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22 November 2021

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The Impact of Social Media on Knowledge Management Within Organisations

by

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Submitted in fulfilment of the requirements for the degree

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in the

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ABSTRACT

Knowledge management is crucial to the sustainability and success of an organisation. Identifying and sourcing knowledge is critical for modern, multi-national organisations which strive for competitive advantage across multiple markets. Organisational development, change management, innovation and efficacy can all be improved through the active management of knowledge. At base level, social media provides a means for people to communicate, share information and content, interact, collaborate and foster relationships between one another and between individuals and organisations. Social media's use within organisations is on an upward trajectory, facilitating employee interaction, collaboration and communication. Knowledge management without social media's assistance leaves organisations with problems, such as knowledge retrieval, connecting knowledgeable individuals, knowledge retention and knowledge dissemination. Knowledge management enabled through social media, however, facilitate effective knowledge management by increasing knowledge access, creation, exchange and storage. However, these two concepts are not entirely harmonious, with challenges arising from several factors, such as data overload, protection, privacy and validity.

This study employed the interpretivist research philosophy. This allowed the researcher to investigate the phenomena under scrutiny while considering the beliefs, thoughts, feelings and experiences of the research participants through interpretation and observation. This study made use of the qualitative research approach. A case study was employed and data was collected through a questionnaire and semi-structured interviews. This data was analysed in great detail, leading to the identification of emerging themes related to the phenomena under investigation.

It was established that social media possesses both a positive and negative impact on knowledge management. Most employees understand knowledge management and its core concepts of knowledge generation, sharing, storage and application. However, while many understand these concepts, not all know how to put them into practice and effectively

separate theoretical and practical knowledge. There are several benefits through knowledge management enabled through social media, but there are challenges and barriers limiting its sustainability and growth. The researcher contributed to the academic and business communities by providing a model, one which takes social media's impact into consideration. The conventional Socialisation-Externalisation-Combination-Internalisation (SECI) model consists of elements which require in-person communication and others which require virtual communication, however, the enriched model illustrates that social media can facilitate all elements of the SECI model, acting as the central element for all four phases of the model.

Keywords: Social Media, Knowledge Management, Organisation, Barriers, Benefits

CHAPTER 1: INTRODUCTION

1.1. BACKGROUND INFORMATION

Knowledge management is of the utmost importance to the sustained existence and future growth of an organisation (Yates & Paquette, 2011). Ford & Mason (2013) agree, and state that knowledge management is key to the survival of an organisation within the competitive and international markets of today. A key factor within knowledge management is identifying that knowledge and sourcing it effectively (Murphy & Salomone, 2013). Murphy & Salomone (2013) state that detecting knowledge sources that are of serious importance to an organisation will afford them the ability to compete across a variety of domains when applied. These domains include organisational processes, efficiency and effectiveness, their ability to respond to changing market conditions and how innovative they are (Murphy & Salomone, 2013).

Social media's various platforms and tools offer a variety of possible ways for people to connect with one another (Parise, 2009). Social media can be used to create and maintain relationships between people and organisations which differ from face-to-face ones (Hemsley et al., 2013). Hemsley & Mason (2013) propose that people use social media to communicate, collaborate, maintain relationships, share information and share content both with friends and with perfect strangers. This study does not concern any one type or classification of social media, such as enterprise social media or networking social media, but rather concerns any social media application that an organisational user may choose to employ when communicating, collaborating, or sharing content.

The use of social media within organisations is increasing with each passing year (Leidner et al., 2018; Väyrynen et al., 2013). Väyrynen et al. (2013) believe that this results in social media being important to knowledge management as social media facilitates an increase in employee collaboration and communication within organisations. Organisations have a variety of knowledge management issues (Annabi et al., 2012). These issues include sourcing knowledge, establishing connections between different knowledge sources, protecting their knowledge and sharing their knowledge effectively and efficiently (Annabi et al., 2012). Social media can help with this, by supporting the management of knowledge

both for personal processes as well as organisational ones (Razmerita et al., 2014). This leads to an increased amount of knowledge exchange between organisations and the employees employed by them (Behringer & Sassenberg, 2015). However, this marriage of concepts is not without its challenges. Social media and knowledge management see integration problems in the form of information protection, managerial complications and the reputations of different organisations (Ford et al., 2013). Ford et al., (2013) attribute the challenges to several issues, such as the speed at which social media distributes information, a misunderstanding of their target audiences and a confusing coming together of personal and organisational identities. This leads into section 1.2., the Problem Statement and Rationale for the Study.

1.2. PROBLEM STATEMENT AND RATIONALE FOR THE STUDY

When determining a topic, it is crucial to understand where this topic is derived from. Sandberg & Alvesson (2011) found that topics generally flow from two broad avenues: gap-spotting and problematisation. While gap-spotting involves identifying areas of prevailing research which have openings for novel discoveries, problematisation involves challenging existing research and thinking about it in a new way (Sandberg & Alvesson, 2011). The topic under exploration in this study has been described as the impact of social media on knowledge management within organisations. This topic was borne of Sandberg & Alvesson's (2011) concept of neglect spotting, resulting from the researcher exploring a topic that is novel and not found within the existing literature. This is supported by the work of Ellis & Levy (2008) as an acknowledged missing piece from this research area was provided and preceding research was expanded upon in a new light with a novel setting with appropriate participants. Critical to the topic of social media’s impact on knowledge management within organisations is investigating what social media is, what knowledge management is, how social media can have an influence over knowledge management and the impact this influence can have on knowledge management. Stemming from the concepts of each, and the influence social media has over knowledge management, are a range of both benefits and drawbacks associated with this influence.

Social media enables organisations to obtain data, information and knowledge from a variety of sources. In furtherance to this, social media can, in turn, be used to share and distribute

the obtained knowledge both within an organisation and outside of its borders (Sigala & Chalkiti, 2015). Social media is used internally within organisations to communicate within that organisation, to share knowledge and information and to crowdsource ideas from employees (Vuori, 2012). Vuori (2012) found that on the external front, organisations use social media to bolster brand reach and recognition, to establish improved customer relationships and communication channels and to interface with stakeholders. However, social media within organisations is not without its shortcomings (Hauptmann & Steger, 2013). Companies are facing knowledge management issues, with one such issue being the protection of knowledge (Väyrynen et al., 2013). The knowledge being shared by and within organisations is under threat and needs to be safeguarded against unsanctioned access, sharing, use, manipulation and deletion (Väyrynen et al., 2013). Three predominant issues company's had with social media came in the form of employees distributing company information in public areas, showing confidential information to the world at large and performing actions that opened the company up to potential lawsuits (He, 2012). People's use of technology, and in this case social media, is moulded by their personal knowledge of it and experiences using it (Vuori, 2012). Coupled with the social, cultural and authoritative structures to which people belong, this moulding results in a range of issues for social media adopters within organisations to consider as different people use the same social media types for vastly different reasons (Vuori, 2012). Social media can be used and innovated at an exceptional pace, while traditional knowledge management processes can be a lot slower and less innovative. This does not, however, mean that social media can replace traditional avenues to the collection of knowledge and managing these two methods of sourcing can cause problems for organisations (Corral de Zubielqui et al., 2019).

Given social media's power to facilitate communication and the distribution of knowledge within organisations, its impact on knowledge management, for both positive (Parveen et al., 2016) and negative (Y. Cao et al., 2018) reasons, can be found within organisations all over the world (Dlamini & Johnston, 2018; Ford et al., 2013; Kaplan & Haenlein, 2010). As a result, the purpose of this study is to investigate the potential impact that social media has on knowledge management. This was achieved through the answering of the primary and secondary research questions being investigated by the author. These questions, which have been alluded to in this problem statement, are the drivers of this study and can be found in greater detail within section 1.3: Research Questions and Objectives. The findings

of this study are not limited to the academic realm. The public sector and government sector, educators, academics and the private sector would benefit from garnering an understanding of how social media influences organisations. The following section discusses the research questions and objectives outlined for this study.

