Appendix A). The findings of the study were then summarised and categorised, and themes were developed. A total of 53 findings were identified and then recoded to nine categories and five themes were developed. The themes were identified as follows: i) ICT infrastructure and skills development; ii) knowledge management; iii) sovereign privacy of IK data; iv) attitudes towards SMTs; and v) role of government.

In Chapter 5, the researcher will present a discussion of the findings, themes and research questions in relation to the existing literature.

CHAPTER 5: DISCUSSION

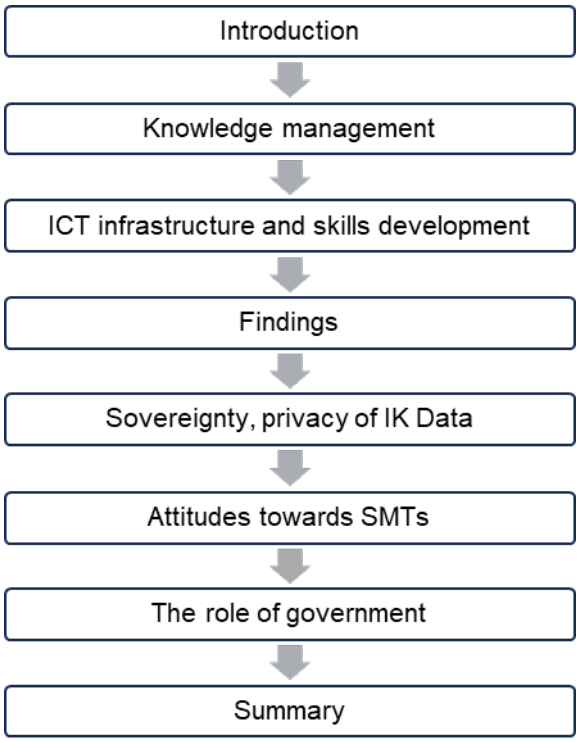

Figure 5.1: Chapter 5 layout

5.1 Introduction

The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives. For the ease of the reader the research questions are once again presented:

RQ1: What are the challenges faced by indigenous marginalised communities in using social media technologies (SMTs) for the preservation of IK?

RQ2: How can SMTs be used to enhance the preservation of IK?

The results from the data analysis of the study suggest that there is a general desire to implement the usage of SMTs in the IK preservation process of the Hlubi nation. However, there are many factors that influence the non-adoption of SMTs as viable tools in the preservation of Hlubi IK. The result is rather disappointing considering the opportunity missed to exploit the socioeconomic benefits offered by SMTs, as pointed out by Abu-Irmies and Al-Khanji (2019), as well as Urien et al. (2019), that SMT platforms can be commended for being accessible in terms of being budget friendly and the fact that they allow for use of ethnic languages. Roberts et al. (2017) describe the inability to implement sound preservation

techniques as a loss of the transformational effect of community regeneration, the strengthening of community cohesion and the potential socioeconomic benefits that a digitised and accessible platform for IK management.

In Chapter 5, the researcher further discusses the factors that impact on the non-adoption of SMTs by the Hlubi nation for preservation projects. The following five themes (Chapter 4, section 5.2.1) are discussed: i) knowledge management; ii) ICT infrastructure; iii) sovereign privacy of IK data; iv) attitudes toward SMTs; and v) role of government. The chapter ends with a summary.

5.2 Themes

5.2.1 Knowledge management

From the findings, knowledge management (KM) is identified as a theme (Chapter 4, section 4.5.1). Table 4.7 shows the link between the findings and the research questions, sub-research questions and the themes.

RSQ 1.1: What is the current process of preserving IK?

RSQ 1.2: What are the challenging factors in preserving IK?

RSQ 2.1: How should technology be used to capture and store knowledge, traditions and customs?

The objective for the research questions was to get a better understanding of the prevailing state of preservation in the Hlubi nation with regard to the current processes applied to preserving of the nation's IK and to identify the challenging factors in the process.

The state of KM in the Hlubi nation is rather dismal. The preservation processes are currently very informal and the nation still relies on word-of-mouth, with knowledge handed down from the elderly to the young during family gatherings and events. Nduka and Oyelude (2019) argue that IK is held in the memories of the elders within society and is mostly conveyed in oral forms such as folktales. However, this study challenges Nduka and Oyelude's assertions that the elders remain the absolute holders of this knowledge. Instead, the study showed that it cannot be generally assumed that the elders still possess the required levels of in-depth knowledge on matters pertaining to Hlubi nation. Although some participants acknowledged that traditionally, the elders are supposed to have this knowledge readily available to share with the young, it is not the case. The data analysis shows that the youth participants and some adults held a similar view. One explanation that can be offered for this finding is that modern families have transformed and they are no longer interested in the culture of indigenous