1.3. RESEARCH QUESTION AND OBJECTIVES

The primary aim of the study was to find and analyse the characteristics of both social media and knowledge management. This enabled the determination of how these characteristics allow social media to have an impact on knowledge management. With this as the primary research objective, the primary research question can be derived to be:

What are the key characteristics of social media's impact on knowledge management?

From the primary research question and its objective, the subsequent secondary research questions are determined:

Secondary research question 1: Is organisational knowledge management understood and employed by employees?
Secondary research objective 1: To determine the extent to which employees understand and make use of knowledge management within their organisation. Knowledge management has become an integral part of organisations globally. Knowledge management takes advantage of the combined knowledge of an organisation to achieve a competitive advantage, increased productivity and increased organisational development (Scuotto et al., 2017). Knowledge Management processes allow for organisations to have an increased amount of work to be performed by a decreased number of employees through the use of expertly shared, and taught, knowledge (Soto-Acosta et al., 2017).

Secondary research question 2: Is social media collaboration influencing knowledge management?
Secondary research objective 2: To determine whether the collaborative use of social media influenced knowledge management. Social media can be defined as an assortment

of different platforms and software applications which allow people to connect with one another to cooperate, collaborate and communicate (Murphy & Salomone, 2013). Social media allows people to transfer information to one another, within organisations and across the world (Nisar et al., 2019). Owing to this, it is important to determine the nature and extent to which social media collaboration has an impact on knowledge management.

Secondary research question 3: What are the challenges and barriers associated with social media and knowledge management?

Secondary research objective 3: Knowledge management through social media has a host of benefits, but is not without its challenges (Ford et al., 2013). Väyrynen et al. (2013) determined that a significant challenge in the modern era is that of the security of knowledge and information. There are also issues surrounding how knowledge management is shared using social media – with both a lack of employee understanding of what should be shared along with how it should be shared (Parise, 2009). The research methodology employed for this study is discussed in the following section.

1.4. RESEARCH METHODOLOGY

For this study, various research philosophies were considered, a research approach was outlined, and a research strategy was constructed. A data collection strategy was determined, and data analysis was carried out. The aforementioned data collection and analysis was performed in an ethical manner.

Research paradigms stem from a range of diverse philosophies (De Villiers, 2005). The interpretivist, pragmatist, critical research and positivist philosophies were taken into consideration for this study. After careful contemplation, the interpretivist paradigm was selected. Studies which follow the interpretivist paradigm seek to understand phenomena through understanding how people feel about the investigated phenomena (Myers, 1998). As such, interpretivism is suitable as knowledge is not impartial, but rather personally biased by individuals' experiences (Ryan, 2018).

Quantitative, qualitative and mixed-methods research approaches were considered for this study. Qualitative research, which was chosen for this study, originated in the social

sciences in order to explore cultural and societal trends and experiences (Myers & Avison, 2002). Qualitative research methods provide researchers with a way to comprehend the socio-cultural reasons behind people's actions and feelings (Myers & Avison, 2002). This corresponds well with the interpretivist paradigm as well as the research strategy employed in this study, that of the case study (De Villiers, 2005; Myers & Avison, 2002). This alignment stems from a case study being an empirical assessment which examines data collected from individuals with a range of lived experiences, thoughts and feelings towards the phenomena under investigation (Myers & Avison, 2002; Noor, 2008).

The target population for this study were the employees of a multi-national software engineering (MNSE) company based in South Africa. Data was collected via two mechanisms: a self-administered questionnaire and expert interviews. The researcher sent out an online questionnaire (Annexure A) to employees from around the globe and conducted semi-structured interviews (Annexure B) with specific employees from various countries – both before and throughout the COVID-19 pandemic (Basilaia & Kvavadze, 2020; Fauci et al., 2020; Myers, 2019; Regmi et al., 2017; Wright, 2005). Convenience and purposive sampling methods were considered for this study. A mix of both was employed, as the sample was readily available at no cost while also being considered for their credentials, experience and expertise (Elfil & Negida, 2017; Etikan, 2016; Etikan & Bala, 2017).

Data analysis within the context of this study involved detecting properties and trends through the data the researcher collected using qualitative methods. The analytical methods employed within this study were those of content analysis and axial coding. Content analysis was used to allocate the content procured from journal articles, research studies, the questionnaire and the interviews to diverse groups (Myers, 2019). This provided the researcher with the ability to derive trends from the groups and make interpretations (Myers, 2019). Subsequently, axial coding allowed the researcher to add intricacy to these created groups (Gorra & Kornilaki, 2010; Moghaddam, 2006). Axial coding facilitated the researcher's ability to create associations between groupings and subgroupings based on their traits and features (Gorra & Kornilaki, 2010).

Ethical considerations are fundamental to conducting research. They outline safe and moral practices for the researcher to follow when people are involved in their studies. These practices were considered for all of the participants throughout the course of this study, as they provided informed consent, understood what they were taking part in, could have left the study at any time and have been offered access to the findings of this study. Their privacy and private information were always of the highest priority (Etherington, 2007; Wester, 2011). The following section discussed the delineations and limitations of this study.

1.5. DELINEATIONS AND LIMITATIONS

Acknowledging the delineations and limitations of this study was crucial to assessing the contributions being offered by it. These delineations and limitations are as follows:

- A delineation of this study is that the data collected for this study was sourced from a South African software engineering company with an international footprint. The author is employed by this company, which afforded them a unique opportunity to gather information relevant to this study.
- A limitation stemming from this is that these findings cannot be generalised to any company. However, given the nature of the organisation which the case is based on, these findings may be transferable to similar organisations.

These limitations and delineations flow reasonably to the following section, which discussed the underlying assumptions of the researcher.

1.6. UNDERLYING ASSUMPTIONS

An assumption of this study is that both organisations and individuals make use of social media. This can be for diverse reasons, such as communication, employee collaboration, marketing, outreach, recruitment and more.

The following section covers the contribution this study aimed to provide.

1.7. EXPECTED CONTRIBUTION

In the modern era, social media networks are becoming more prevalent not only for individuals but for organisations as well. At the same time, knowledge management is receiving more attention and resources from organisational leaders and members alike. As a result, it is important to measure the extent to which social media has an impact on knowledge management within organisations. Therefore, this study aimed to help organisations understand the effects which social media can have on their organisations. This better understanding will allow organisations to fully comprehend the benefits of social media while also assessing the challenges which come with it.

With regards to these phenomena, there was both existing research as well as the opportunity for further research. This study was aimed at contributing to the academic and business communities by offering novel information to build on existing research. It aimed to fill a gap in the existing literature and offer fresh insights into the phenomena of social media and knowledge management. Researchers have the ability to better understand the phenomena in question and businesses are able to determine whether or not social media has produced beneficial outcomes for their entities. The final section of this chapter, Section 1.8: Chapter Overviews, will provide a brief overview of this study's chapters.

1.8. CHAPTER OVERVIEWS

This study consisted of six (6) chapters. A brief overview of each of these chapters is described below.

> **Chapter 1: Introduction.** This chapter serves the purpose of introducing the reader to the research paper. It did this by introducing the reader to the contextual concepts which are fundamental to the paper as a whole. It explores the problems being investigated, the research questions and their associated objectives, the reason for this study and finally the delineations, limitations, and assumptions the author has considered.

Chapter 2: Literature Review. This chapter was used to discover existing literature which exists surrounding the key concepts being explored by this study. It is used to give critical insight into the research problem and explore a range of themes which will lead to a superior understanding of the topic of this study.

Chapter 3: Methodology. This chapter takes an in-depth look into the research design and methodology which the author chose to employ. The research methodology utilised in this study was explored in the chapter.

Chapter 4: Data Analysis. The purpose of this chapter was to analyse the data which has been collected, compiled, and identified throughout this study. Themes in the collected data will be identified, explored and discussed and insights will come as a result of this process.

Chapter 5: Discussion of the Research Findings. This chapter discussed the findings the author derived from the data analysed in Chapter 4. The findings of the author's research into this topic will be culminated and expressed in a way that will contribute to both the academic community and the organisational community as well.

Chapter 6: Conclusion and Contribution. The study was concluded with the clear and concise answering of the primary research question and sub-questions. The author's research contribution was also assessed, and future research recommendations were offered.

The following chapter, Chapter 2: Literature Review, provided an overview of the existing literature and the theoretical framework for this study.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

The preceding chapter outlined an introduction to this dissertation. This chapter, Chapter 2: Literature Review, aims to provide a theoretical context for the remainder of this study. It will do this by reviewing existing literature related to the phenomenon under investigation. That is, it will provide a review of literature related to the key characteristics of social media's impact on knowledge management.

Knowledge management possesses various forms. These forms, along with knowledge management itself, are discussed in the following section.

2.2. KNOWLEDGE MANAGEMENT OVERVIEW

2.2.1. Knowledge Management

For a proposition to be considered knowledge and not simply data, information, opinion or sentiment, it must satisfy three conditions; namely truth, belief and justification (Bolisani & Bratianu, 2018a). *Truth* requires that the proposition is known as true, else it is not known, *belief* requires that it is wholly believed in and *justification* requires that there is a sensible, accepted method to prove that it is true (Bolisani & Bratianu, 2018a; Lehrer, 2015).

Knowledge management can be defined as the overt and methodical administration of critical knowledge, along with its conception, shaping, sharing, distribution and use (Mardani et al., 2018). Knowledge management is a continuous sequence of knowledge attainment, generation, dissemination and implementation (Abualoush et al., 2018). Knowledge management came into being as an essential method for dealing with knowledge, people who work with knowledge and the work being done with knowledge (Bolisani & Bratianu, 2018b). Knowledge management affords organisations the ability to obtain, comprehend and put into practice knowledge assets which transcend organisational borders in order to generate novel knowledge (Abualoush et al., 2018). Knowledge management is not only of interest to organisations but to researchers as well, with researchers seeing knowledge

management as an analysis of the processes which take knowledge from a segregated state to a unified one in order to incur organisational benefits (Barley et al., 2018; Bolisani & Bratianu, 2018b).

The modern organisation needs to hold knowledge management in the highest regard, and afford it a high priority if it is to remain competitive and acquire competitive advantage (Abualoush et al., 2018; Archer-Brown & Kietzmann, 2018; Bolisani & Bratianu, 2018b; Ferreira et al., 2018; Maravilhas & Martins, 2019; Mardani et al., 2018; Shujahat et al., 2017). Knowledge acquired from quality sources has become more important to organisations than the established norms, such as financial assets and other tangible assets (Archer-Brown & Kietzmann, 2018). As a result, organisations are beginning to actively manage both their knowledge as well as their innovation practices (Ferreira et al., 2018). Owing to this increased interest and increased understanding of this importance, organisations are willing to undergo infrastructural and technological changes in order to achieve effective knowledge management (Abualoush et al., 2018; Barley et al., 2018).

Knowledge management is perceived differently in different parts of the world (Bolisani & Bratianu, 2018b). Knowledge management in the Western world is focused around competitive advantage between firms and the mathematics and analytics which impact on the decision-making to achieve competitive advantage (Bolisani & Bratianu, 2018b). By stark contrast, in the Eastern world, the focus of knowledge management is on the distribution of knowledge, as well as an increased emphasis on support collaboration (Bolisani & Bratianu, 2018b). These two worlds collide in the international economy through globalisation and increased technology adoption (Santoro et al., 2018). Globally-operating organisations are able to manage knowledge successfully by making use of particular implementations and procedures (Santoro et al., 2018). This leads to organisations being able to leverage their shared knowledge to not only attain competitive advantage, innovation, and acute market sensitivity but also to attain continued, global sustainability (Santoro et al., 2018).

2.2.2. The Forms of Knowledge Management

Strategic knowledge management builds upon the foundations of knowledge management itself as it constitutes the processes and the infrastructure which organisations use to

conceptualise, shape, distribute and implement gained knowledge towards strategic purposes (Ferreira et al., 2018). This translates to the alignment of knowledge resources and proficiencies to an organisation's overall business strategy (Ferreira et al., 2018).

A clearly identifiable divergence concerning the heart of knowledge can be seen in the difference between explicit and tacit knowledge (Barley et al., 2018). Explicit knowledge is corporeal in nature, which means it is tangible, organisable and storable (Barley et al., 2018). It is knowledge which is procured through the attainment of facts and information and is paramount to new knowledge generation (Maravilhas & Martins, 2019). This knowledge is stored across a variety of mediums, such as documents, copyrights, designs, proposals, and any other form of written or codified medium (Maravilhas & Martins, 2019). Tacit knowledge, conversely, is knowledge which is incorporeal in nature and shrouded in context (Barley et al., 2018). It is knowledge which cannot be stored physically, but rather within a person's brain, and can only be recalled and used at that person's discretion (Holste & Fields, 2010). This is knowledge which is gained through human experience, socialising and interaction (Barley et al., 2018; Garrick & Chan, 2017; Maravilhas & Martins, 2019). This divergence, which postulates that some knowledge can be written and expressed, and some cannot, results in knowledge being able to both reside in and transcend people (Barley et al., 2018).

There are a number of concepts which stem from knowledge management which serve to enable and support it (Abualoush et al., 2018). Knowledge management infrastructure (KNI) is one such concept. KNI embodies the foundation upon which effective, longstanding knowledge management practices are built within an organisation (Abualoush et al., 2018). KMI possesses two essential infrastructures: a technical one, which concerns an information technology substructure and hardware, and a social one, which concerns people, their management and their culture (Abualoush et al., 2018). As discussed earlier in this chapter, the knowledge management process is a continuous cycle of generating or attaining knowledge, finding new knowledge, and establishing storage and dissemination structures for that knowledge. The concepts can be defined in greater detail, as they are crucial to successful knowledge management. After analysing a multitude of papers, Abualoush et al. (2018) discuss these concepts as follows:

- **Knowledge Generation:** refers to a collaboration and connection between tacit and explicit knowledge which serves to create new knowledge and supplement existing knowledge stores.
- **Knowledge Storage:** refers to systems in place which are used to accumulate and recover knowledge when desired. It is a process which involves the storage of newly created or attained knowledge, or existing knowledge, in a manner which allows for it to be maintained, nurtured and grown so that it can be accessed at a later time.
- **Knowledge Sharing:** refers to the dissemination of knowledge between people, both within and outside of an organisation. This supports the process of people sharing both tacit and explicit knowledge, which in turn allows for knowledge generation. Effectively managing this process leads to new knowledge being created with the lowest possible cost to the organisation.
- **Knowledge Application:** refers to the actual, realised use of the created, procured and stored knowledge. Knowledge application involves utilising the knowledge possessed by an organisation to achieve practical goals in an effective manner.

Figure 2.2.2.1: The Continuous Cycle of Knowledge Management (adapted from (Abualoush et al., 2018))

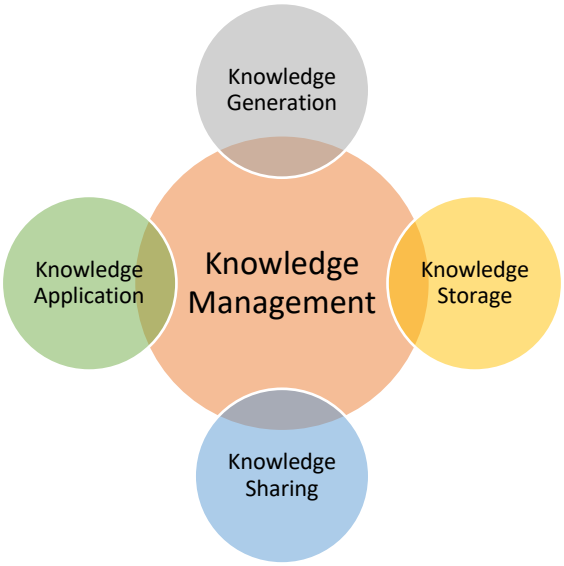


Figure 2.2.2.1 illustrates the concepts discussed in section 2.2.2. Knowledge management both encompasses and is comprised of the four concepts illustrated in Figure 2.2.2.1. The following section discussed social media and its various types and affordances.