practices. Another explanation could be that even with the elders who may poses most of the knowledge, those elders are faced with a myriad of health scares, such as Covid-19, and are passing on at a rapid rate, leaving having not had an opportunity to record or impart the knowledge they have, therefore leaving a gap as far as IK is concerned. Owiny et al. (2014) state the same argument that there is an erosion of traditional knowledge and skills due to memory loss or death of elders. South Africa in the mid-1990s experienced high mortality rates due to HIV/AIDS, which killed many elders all over the country. In its annually report, the South African National AIDS Council (2020) said that of the approximately 74,000 deaths that occurred during the reporting year ending June 2019, more than half were accounted for by men. Because, traditionally, the main custodians of IK are men, the deaths have really impacted on the knowledge base of men within the Hlubi nation, hence the failure of the Hlubi nation to preserve its IK.

Turning to the implications of this knowledge vacuum from elders, for future preservation projects, the elders will not be there to play the role of identifying the material to be preserved, and to determine and guide a suitable cultural approach when undertaking preservation projects. The implications are that the traditional model of KM in the Hlubi nation is being compromised. The perseveration challenge facing the Hlubi nation is even more dire and the need for continued research into improving IK preservation is more urgent than it was from when this study was initiated. One way of addressing this is to start introducing an official younger age that youth can be deemed to be eligible so the knowledge can be passed on as early as possible. In the study it was not clear what the recognised age is to start introducing children to preservation processes as a participant.

The research revealed that the Hlubi nation currently also use ritual event gatherings as an instrument to preserve the knowledge as part of KM system. The effect of scarce monetary resources to run preservation projects is a challenge. The monitory resources required are, for example, transport for its members to be able to regularly meet and discuss issues relating to the Hlubi nation. Capital is also needed to host events and book cultural experts to address the congregation of the Hlubis. There is also a need for money to hire equipment, tents and sound systems, and money to provide catering for guests for when Hlubi nation gather. The non-availability of the funds for members of Hlubi nation to organise and attend these events demotivates the members and they lose interest in projects. This is not surprising because indigenous communities are faced with serious economic challenges, often at times, when faced with choices between choosing bread on the table or going to events, they are likely to optimise their spending for food instead of attending events.

Another factor that contributes to the poor preservation processes and KM is the disunity among members of the Hlubi nation. This study found that disunity exists in two aspects. Firstly the disagreement in the number of ritual practices about how rituals are supposed to be conducted. The second area of disagreement is with the organisation of Mthimkhulu Cultural Institute (MCI). There are varying opinions about how the MCI must be run and operated. One faction believes that the MCI must operate like a burial society or some form of social club, while the other side are of the view that the MCI must deal with purely tracing and restoring of Hlubi culture and develop projects for the preservation of the culture.

In the first instance, where there are differences about procedures to be followed when executing specific rituals, the study revealed that some of the opposing views are influenced by religious and political ideological differences between the members. **I**ndigenous spiritual traditions have survived, despite religious indoctrination and, in other cases, their survival is the result of mixing Western religion with other religious traditions (Krüger, 2020). Krüger (2020) contends that in order to maintain the existence of certain rituals, it is necessary for indigenous communities to infuse themselves with dominant religions. In the case of the Hlubi nation, that explanation can be offered as reasons for the differing views because, within the Hlubi nation, the research revealed that there are more stubborn traditional Hlubis who insist on an undiluted way of perfuming rituals and, on the other hand, there are the ones who are more educated.

However, there is also an alternative way of understanding the conflict that arises out of varying perspectives on the ritual practices. This perspective is that since the late 1800s after the death King Langalibalele, the Hlubis never really managed to regroup as a nation to restore their culture. Wright and Manson (1873) state that after the capture of Langalibalele, many Hlubi learned other languages and were assimilated in other cultures, primarily Xhosa and the Zulu cultures, in order to avoid being identified as subjects of their deposed king and punished as a result of the move that resulted in the imprisonment of Langalibalele on Robben Island. For this reason, the conflict in the practice of culture will differ because the Hlubi have not had proper leadership and canon of a unified approach on how the Hlubi rituals are to be practiced.

Regarding the varying opinions on what direction the MCI should take, a possible explanation for these results may be linked to the point about financial challenges within the members of the Hlubi nation. It may be that the group that wants MCI to be a burial society is more concerned with immediate monetary gains, where financial support could be provided to members in time of need. It is also not uncommon in rural areas to find families who are unable to bury their loved ones because of lack of financial resources. When the suggestion of burial society is made, the thinking could be along these lines of financial assistance A different

explanation can also be that there is a lack of leadership and tolerance of differing views that actually, because these rifts on the question of what direction should MCI take, the is no legitimate leader whose final word would be respected. In the end, the disunity that exists prevents unity for the purpose of preservation, therefore undermining the processes of preservation of the Hlubi IK.