2.3. SOCIAL MEDIA

2.3.1. Social Media

Social media is involved in the daily lives of billions of people around the world, having an impact formally, informally, personally, professionally and institutionally (van Dijck & Poell, 2013; Vogel et al., 2014). Social media can be defined as a collection of applications, which require the internet, which allow for the creation and distribution of user-created content (Tsimonis & Dimitriadis, 2014). Social media sites and applications provide their users with the power and means to generate, manipulate, assess and share both their own content and the content of others (Mladenović & Krajina, 2020).

Users are fundamental to the success of social media applications as their constant and sustained interactions support their relentless growth (Neti, 2011). The number of these applications, as well as their popularity, is growing and at an exponential rate (Stieglitz & Dang-Xuan, 2013; Tsimonis & Dimitriadis, 2014).

One of the many factors which draw people to social media is its pricing, or rather lack thereof, as social media is usually either reasonably cheap or completely free (Whiting & Williams, 2013). Interactions on social media cannot necessarily be equated with interactions had in real-life (van Dijck & Poell, 2013). Social media has fundamentally changed the way that information is disseminated (Stieglitz & Dang-Xuan, 2013). Social media has created new methods and modes for people to find like-minded others, create groups and find and share beliefs, ideas, news, interests and information (Stieglitz & Dang-Xuan, 2013).

2.3.2. Types of Social Media

Social media encompasses a great number of applications, with a number of different purposes, such as social networking, business networking, blogging and micro-blogging, photo and video sharing and many more (Whiting & Williams, 2013). When one hears the term social media, one's first thought is generally towards social networking applications

such as Facebook, image sharing applications like Instagram and micro-blogging applications such as Twitter (Allcott & Gentzkow, 2017; Whiting & Williams, 2013; Zafarani et al., 2014). However, these are not the only types of social media. Social media can also be business-oriented, with applications such as LinkedIn, where strangers, colleagues, recruiters and employers can connect or befriend one another, send messages and post their own or shared content (Zafarani et al., 2014).

There are some social media applications which can be dual-purpose. An exemplary example of this is video conferencing social media applications. Applications such as Skype, Zoom, Slack, Google Meet and Google Hangouts allow people to video or voice conference with individuals or groups (Basilaia & Kvavadze, 2020; Hanna, 2012; Janghorban et al., 2014; Lo Iacono et al., 2016). The dual-purpose nature of these applications stems from them being able to be used for both informal and formal reasons. The informal reasons are those of socialising, whereby people, especially the young, are using the applications to socialise with one another (Adams et al., 2017; Meldrum & Clark, 2014). The formal reasons come in the form of business conferencing, interviewing, online education, research and more (Basilaia & Kvavadze, 2020; Hanna, 2012; Janghorban et al., 2014; Lo Iacono et al., 2016; VanDoorn & Eklund, 2013).

Some forms of social media are purpose-built for business use – and as such have been commonly referred to as enterprise social media (ESM) (Evans et al., 2017). It is important to note that enterprise social media are not limited to internal organisational use, but can be used externally as well (Leonardi et al., 2013). Internally, ESM allow employees within organisations to connect with one another as well as their management across different departments, offices, cities and countries (Evans et al., 2017; Laitinen & Sivunen, 2021; Leonardi et al., 2013). Externally, ESM allow organisations to communicate and maintain relationships with their target markets, users, customers, suppliers and the broader public (Leonardi et al., 2013). In modern times, businesses are placing increased reliance on their employees capacity to connect, communicate and collaborate with one another in an online setting (Pinto, 2014). Social media, and in this instance ESM like Yammer and Slack, are being used to enable this capacity (Basilaia & Kvavadze, 2020; Pinto, 2014). An employee's capacity to make use of a variety of communication tools and channels is of the utmost importance, as the ability to connect with one another, management and customers is of

direct importance to long-term organisational success (Pinto, 2014). ESM sites and applications are set to transform communication within organisations (J. Cao et al., 2013). ESM differ greatly from social networks like Facebook and Twitter primarily through the fact that not all users are equal, owing to employee-manager-owner connections and communication (J. Cao et al., 2013).

The relationship between social media and knowledge management can be very positive and beneficial but is not without complications. There are challenges to social media and knowledge management, challenges which were explored in the following chapter.

2.4. KNOWLEDGE MANAGEMENT WITHIN THE CONTEXT OF SOCIAL MEDIA

2.4.1. Social Media and Organisational Value

Social media's popularity is ever-increasing amongst the customers and clients of organisations, and as a result, organisations are aiming to convert their business to incorporate and facilitate social media in order to capitalise on the value it has to offer (Luo et al., 2013). For directors, social media has the potential to enable transformation through the administration of consumer relationships, marketing resources and overall organisational processes (Luo et al., 2013). Owing to this transformation potential, and an organisation's ability to alter failing products or ventures based on consumer feedback, organisations have invested significant amounts of capital into social media (Luo et al., 2013).

Social media can be used to assist in the achieving of organisational objectives (Annabi et al., 2012). Social media mediums, such as micro-blogging, blogging, wikis, and tags can be used to manage knowledge, innovate, become more productive, manage customer relations, create, manage and store knowledge and content across organisational boundaries and aid in managerial decision making (Annabi et al., 2012).

2.4.2. Social Media and the Management of Knowledge

Social media sites and applications possess the functionalities to be top contributors to knowledge management (Annabi et al., 2012). Social media can do this through a number of affordances, such as digitally sharing of knowledge and information through professional and casual collaboration as well as supporting and supplementing communication channels by linking employees to whom they need to be connected to instantly and easily (Annabi et al., 2012; Sun et al., 2020). These affordances stem from two avenues – the employee's ability to use a technology and the capability of that technology (Sun et al., 2020). This interrelationship creates the affordance (Sun et al., 2020).

A strong method to achieve the above link is to make use of ESM. These networks have the means to encourage and enable the performance, effectiveness and efficiency of knowledge workers to novel and innovative heights (J. Cao et al., 2013; Nissen & Bergin, 2013). They allow knowledge not only to be distributed throughout an organisation but across global and organisational limitations which have halted knowledge sharing for generations (J. Cao et al., 2013).

As suggested by the above generational leap, social media presents unparalleled prospective knowledge sharing avenues (Ford et al., 2013). These avenues are not limited by organisational hierarchy, with all levels of an organisation being able to share knowledge with one another (Ford et al., 2013). As a result, social media can be used to nurture, grow and sustain employee interrelationships in novel ways which contrast to face-to-face interactions in value and extent (Hemsley et al., 2013). Social media enables the distribution of ideas, information, knowledge and concepts, do work with colleagues, generate new concepts for colleagues to use and trade knowledge, novel ideas, capital and assets (Murphy & Salomone, 2013). While these applications and sites appear to enable artificial interaction, they still allow people to share and experience knowledge from the source, as if they were face-to-face (Nissen & Bergin, 2013). As discussed earlier in this chapter, explicit knowledge and tacit knowledge are fundamental to knowledge management. Social media not only has the ability to share tacit and explicit knowledge, but it also nurtures and facilitates this sharing (Mladenović & Krajina, 2020).

2.5. CHALLENGES AND BARRIERS TO SOCIAL MEDIA AND KNOWLEDGE MANAGEMENT

As alluded to throughout this study, social media provides a lot of benefits to knowledge management. However, it would not be fair to judge its impact on knowledge management, as this study seeks to do, by only evaluating its positives and negating its negatives.

One of the primary issues with knowledge management for employees, managers and researchers alike is the fact that knowledge management makes use of resources which come with complications – namely that they are nonlinear and intangible (Bolisani & Bratianu, 2018b). The nonlinear element speaks to how it is difficult for managers to quantify the value brought by knowledge management (Bolisani & Bratianu, 2018b). The intangibility element makes it difficult for managers to know how to garner, utilise and share this knowledge, making social media difficult to use to this end (Bolisani & Bratianu, 2018b).

Critical to the successful use of social media within organisations is making use of the right one. Selecting the correct social media for an organisation is of paramount importance (Kaplan & Haenlein, 2010). There is an incredible number of social media options, and this number is only growing (Kaplan & Haenlein, 2010). Organisations cannot afford the time or the resource cost of getting involved in every type of social media, so choosing the correct one is a top priority (Kaplan & Haenlein, 2010). Another issue with knowledge management and social media is managing the growth of the amount of knowledge that is being procured (Yates & Paquette, 2011). Simply adding file upon file into your knowledge store will not make that knowledge usable and worthwhile – it is imperative that that knowledge is shaped and given the appropriate metadata to ensure its quality (Yates & Paquette, 2011). The reason for this is that knowledge needs to be precise and correct in order to have value, and knowledge which is not maintained or is haphazardly captured on social media incorrectly cannot be known to be completely accurate (Yates & Paquette, 2011). Knowledge which is shared too rapidly or without care across social media can cause an organisation to lose their control over what knowledge is coming in and going out, causing managers to think more towards the barriers to knowledge management through social media rather than the rewards (Ford et al., 2013).

Adamovic et al. (2012) performed a study where they asked employees several social media and knowledge management questions to try and learn what employees think of sharing knowledge through social media. They asked employees what social media technologies they use, what their preferred methods of communication are, how prepared and happy with sharing their knowledge they are and how much they believe social media helps with creating a knowledge-sharing ethos within an organisation (Adamovic et al., 2012). The questions, and their answers, alluded to challenges to social media and knowledge management for organisations to overcome. The results of these questions indicated that about a third of all employees preferred face-to-face interactions rather than those over social media (Adamovic et al., 2012). Despite a positive slant towards employees being happy with communicating over social media, a third of the workforce being unwilling can cause issues with social media adoption for knowledge management within organisations. Another result noted was that only a third of employees preferred to use a form of social media to ask for help when posed with a problem (Adamovic et al., 2012). If social media is to positively impact knowledge management, the knowledge generated from solving problems not being exchanged over social media presents challenges to organisations.

Väyrynen et al. (2013) found several challenges to social media enabled knowledge management – these included:

- Security concerns for both knowledge and data.
- Employee understanding of effective knowledge management.
- Concerns over personal data loss and leaks.
- Concerns over the effectiveness of social media by employees and managers.
- Concerns over knowledge management responsibility on social media.
- Concerns over possession of the correct authorisations and roles to manage knowledge.
- Concerns over the protection of knowledge.

Expanding on the above, with specific focus on an employee's willingness to share information over ESM, Laitinen & Sivunen (2021) found that there are three dimensions both promoting and restricting employee motivation to share. These were the *personal* dimension, the *technological* dimension and the *organisational* dimension (Laitinen &

Sivunen, 2021). From the personal dimension, employees held strict boundaries for what was considered to be appropriate for sharing on ESM, with their private information being withheld from ESM. Professional boundaries were also points of contention with employees not knowing if their posts could be construed as unprofessional (Laitinen & Sivunen, 2021). From the technological dimension, visibility both encouraged and inhibited sharing. Visibility was encouraging with work-related information sharing but inhibiting for personal information (Laitinen & Sivunen, 2021). Persistence was also an issue. The always-available nature of ESM, along with the ability to chat to anyone at any time, meant for information to be too informally shared and posted, causing issues with longevity, context and understanding (Laitinen & Sivunen, 2021). The final dimension, the organisational dimension, dealt with organisational issues such as organisational customs, duties and media ability (Laitinen & Sivunen, 2021). With organisational customs, employees were reluctant to post if colleagues were not posting. With organisational duties, employees indicated that they simply did not have the time to post on ESM. Finally, organisational media ability, or ability to use ESM, was a contentious issue for employees when they felt incompetent with the technologies available to them (Laitinen & Sivunen, 2021).

As can be seen, while there are several benefits to social media and its impact on knowledge management, so too are their challenges. The following section of this study discussed the theory upon which this study was based upon.

2.6. THEORETICAL FOUNDATION OF THIS STUDY

Theory is fundamental for information systems research (Gregor, 2006). This study employed the organisational knowledge creation theory (Nonaka, 1994). Nonaka first introduced the concepts of socialisation, externalisation, combination and internalisation in his seminal work paper “A Dynamic Theory of Organizational Knowledge Creation” in 1994 (Nonaka, 1994). Nonaka (1994) postulates that there are 2 dimensions or components to the knowledge creation process. The first component is the difference between tacit knowledge and explicit knowledge, which was discussed in section 2.2.2 of this study. The second component is that of ontology and sociology, specifically the degree of social interaction between people (Nonaka, 1994). Based on these components, it can be said that

knowledge creation fundamentally requires either tacit or explicit knowledge being created by people within an organisation (Nonaka, 1994).

In 2000, Nonaka created the Socialisation-Externalisation-Combination-Internalisation (SECI) model for determining how organisations are able to dynamically create knowledge (Nonaka et al., 2000). The cornerstones of the SECI model are *Socialisation, Externalisation, Combination and Internalisation* (Rice & Rice, 2005). **Socialisation** involves the adaptation of novel tacit-to-tacit knowledge through experiences with others (Lee & Kelkar, 2013). This involves the creation of shared experiences in a variety of ways, such as living or working within the same environment (Rice & Rice, 2005). **Externalisation** is centred around the conversion of tacit knowledge to explicit knowledge (Karim et al., 2012). This is done through a process whereby the tacit knowledge is collated and codified through graphics, documents, visuals, concepts, analogies and metaphors (Karim et al., 2012; Nonaka et al., 2000; Rice & Rice, 2005). Externalisation is typified by people expressing tacit knowledge, making it explicit (Richtnér et al., 2014). **Combination** involves converting an amalgamation of different explicit knowledge mediums into one intricate piece of explicit knowledge (Nonaka et al., 2000; Rice & Rice, 2005). Combination can occur through people trading explicit knowledge and creating new explicit knowledge (Karim et al., 2012). Finally, **Internalisation** encompasses the conversion of explicit knowledge to tacit knowledge (Richtnér et al., 2014). Internalisation involves a person taking the explicit knowledge they have and making it personal, tacit knowledge, by applying it to their own situations (Karim et al., 2012; Lee & Kelkar, 2013). After internalisation, the process continues on an entirely new plane, where it continues to iterate in a spiral (Gourlay, 2003).