There is a disconnect between the young and older generation because of competing interests, such as mobile and entertainment technologies. These technologies prevent families from spending more time with each other, where they would converse about cultural preservation. This finding is consistent with Nduka and Oyelude (2019), who observed that the older African generations are much more inclined towards IK, while the younger generations show no interest. The absence of a proper stakeholder management processes within the Hlubi nation can be a contributing factor to the failure of preservation processes that ensure the transfer of knowledge. The disconnect expressed by the results of the study, illustrates that stakeholders are not identified and the process of stakeholder management is not coordinated and is being left to chance. As such, the young participants are not being prepared and made to understand what their role is in the processes. It is assumed that they will learn through observation. A different point to be made around stakeholder management is that modernisation and the migration from rural communities to modern metropolitan areas have also had a negative impact on why people have little interest in traditional preservation processes. One participant remarked that it would be beneficial for effective preservation if Hlubis living in metropolitan areas could identify stakeholders, chiefs or representatives. The role of such a stakeholder would be to maintain constant communication with chiefs in rural regions for guidance in order to ensure that the Hlubi culture is consistently practiced in all territories where Hlubi reside. Having a designated person who's liaison role is defined and understood upfront will lead to better coordination and uniformity of the practice, therefore improving the preservation processes.

5.2.2 ICT infrastructure and skills development

The Hlubi nation seems to have an inclination towards the use technological means to address challenges facing the preservation of IK but they do have the challenge of information and communications technology (ICT) infrastructure. This finding is consistent with what was found by Chamunorwa et al. (2018), who criticised the South African government for not having an inclusive policy plan for ICT systems that included the rural areas. However, Chamunorwa et al. (2018) did not take in into considerations that sometimes indigenous communities are really not in agreement about what the role of government should be in IK preservation. The lack of digital inclusion of especially rural areas leads to the non-adoption of the SMTs by the Hlubi nation. Despite the presence of

a government public broadband initiative called SA Connect, a significant portion of the South African population is still not productively linked to the internet (Terzoli et al., 2018). The non-adoption leads to an obstacle for the preserving of IK. The non-availability of ICT infrastructure in the Hlubi nation areas is a challenge that constrains the members of the Hlubi nation against implementing digital strategies for preservation.

According to Deen-Swarray (2016), there is a significant discrepancy in internet adoption between persons who lack reading and writing abilities and those who can read and write. South Africa's growth is uneven, with most people in rural areas reliant on agriculture for a living (Chisango & Lesame, 2017). Rural individuals with little or no reading and writing abilities are less likely to use the internet in South Africa. According to Onitsuka (2019), because of aging and shrinking populations, SMT adoption in rural areas is low and, as a result, a lot of potential to promote social development through SMTs is being wasted. The research supports Robinson et al. (2020) in that rural communities need extensive engagement and involvement during the planning phase, which is critical to avoid failures of in the preservation projects. Yaacoub and Alouini (2020) state that although there is no single solution that will solve all rural connection difficulties, growing gradually, while taking into consideration the specific features of each location and adjusting the solution accordingly, appears to be the most appropriate path to pursue. In essence, what Yaacoub and Alouini (2020) propose could be a solution to addressing the challenges identified in this study relating to connectivity of the rural Hlubi community. A criticism of this study is that it does not include members of the South African government. Including government could have provided a balanced view on what government's role should be in preservation matters of the Hlubi nation. This is an area that could be further explored by future research.

In the study, it emerged that the Hlubi nation have no formal record-keeping ICT systems nor is the any central storage as a frame of reference to the authentication of knowledge shared. In rural regions, a lack of education results in a lack of abilities to conduct critical operational duties that may benefit the community. As a result, the majority of individuals living in rural regions are untrained, while those with skills migrate to cities in search of better opportunities. An encouraging observation is that despite the infrastructure problem, the Hlubi nation has not given up on striving to integrate the use of ICT technologies in their processes. One participant highlighted the point that there is a WhatsApp group that just started but the difficulties arise, however, when these ICT tools have to be used by elders who lack the skills set to coordinate and administrate an SMT tool. This finding is not unexpected as previous research found that digital literacy skills

shortages is a limitation to accessing SMTs (Mehra et al., 2020). However, in the age of the 4th industrial revolution, rapid upskilling in digital literacy cannot be left unattended.

5.2.3 Sovereignty, privacy of indigenous knowledge data

From the findings, sovereign privacy of IK data is identified as a theme (Chapter 4, section 4.5.1). Table 4.5 shows the link between the findings and the research questions namely:

RSQ 1.1: What is the current process of preserving IK?

RSQ 2.1: How should technology be used to capture and store knowledge, traditions and customs?

RSQ 2.2: How can the gap in perceptions of SMTs be narrowed?

The participants from the Hlubi nation acknowledged the benefits of SMTs being incorporated into the preservation process. Many participants expressed the need to consider cultural rights protection in order to protect the IK from abuse when preserved on the SMT servers. In recent times, concerns have been raised about the mixing of traditional and non-traditional institutions as guardians of digital preservation under the UNESCO (2021) policy. Traditional digitisation functions include those performed by a curator or librarian in order to maintain collections of such things (Almahasheer, 2018). However, commercial corporations have recently been entrusted with storing digitised content for long periods of time, despite the fact that there are no statutory or regulatory frameworks in place to ensure that such services correspond to the principle of universal human rights to information. The privacy violations that occur on SMTs make the Hlubi community uneasy about sharing knowledge on platforms where the knowledge could be abused, misappropriated and misinterpreted for the financial gain of big corporates and benefits to the government. This study supports evidence by Krøvel (2021), who observed that the open nature and access to certain knowledge on SMTs by groups of people who are not customarily designated to have access to such knowledge, has had a traumatic effect on the sacred practices of the nation. This finding may explained by the fact that certain practices and knowledge are limited to specific gender groups. Access to that knowledge is governed by traditional principles that do not apply in online systems. The indigenous people of South Africa have for years been exploited by multinational companies, including being moved off their land, stock theft and cheated out their natural minerals (Wilson, 2011). While indigenous peoples have long claimed sovereignty over their lands and territories, Kukutai and Taylor (2016) state that discussions about digital sovereignty have been pushed by national governments and multinational corporations

concerned with the legal repercussions. Indigenous peoples' inherent and fundamental rights and interests in the collection, ownership and interpretation of the data of their people, ways of life and territories has been ignored in such talks. These occurrences provide reasons for the Hlubi people to approach SMTs with caution; particularly because most SMTs are products of multinational companies. In recent times, allegations of data manipulation by the SMTs such as Facebook have emerged, and this context justifies the concerns of the Hlubi nation.

5.2.4 Attitudes towards social media technologies

The following sections deal with specific views and preferences in respect of each of the social media technologies namely i) Instagram; ii) WhatsApp; iii) YouTube; iv|) Twitter; and v) YouTube.

5.2.4.1 Participants' views on Instagram

P1 was in favour of Instagram as an appropriate platform to receive cultural content from. The majority of participants rejected or did not know of it. Other participants failed to even mention it as an option. The reason for the rejection mainly has to do with privacy and control as Instagram does not have private groups. Participants expressed the notion that the Hlubi nation culture requires privacy and gatekeeping for people who should have access to the information to preserve the sacredness of the culture.

The negative attitude towards Instagram is mainly around its inaccessibility and the platform is viewed as a class tool for the rich. Rural custodians of the culture feel discriminated against on the Instagram platform as it requires high usage of expensive data. This perceived discrimination creates a lack of confidence to join Instagram from a cultural content perspective. This result is not surprising. Wyche et al. (2013) mention that technological infrastructure in rural indigenous communities is less developed, access to technology is uneven and that the costs of using the internet, limited access to computers and smartphones and unreliable electricity are all barriers to online participation.

Emerging from the data is the issue of indigenous data sovereignty, security and storage. The participants of the Hlubi nation are concerned that the preservation of the cultural data can be compromised on the Instagram platform. Integrity of that data can be manipulated by the prevalent influencer phenomenon on Instagram. The knowledge meaning will be lost or reinterpreted to be abused and exploited in order to achieve financial gain, as opposed to preservation of the culture. This finding of the study is best understood from the perspective of Maros et al. (2020), who condemned the SMT platforms for their lack of integrity, stating that additional research on the increasing tendency for disinformation

propagated by social media is required. Rice et al. (2016) identified the need to look at methods to prevent social media misuse and pushed for creating a solution that encourages strong social media apps for the protection of rural communities. The finding of this study concerning abuse of and misuse of social media still persists and both recommendations by Rice et al. (2016) and Maros et al. (2020) are still relevant. Furthermore, the Hlubi nation's reluctance to freely participate in Instagram is maintained and justified by Stevens (2021) and Karsgaard and MacDonald (2020), who confirmed that Instagram's platform contains racial contextual clues and capitalist logics. These racial contextual clues enable cultural conceptions that encourage ways of how Black identity can turned into a profitable commodity.

The instant nature of Instagram also allows for opportunities to distort cultural content, as opposed to other platforms such as Facebook. In the case of Facebook, contrary to Instagram, in-depth discussions and engagements can take place to set the context and responsible representation, and the archiving of the Hlubi nation IK. This behaviour of negligence and aptitude can be traced to what Karsgaard and MacDonald (2020) argue, that Instagram, through the technological functionality: i) allows or denies its users; ii) determines how users view the issue; and iii) motivates users to take on specific behaviours. In as much as there is an overwhelming lack of support for Instagram to be used within the Hlubi nation preservation processes, it can be argued that a tremendous opportunity is being squandered by not adopting Instagram. Serafinelli (2020) revealed Instagram's ability allow users to share visual narratives results in the establishment of "Social Networked Archives" of both personal and community memories. Serafinelli (2020) further argues that new mediated ways of seeing pictures online, such as the use of hashtags and geo-tags, create a personalised method of amassing personal visual memories and a connected approach of accessing community memories. This is an opportunity that the Hlubi nation may be missing out on.