Figure 2.6.1: SECI Knowledge Cycle (enriched from Chatti et al., 2007; Nonaka, 1994; Nonaka et al., 2000)

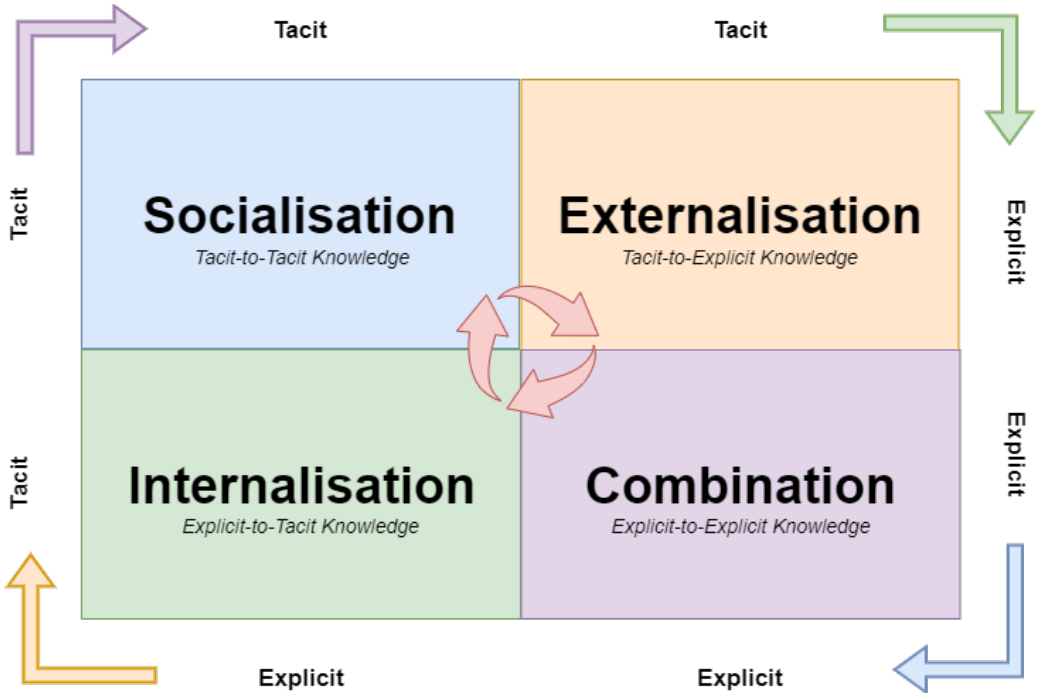


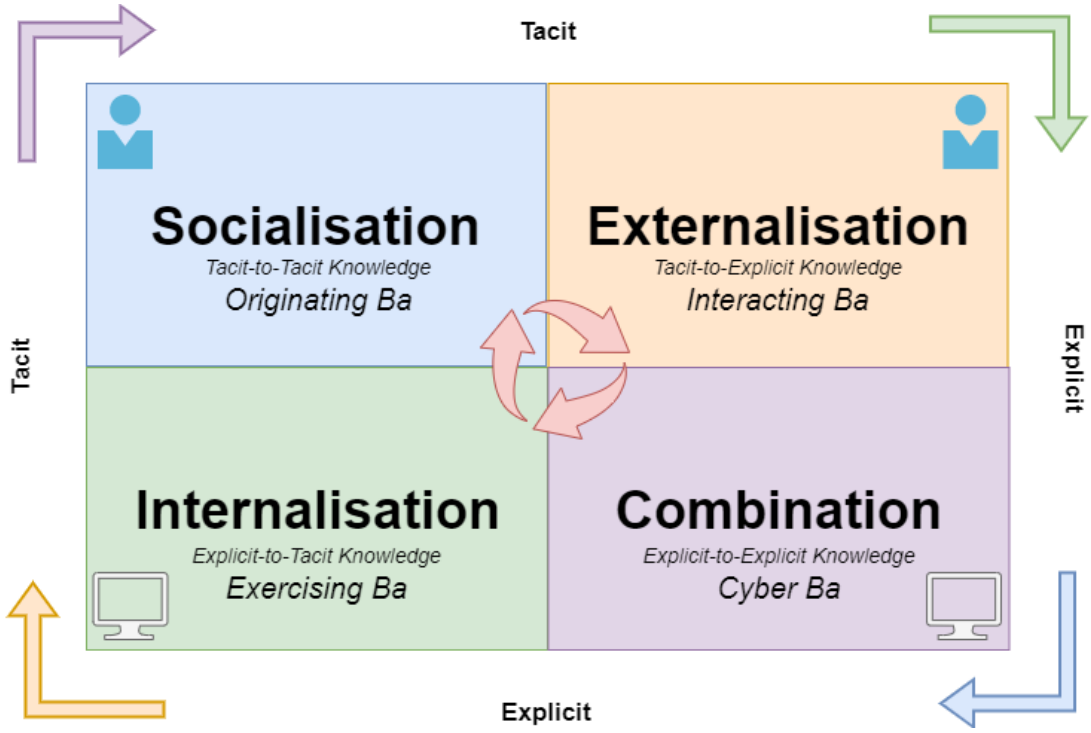
Figure 2.6.1 illustrates the continuous, cyclic nature of knowledge creation. It helped contextualise and explain the manner in which the SECI model can be used to understand how knowledge is created. The organisational knowledge creation theory and the SECI model align to both the problem as well as the research paradigm discussed later in this study, interpretivism. The problem which was investigated was centred around knowledge and the sharing thereof. The SECI model looks at sharing knowledge, either tacit or explicit, and creating either new tacit knowledge, explicit knowledge, or both (Nonaka et al., 2000). Using SECI, the researcher was able to follow the interpretivist paradigm and observe the types of knowledge being shared, and what that knowledge becomes.

Nonaka et al., (2000) also hypothesised that information can only be considered knowledge when it has an appropriate physical context. To aid in this, the word *Ba* was used to define a common context within which knowledge is created, used and distributed through interaction (Bartolacci et al., 2016; Nonaka et al., 2000). *Ba* provides a means to accommodate and sustain the knowledge creation and conversion phases of the SECI model (Bartolacci et al., 2016). There are four types of *Ba,* each possessing its own

characteristics (Nonaka et al., 2000; Nonaka & Konno, 1998). According to Bartolacci et al., (2016), Nonaka et al., (2006), Nonaka & Konno (1998) they are:

- **Originating Ba** (*Socialisation* phase): is the primary *Ba* which initiates the knowledge creation process. It involves individuals sharing their feelings, emotions and experiences. It takes place in the form of a face-to-face meeting.
- **Interacting Ba** (*Externalisation* phase): consists of peers, individuals who are there for their specific skills and abilities, sharing tacit knowledge with one another.
- **Cyber Ba** (*Combination* phase): in contrast is facilitated virtually, rather than face-to-face. People make use of technology (such as documentation and databases) to share and systematise explicit knowledge in a collaborative setting.
- **Exercising Ba** (*Internalisation* phase): is the final *Ba*. It entails individuals internalising the explicit knowledge gained through Cyber Ba and making it tacit through its use. Individuals are able to apply their knowledge through writing and simulations.

Figure 2.6.2: SECI Knowledge Cycle with Ba (enriched from (Bartolacci et al., 2016; Nonaka et al., 2006; Nonaka & Konno, 1998))



Ba categorisation adds an added layer of complexity, as Figure 2.6.2 indicates, and is a key component to the dynamic and continuous nature of the SECI model (Bartolacci et al., 2016; Nonaka et al., 2006; Nonaka & Konno, 1998). Cognisance of the Ba categories and their impact on knowledge creation is paramount to the success of organisations (Bartolacci et al., 2016; Nonaka & Konno, 1998).

The SECI model, *Ba* and the overarching theory of organisational knowledge creation aligned well to the objectives of this study and contributed to achieving these objectives. The last section of this chapter concerned providing a conclusion to this literature review.

While the organisational knowledge creation theory was employed for this study, it was not the only one considered. Weick's theory of sensemaking (Mohajan, 2017; Weick, 1995) and Wiig's knowledge management methods (Wiig, 1995) were also considered. However, it was decided that Nonaka's knowledge creation theory, discussed throughout this section, had the closest alignment with this study and the phenomenon under investigation.

2.7. CONCLUSION

This chapter, Chapter 2: Literature Review, concerned the theoretical framework which underpins this study. First, social media was defined and discussed. Social media was looked at as a concept, and a variety of types of social media were studied. Next, knowledge management was investigated, and its various forms were alluded to and conferred. The following section looked at knowledge management within the context of social media and looked at both the effects that social media has on organisations as well as the benefits and drawbacks of these effects. This chapter concluded by outlining the theory to be used in this study – the organisational knowledge management theory. The ethical clearance obtained for this study can be found in Annexure C of this document.

The following chapter, Chapter 3: Methodology, discussed the research philosophy, approach and strategy of this study, as well as discussing data collection and analysis. It will conclude with the ethical considerations being undertaken by the researcher for this study.