5.2.4.2 Participants' views on WhatsApp

The lack of usability features for purposes of preservation deemed WhatsApp to not be a preferred platform for preservation of the IK of the Hlubis. Participants felt that WhatsApp has a high risk of information being lost as the chats can easily be deleted. Some features of the WhatsApp statuses get wiped out within 24 hours, and for preservation purposes, the information needs to be stored for a longer period of time. These observations support the comments of Resende et al. (2019) that it is difficult to access information within WhatsApp chat applications because of the application's encryption. For the purposes of the research, WhatsApp may not be the answer to the question of preservation. On the other side, Sanusi et al. (2020) concluded that SMTs such as WhatsApp can be used to create

knowledge sharing programs for the benefit of rural communities. According to Aysegul (2019), conversations in WhatsApp groups stimulate users physically, psychologically and emotionally to active participation, making it easier to offer an understanding of a historical event, which leads to an understanding of a historical awareness about their nation's history. The Hlubi nation could benefit from the knowledge sharing ability of WhatsApp. For instance, rural communities are not sophisticate in technology so they require easy to use, simple solutions to their needs.

WhatsApp is also highlighted for its privacy and the ability to control the messaging as the Hlubi culture is one of privacy. It is not unexpected that the rural Hlubi population would be interested in using WhatsApp in its process of preservation for these reasons. For privacy reasons, they may very well be justified in in considering WhatsApp. In this case, the literature supports this reasoning in that WhatsApp makes use of multiple, private communication channels that enable users to have more private discussions (Karapanos et al., 2016). The issue of privacy and secrecy is emphasised by this research. However, the Hlubi people may face unforeseen consequences in this regard. Resende et al. (2019), as well as Maros et al. (2021), expressed concerns about the encrypted nature of WhatsApp. The reservations are related to the spread of misinformation in WhatsApp groups, which cannot be addressed solely by WhatsApp's encryption policy. The desire for the Hlubi nation to have a controlled digital environment where they can discuss and control messaging about their issues privately comes across very strongly in this study. The Hlubi nation is a dispersed nation, with its members scattered all over the South Africa. In this regard, WhatsApp groups have limited numbers and this is a disadvantage to the dissemination of the preserved knowledge. Even though the Hlubi nation may have favourable view of WhatsApp in terms of WhatsApp providing a safe controlled private environment for discussions, the conundrum they face is one of the limitations of numbers that can be added to a group, therefor WhatsApp may not fulfil the requirements for an SMT preservation solution

5.2.4.3 Participants' views on YouTube

YouTube is placed second as the preferred platform to store and access IK of the Hlubis. The reason for this perspective is that YouTube is viewed as a learning platform. The study also highlighted YouTube's information storage capacity and its ability store information that is retrievable in the future. The point about YouTube is validated by new studies that found that teaching cultural content through the use of YouTube audiovisual documentaries has had a positive impact on the high success rate of students taught using YouTube, as opposed to students taught the same cultural information by using traditional means (Azor et al., 2020). The same study also concluded that the interested in historical content can be revitalised by this method of teaching historical cultural content using YouTube. In the study, the Hlubi nation

revealed that they have a challenge in terms of transferring knowledge form the older generation to youth and also in terms of getting youth interested in IK activities. It seems that YouTube could be an answer to these challenges. It appears as if the YouTube platform meets some of the most critical requirements highlighted by the Hlubis. For instance, the requirement for storage and future accessibility of IK stored is addressed by the YouTube platform.

5.2.4.4 Participants' views on Twitter

With Twitter, it is clear that most participants do not know how Twitter works. Onitsuka (2019) and Wyche and Baumer (2016) also reported that rural populations are slow to join social media. Young users who have joined are unsure how to utilise social media or fully comprehend what it is. According to Mills et al. (2019), Twitter works better for those who are actively seeking information or it works better for people who know what they want. It is found that Twitter has trolling and bullying and abuse. It also has no control over privacy, therefore making Twitter unsuitable as a preservation platform for the Hlubi nation.

5.2.4.5 Participants' views on Facebook

Facebook is the most preferred platform to store and access Hlubi IK. The participants expressed knowledge of Facebook and how it functions. All participants viewed Facebook as an idea sharing platform, with interactive features that allow engagement, particularly with regard to groups, the Hlubi participants felt the group function on Facebook allowed for exclusive membership and participation of strictly vetted people before they are allowed to participate in discussions about Hlubi IK. This finding is in line with what Botangen et al. (2017) assert, that social media plays an important part in the transfer, revival, practice and learning of indigenous culture, and it serves as an excellent platform to support preservation initiatives. It is also not surprising that the finding reflects wide expectance purely because Facebook is the most popular SMT platform (Kuyucu, 2021).

5.2.5 The role of government

From the findings, the role of government is identified as a theme (Chapter 4, section 4.5.1 Table 4.5). Table 4.5 shows the link between the findings and the research questions namely,

RSQ 1.1: What is the current process of preserving IK?

RSQ 2.1: How should technology be used to capture and store knowledge, traditions and customs?

Research questions addressed under this theme are:

RQ1: What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK?

RQ2: How can SMTs be used to enhance the preservation of IK?

The objective for asking this question was to get a better understanding of the prevailing state of preservation in the Hlubi nation with regard to the current process applied on preserving of the nation's IK and to identify the challenging factors in the process.

As discussed in section 5.3, there are disagreements between the participants in terms of what role of government should play in the preservation of IK of the Hlubi nation. It is important to reiterate that this result needs to be interpreted with caution for the reason that this study did not include government officials. There is, thus, a lack of a balanced view of all perspectives. However, the result does give insights into the perspective of the Hlubi nation. Participants said that the government is not playing a sufficient role.

Fuelled by corruption, the government is failing in the execution of its duties in facilitating funding and encouraging research to address cultural dispositions caused by the Apartheid laws against the Hlubi Nation. This view can be understood against the backdrop of the Commission on Traditional Leadership and Claims, which determined in 2010 that under the Traditional Leadership and Governance Framework Act 41 of 2003, the amaHlubi do not have kingship, consequently, there is no monarchy to be restored (Nwaila, 2011). The commission also determined that amaHlubi are semi-independent entities, not a kingdom, like numerous other indigenous peoples in South Africa. The negative outcomes of the Nhlapo Commission report towards the Hlubi cause is likely one of the reasons why the Hlubi nation lacks confidence in government's role in processes of the Hlubi nation.

A broad perspective in understanding the discontentment of the Hlubi nation against government is found in the Ngoepe and Netshakhuma (2018) report. The authors state that the preservation of cultural and historical memory in South Africa continues to favour the dominance of colonial methods and approaches in archives, while indigenous people's viewpoints are ignored in the country's social memory. Ngoepe and Netshakhuma's (2018) finding resonates with the Arts and Culture Minister, Nathi Mthethwa's 22 million rand flag monument, which infuriated South Africans. The government planned to fly the flag in Pretoria's Freedom Park, where the government has budgeted 22 million rand for the flag's installation. The flag serves as a national monument and tourism destination. However, the South African citizens thought it would undoubtedly be a good idea to divert the 22 million rand set aside for the flag pole to the preservation of a number of nationally significant historic

monuments that are now deteriorating. The idea of restoration of historical sites would create an environment in which South Africans could seriously engage with their complex past. The example of a 22 million rand flag is an example of the disconnect between the government and the wishes of the larger population. Ngoepe (2019) posits that the public domain does not accommodate indigenous forms of knowledge creation and indigenous people's unique cultural heritage. In the case of the Hlubi nation, their story is one of is one of land disposition, displacement and loss of identity.

, sectionAnother area of concern mentioned is the funding and the government's failure to resolve the issue of funding for a mega infrastructure project with the aim of building a solid ICT infrastructure in rural areas, which is essential for the provision of ICT-related services. The government must give adequate funding and create an environment that attracts and encourages big corporations to invest in and operate in rural areas. Incentives must be provided to change the current situation in which corporations are hesitant to provide support and maintenance for services in rural areas as a result of poor leadership by government.

There is a strong negative attitude towards the involvement of government in Hlubi preservation processes. The view is that government has no role in Hlubi matters, apart from the administrative role of regulating and providing funding. There is also the view that says the government's policies are dominated by Western philosophies, hence the current situation of neglect of indigenous knowledge systems. However, this cannot be the case in accordance with the laws and policies put in place, as discussed in section 2.4 of this thesis. The participants also expressed concerns that the members of the Hlubi nation are not being proactive in presenting government with writing proposals and forcing government to undertake preservation projects. There are points of contradictions and some strong sentiments expressed that government should not have a role to play in processes of the of Hlubi nation. The participants outlined what government's role should be. However, it is possible that these roles are there but are not being executed or communicated properly. This is an important issue for future research.