CHAPTER 3: METHODOLOGY

3.1. INTRODUCTION

As per the primary research question of, “What are the key characteristics of social media’s impact on knowledge management?” the purpose of this study was to determine both the type of impact that social media has had on knowledge management within organisations as well as the extent to which it has had an impact.

This chapter focused on the research methodology employed in this study. A variety of research philosophies were discussed, a research approach was defined, and a research strategy was fleshed out. A data collection method and plan were also created and expanded upon, along with data analysis being discussed in detail. The final element of this section surrounds ethics, with special reference to the ethical collection and analysis of the data contributing to this study.

The research philosophy of this study was examined in the next section of this chapter.

3.2. RESEARCH PHILOSOPHY

Research paradigms, with their own methodologies and approaches, have their foundations in a variety of different philosophies (De Villiers, 2005). The research philosophies to be discussed and selected from in this study are those of the interpretivist, positivist, pragmatist and critical research philosophies.

Interpretivist papers endeavour to make sense of phenomena by analysing the thoughts, feelings and meanings that people link to those same phenomena (Myers, 1998). Interpretivism sees the nature of reality as a societal creation, seeks to understand rather than explain, sees people’s cultural values as important and has the researcher in an active observational role (Chauhan, 2018).

In stark contrast to interpretivism, positivism believes that knowledge not backed up by science is not knowledge, that theory is used to create hypotheses to be tested, that facts

are crucial to the success of the research and that the research must be completely objective (Ryan, 2018). Positivism sees the nature of reality as objective, seeks to explain rather and understand, sees science and laws as important and not people's values and keeps the researcher completely separate from the phenomena being observed (Chauhan, 2018).
A pragmatist focuses less on the quarrelsome concepts of what is true and what is real and looks rather towards solving real-life, everyday problems (Feilzer, 2010). Pragmatism is not centred around observation but rather taking action, a delicate balance between knowledge and making an actual, physical change (Goldkhul, 2012).

Finally, the critical research paradigm is entrenched in historical realism, resulting in the perspective that reality has been moulded by culture, politics, gender and race (Scotland, 2012). Critical research involves not just researching and creating and using theories, but actually making actionable changes in the world (Zuber-Skerritt, 2001).

The title of this study is "The Impact of Social Media on Knowledge Management Within Organisations." This study was centred around determining how social media's use, for a variety of reasons, within organisations will affect that organisation. As such, the paradigm chosen for this study was that of the interpretivist. Social media intrinsically requires people. Employees sending and receiving data, information and knowledge on social media will have an impact on the knowledge itself (Vuori, 2012). This ties into interpretivism, wherein knowledge itself is considered not objective, but subjective, impacted on by the world around it and peoples' experiences of it (Ryan, 2018). The researcher collected data from the company the researcher works for, a multinational company based in almost 50 countries. Owing to this medium of data collection, the researcher followed the interpretivist approach of being involved as an observer and an interpreter, as per interpretivist standards (Clarke, 2009). The researcher made use of inductive reasoning, which is commonly associated with interpretivism, as they witnessed, tested, measured and identified patterns in data (Ryan, 2018). As postulated by Goldkhul (2012), interpretivism involves taking note of existing social realities in the world and recreating, comprehending and preserving them in order to build novel theories on the phenomenon under investigation.

The next section of this chapter discussed the research approach employed by the researcher.

3.3. RESEARCH APPROACH

Quantitative research was initially established in order to investigate the natural world (Myers & Avison, 2002). However, it has become an accepted research method for the social sciences as well, with some quantitative methods included such as factor analysis and other mathematical models, surveys, lab experiments, statistical analysis and more (Myers, 2019; Myers & Avison, 2002). Quantitative research allows a researcher to test and corroborate existing theories on how and why certain phenomena take place, take a broad view on research results which have been simulated on a number of different and gather accurate, quantitative data for quantitative forecasts (Johnson & Onwuegbuzie, 2004). In addition to this, analysing the aforementioned data is generally less time consuming than analysing qualitative data thanks to data analysis tools (Johnson & Onwuegbuzie, 2004).

Mixed methods research (MMR) is being viewed and accepted as the third major research approach, across multiple disciplines, after qualitative and quantitative research approaches (De Silva, 2011). MMR has several definitions (De Loo & Lowe, 2011; De Silva, 2011; Hanson et al., 2005; Johnson et al., 2007). Johnson et al. (2007) analysed 19 different definitions, can come up with one unitary definition which stated that MMR is the research paradigm chosen for researchers who syndicate quantitative and qualitative research approaches to data collection and analysis. MMR constitutes the collection of both qualitative and quantitative data in a solitary research paper (Hanson et al., 2005). MMR design comes in a variety of different shapes and sizes and can fall on a weak-to-strong spectrum depending on the qualitative/ quantitative research approach integration to data collection, data analysis, methodologies and findings (De Silva, 2011).

Qualitative research was created and nurtured in the social sciences, with the aim of exploring cultural and social phenomena occurring in the world (Myers & Avison, 2002). To this end, qualitative research methods are able to assist researchers in understanding people through understanding the social and cultural factors which make them who they are (Myers & Avison, 2002). Some qualitative research methods include case studies, action research, interviewing, observing, questionnaires, the analysis of existing documentation, ethnography, grounded theory and the researcher's own opinions and responses to observed behaviour (Myers, 2019; Myers & Avison, 2002). With qualitative research, a

researcher is able to study a few cases in great detail, define complicated and deep phenomena, contrast and compare different cases, provide a description for a person's personal experience of the phenomena under investigation and can define and explain phenomena in their native context (Johnson & Onwuegbuzie, 2004). Owing to all of the above factors, qualitative research was employed for this study. It served as the most-aligned research approach for the purposes of this study, as qualitative methods were well-suited to be applied in this study and as the researcher was involved with the phenomena under investigation.

The next section of this chapter discussed the research strategy which this study will utilise.

3.4. RESEARCH STRATEGY

This study contained a case study. Case studies are the most common method employed in information systems research and are strongly aligned to both interpretivism and the qualitative research method (De Villiers, 2005; Myers & Avison, 2002; Yin, 2009). A case study can be used as an empirical analysis tool which investigates phenomena within a real-world context, making it appropriate for the researcher's need to collect data from a sample (Myers & Avison, 2002; Noor, 2008). Case studies can be used for both exploratory research, whereby the researcher aims to find novelty, and explanatory research, whereby a researcher aims to test existing theories or explain phenomena (Harrison et al., 2017; Myers, 2019). A case can be described as a smaller example of a greater overall category, whereby a smaller set of observed phenomena is used to make inferences about greater phenomena (Myers, 2019). Case studies provide an overarching view of phenomena or processes and can be used to determine novel and intrinsic factors occurring within organisations (Noor, 2008). Harrison et al. (2017) found that there is an approach to performing a case study which was both qualitative and aligned to interpretivism. This approach, postulated by Robert E. Stake, took into account that case study research can involve quantitative methods, but was, in this case, strictly anchored by determining and understanding experiences and meaning within a real-world context (Harrison et al., 2017).

The researcher's subjective, interpretive role in procuring knowledge in this way is paramount and the knowledge itself is paired to the context as well as the time in which the

case study is conducted (Harrison et al., 2017). As supported by the above, the researcher collected and analysed data from an MNSE organisation based in South Africa. This is a large, well-established organisation operating across several countries around the globe, with each employee having their own distinct occupations, thoughts and opinions. They have a multinational customer base and use multiple business models depending on the service they are providing. This data was used to draw conclusions about organisations around the globe, making a case study method suited towards this study. Data collection was discussed in the next section of this chapter.

3.5. DATA COLLECTION

3.5.1. SAMPLING

3.5.1.1. Target population

The researcher interviewed people from a multi-national software engineering organisation based in several countries around the world. The company employs over 400 people across the globe. This posed a unique opportunity for the researcher. With the researcher being based in South Africa, they were able to observe people in a real-life context using the phenomena under investigation, both before and during the COVID-19 pandemic (Basilaia & Kvavadze, 2020; Fauci et al., 2020). They were able to send an online questionnaire to both the South African employees as well as those situated around the world.