5.3 Summary

In this chapter, the findings of the study were discussed according to the themes developed from the analysis Chapter 4. Through the discussion, it was revealed that despite the general desire to implement the usage of SMTs in the preservation process of the Hlubi nation, there are still many factors that influence the non-adoption of SMTs as viable tools in the preservation of Hlubi IK. The discussion identified the following challenging factors that prevent the adoption of SMTs within the Hlubi nation: poor knowledge management processes; and the non-availability of ICT infrastructure in the

Hlubi nation areas. This discussion further revealed the need to consider the protection of cultural rights in order to protect communities from abuse of their IK that would be preserved on the SMTs servers; abuses such as cultural misappropriation and exploitation IK for economic gain by multinational companies. Furthermore, the discussions canvased the various reasons why the role of government in the Hlubi nation's quest for IK preservation is been questioned. It was identified that the government is failing in the execution of its duties to facilitate funding and encourage research to address cultural dispositions caused by the Apartheid laws against the Hlubi nation.

In the final chapter, Chapter 6, the researcher provides the conclusions, the answers to the research questions, recommendations, research recommendations, contributions, future research, limitations and a reflection on the research.

CHAPTER 6: CONCLUSION, RECOMMENDATIONS AND FURTHER RESEARCH

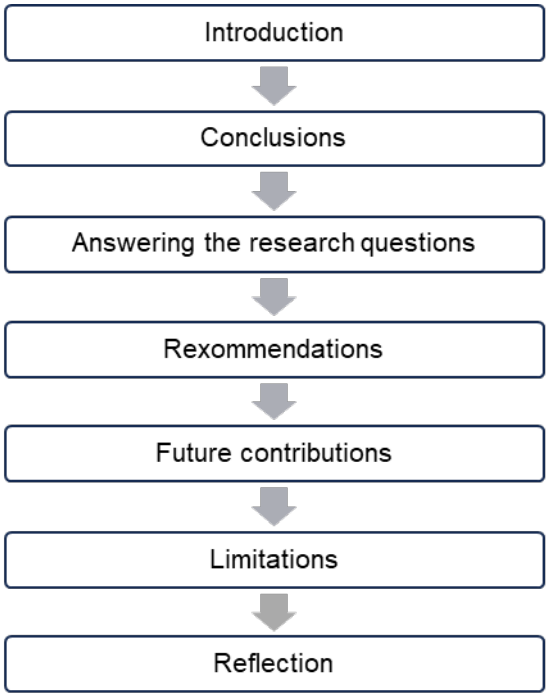

Figure 6.1: Chapter 6 layout

6.1 Introduction

In this chapter, the researcher concludes the study by providing the answers to the research questions, research recommendations and contributions. The limitations of the research are reviewed, reflections are made and opportunities for future research are proposed. Figure 6.1 outlines the layout of the chapter.

6.2 Conclusions

The findings of the study were discussed accordance to the research aims and questions for study. This study aimed to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives. The results indicate that SMTs have many benefits for IK capturing, storage and dissemination. However, further findings show that the implementation of SMTs may require a large technological and skills development investment before the SMT benefits can be realised. In section 6.3 the researcher responds to the questions of the study.

6.3 Answering the research questions

The problem statement is that it is unclear how social media can effectively be used to digitise cultural activities and history of marginalised indigenous communities. The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives. This aim is answered by the research questions as follows:

6.3.1 RQ1: What are the challenges faced by indigenous marginalised communities in using SMTs for the preservation of IK?

The answer to the research question was achieved through a detail undertaking of data collection, intense analysis of data and an in-depth discussion of merging themes. The discussion pointed to the factors that impact on the of preservation IK by the Hlubi nation and identified the following areas as major stumbling blocks in successfully implementing a preservation programme for the Hlubi nation. These factors include the lack of knowledge managements systems within the Hlubi nation. Furthermore the challenges of poor ICT infrastructure are prevalent in the rural spaces. In addition, the study also found that concerns about the issues of data security and sovereignty when dealing with the data of Hlubi IK is the main cause of reluctance to incorporate SMTs into the preservation of Hlubi IK processes. Furthermore, the role of government in the preservation processes of the Hlubi nation was assessed and the results were not definitive. There were two conflicting views, namely one in favour of government involvement and the other view is one of not in being favour of government involvement in preservation process for various reasons.

6.3.2 RQ2: How can SMTs be used to enhance the preservation of IK?

Moreover, the study discussed the attitudes of the Hlubi nation towards the use of SMTs and it was revealed that the nation is more optimistic towards SMTs, with reservations about the phenomenon of misinformation and concern is that using the SMTs in the preservation process of the Hlubi nation will put IK at risk of being devalued. In addressing the same question on the attitudes of the members of the Hlubi nation, Facebook and YouTube platforms were identified as the most preferred platforms that can be used to preserve the IK of the Hlubi nation. The two platforms were identified for the reasons of being accessible and easy to use. Other SMT platforms that were identified as the least preferred platforms were Twitter, WhatsApp and Instagram. The study concludes by answering to the two research question posed.

6.4 Recommendations

It is recommended that the Hlubi nation must, through the Mthimkhulu Cultural Institute (MCI) structures, initiate public education on responsible social media use and the potential benefits that could be derived for purposes of IK preservation. In this regard the MCI must organise serious educational campaigns using Izimbizo, a local radio station, to educate its members about SMTs. These educational platforms will assist in debunking the myths around SMTs that exist within the nation. These sessions will also assist in increasing the digital SMT adoption rate.

It is also recommended that the Hlubi nation should set up a deliberate mechanism to start with the recording of IK. In this light, the Hlubi MCI should establish an intergenerational committee to be responsible and lead the preservation process. The immediate preservation will assist to avoid further loss of the IK that is held by the elderly, who are at risk of demise. The establishment of an intergenerational committee will also address the issues of disjuncture that currently exists in-between the youth and adults regarding participation in preservation process. The establishment of the committee will also formalise the otherwise informal manner in which IK us preserved. This will address different interpretations of the execution of certain rituals.

It is further recommended that the Hlubi nation engage government for support. The support to be sought relates to addressing the lack of ICT infrastructure and the resourcing of Hlubi preservation projects, including technologies that enable digital preservation, such as hardware, software and bandwidth.

6.5 Contributions

This research contributes in the following ways:

i) This study identified the factors that prevent the adoption of SMTs in the process of IK preservation in the Hlubi nation. These factors provide some insights into the challenges faced by indigenous rural South African communities in maintaining their cultural identities, IK and cultures, while being confronted by a fast changing environment of ever advancing technology.
ii) The study contributes to the body of knowledge that exists in terms its findings. The study provides insights into knowledge management for indigenous South African communities.
iii) The research provides a comprehensive analysis the attitudes of an indigenous community on various SMTs. This analysis can be used to determine the appropriate SMTs to use when a community decides to pursue an SMT integrated preservation strategy.

iv) This study could also help government to plan and develop policy that speaks to the observation made by the Hlubi nation in this research.
v) This research is likely to add to a more complete knowledge of social media adoption in underserved rural populations, which has traditionally been overlooked.

6.6 Future research

Having taken into consideration some limitations of this research, future research is recommended to gain a better understanding on how SMTs could aid the capturing of IK for the future and representation in the cultural archives. It is recommended that future research should focus on a wider target population to include other role players in the field of preservation, such a government officials. It is further recommended that a larger sample size be selected to include areas outside the Eastern Cape in order to increase the validity of the study.

6.7 Limitations

This study was limited to the members of the Hlubi nation. The wide dispersion of the members of the Hlubi nation also posed limitations; it limited the study in such a way that it was difficult to identify and contact members to become involved in the research. Covid-19 made some aspects of the study difficult and extended the timeframe of the study. Time was one of the biggest limitations as members of the community, as participants, were not always available and it was inevitable that many interviews had to be delayed because of various situations.

6.8 Reflection

I found the construction of the research process and knowledge generation processes, when carried out properly, to be intriguing and equally fulfilling. It is possible to realise the successful production of a thesis within the anticipated timeframe for finishing the research, while some time management issues, challenges brought on by the Covid-19 period and ongoing Eskom power shortages may need to be overcome.

Dr. Andre de la Harpe, my research supervisor, showed excellent leadership and a good understanding of the academic process. In order to encourage the researcher to think more deeply about technical academic issues and to inspire innovative methods of approaching the study, the supervision component included constructive consultative criticism.

6.9 Summary

AmaHlubi are of eMbo descent, and they constitute the greatest formation of the eMbo nation, who formed part of the downward migration from central Africa to settle in areas of what is now known as KwaZulu. The Hlubi people's story is one of land dispossession, displacement, loss of identity and continues loss of their indigenous knowledge through colonialism, Apartheid and the post-Apartheid setting. They are on quest to revive their kingdoms through various instruments, one of which is to revitalise the Hlubi IK through gathering, restoring, distribution and storage. It is unclear how social media technologies can effectively be used to digitise cultural activities and the history of marginalised indigenous communities such as the Hlubi nation. The aim of the study was to explore how the indigenous people can use SMTs to aid the capturing of information about their culture and history for the future and for further representation in the cultural archives.

The study found that SMTs can be highly beneficial to the preservation of IK. The study also found that challenges, such as flawed knowledge management system within the Hlubi nation, as well as poor ICT infrastructure that is widespread in rural areas, prevents the full realisation of the benefits offered by SMTs. The use Facebook and YouTube are the most preferred SMT platforms for preserving the Hlubi people's IK. Future research is recommended to gain a better understanding of how SMTs could aid in the capturing of IK for the future and for representation in the cultural archives. It is recommended that future research should focus on a wider target population to include other role players in the field of preservation, such a government officials. It is further recommended that a larger sample size be selected to include areas outside the Eastern Cape in order to increase the validity of the study.

In conclusion, while there may be a number of available technologies, there is great potential for the preservation of indigenous knowledge of the Hlubi nation through the use of social media technologies.

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