3.5.1.2. Sampling method

The two sampling methods considered for this study were those of convenience and purposive sampling. The first, convenience sampling, which applied to the questionnaire, involved the researcher using a population which is easy to access, readily available and inexpensive to make use of (Elfil & Negida, 2017; Onwuegbuzie & Leech, 2007). Convenience sampling is non-random, whereby the population was chosen for ease of access, geographical limitations and the population's inclination to partake (Etikan, 2016).

Purposive sampling, which was employed with the semi-structured interviews, was a degree more deliberate than convenience sampling as it looked at the qualities, qualifications, experience and knowledge of the participants (Etikan, 2016). However, like convenience

sampling, it is also non-random and looks at participants who are available and willing (Etikan, 2016). It is aligned to this researcher's needs, as it is commonly used in qualitative research and involves the researcher determining what information needs to be determined and then finding the people who are able to provide this information as per their own knowledge and experience (Etikan, 2016; Etikan & Bala, 2017). To this end, six interview participants were selected on the basis of them being cross-domain and cross-nationality, presenting an opportunity for international insights into social media's impact on knowledge management within organisations (Onwuegbuzie & Leech, 2007).

The sample population for this study involved people with degrees in business, information technology and other higher-education qualifications which allowed them to not only understand the phenomena under investigation but also accurately articulate their knowledge and experience of the phenomena, an important requirement (Etikan, 2016).

3.5.1.3. Collection methods

This study consisted of two different data collection methods. These include an online questionnaire and semi-structured interviews.

The primary data collection method which was used in this study is that of an online questionnaire. There are two primary reasons for this. The first is that the researcher collected data from people who can be found across several different countries around the globe. The second reason is the COVID-19 virus, which created the need for many people to communicate over digital mediums, rather than face-to-face interaction (Brammer et al., 2020; Donthu & Gustafsson, 2020; Houston, 2021; Wang & Roubidoux, 2020). The online questionnaire allowed the researcher to gather information from a large number of people without needing to be in the same geographical location as them. An online questionnaire has several advantages. These advantages include the ability to reach global participants, save time and reduce costs (Wright, 2005). According to Regmi et al., (2017) in order to take advantage of the benefits of online questionnaires, there are six logical components they must possess. These components, as per Regmi et al., (2017) include:

1. a design which is welcoming and usable for participants.
2. selecting relevant participants.
3. guarding against several responses from the same source.

4. effective, efficient and responsible data management.
5. taking into account ethical considerations, such as
    a. the participant's consent,
    b. the participant's confidentiality and,
    c. the participant's right to not take part or retract their answers.
6. piloting the questionnaire with peers before distributing it to participants.

This study, and the online questionnaire used within it, possessed all six of these components. The pilot, or pre-test, for the online questionnaire created by the researcher, included sending the questionnaire to friends and academic peers for review. Pre-testing the questionnaire allowed the researcher to certify the appropriateness of the questionnaire, ensure the questions are logical and numbered properly, ensure that the questions are thorough without being overbearing and ensure that the data can be collected without technological interruptions (Regmi et al., 2017). The pre-test participants for this study, who were noted down, ensured that all of the above factors were considered during their testing.

When considering interviewing participants, there are three primary interview styles to contemplate – namely a structured interview, a semi-structured interview and finally an unstructured interview (Myers, 2019). A structured interview involves the researcher asking pre-determined questions in a specific and controlled order, within a specific time (Myers, 2019). A semi-structured interview, however, also has pre-determined questions, but following these questions to the word is not necessarily required, resulting in the potential emergence of new questions (Myers, 2019). Lastly, an unstructured interview has little to no pre-determined questions, resulting in the interviewer being able to direct the interview as they see fit (Myers, 2019). The style preferred by the researcher for this study is that of the semi-structured interview. It allowed the researcher to both prepare questions as well as deviate from them if the need arose. This style allowed the researcher some consistency across their interviews, while also allowing for improvisation in order to garner potentially novel information which may have been otherwise missed.

The following section of this chapter discussed data analysis.

3.6. DATA ANALYSIS

The purpose of data analysis in this research study was to identify characteristics and themes within data through qualitative techniques. Therefore, this study made use of analytical techniques such as content analysis and axial coding. Content analysis was used to assign the content derived from articles, papers, interviews, questionnaires and other sources into comprehensively thought out groupings (Myers, 2019). This allowed the researcher to identify patterns and formulate interpretations from these patterns (Myers, 2019). The researcher developed the aforementioned groupings from words and word sets derived from the data sources. The content analysis allowed the researcher to quantify qualitative data in a way which is readable, understandable and usable (Myers, 2019).

Axial coding was used to take existing or created groupings and give them a new level of complexity (Gorra & Kornilaki, 2010; Moghaddam, 2006). It allowed the researcher to examine elements from all sources of data by linking groups to subgroups according to the properties as well as dimensions which they possess (Gorra & Kornilaki, 2010). Throughout the axial coding process, there are four analytical processes taking place (Moghaddam, 2006). According to Moghaddam (2006), these include:

1. Regularly linking sub-groups to an over-arching group;
2. Linking groups with the data which is being collected;
3. Elaborating on the complexity of the groups by noting their properties as well as their dimensions and;
4. Discovering similarities and dissimilarities in the topic being investigated.

Both content analysis and axial coding were employed across the questionnaire analysis as well as the semi-structured interview analysis.

3.7. RELIABILITY AND VALIDITY

Reliability concerns research results maintaining consistency over a given time period (Golafshani, 2003). A questionnaire can be considered reliable if the study results will remain mostly unchanged if there is a methodology alteration (Golafshani, 2003). Validity builds upon reliability in that it seeks to ensure that the research genuinely determines what it

sought to determine with truthfulness being paramount (Golafshani, 2003). Reliability and validity were considered throughout the course of this study, with the online questionnaire and semi-structured interviews created and conducted with these tenants in mind.

3.8. ETHICS

Ethics concerns the guidelines which must be followed when researchers have people participating in their study. Having an ethical study means having a study which offers participants the opportunity to provide informed consent, the opportunity to learn about what the information they provide will be used for, the opportunity to leave the study at any time, access to the research paper's findings and finally the privacy and protection of confidential information of participants (Etherington, 2007). Ethical research is not considered at the beginning of a paper and then forgotten about, it is a continuous process which is ongoing throughout the duration of the research and the writing of the research paper (Wester, 2011).

For this study, all of the above ethical considerations were taken into account and adhered to. The semi-structured interviews were conducted in an ethical manner and the online questionnaire was created and distributed with ethical guidelines in mind. For both the interviewees as well as the questionnaire respondents, privacy and confidentiality were paramount. No unique identifiers were recorded, such as names, passport numbers or identification numbers. Only relevant questions were asked, which contributed to the information sought after by the researcher. All forms of ethical clearance were requested and obtained in line with the departmental requirements of the University of Pretoria. The study, as well as the interview and research questions and answers, were stored on a password-protected local machine and on a password-protected account on the cloud.

The following, and final, chapter of this study concluded this chapter and discussed briefly the concepts alluded to throughout.

3.9. CONCLUSION

This chapter, Chapter 3: Research Methodology, centred around the methodologies employed for this study. First, a research philosophy was discussed in detail, with the

philosophy of interpretivism being decided as the philosophy of choice for this study. Next, a research approach was considered, taking into account the qualitative, quantitative and mixed-methods research strategies. Ultimately, the qualitative approach was chosen as the approach best suited to this study. As for the research strategy, this study included a case study, which aligned well with the researcher's subjective and interpretive role in the research itself.

Data collection for this study was sourced from a target population from a multi-national software engineering company, where purposive sampling was employed. As for collecting the data itself, the researcher conducted semi-structured interviews as well as created and distributed an online questionnaire. There is also a literature review, which is alluded to in this chapter and can be found in detail in Chapter 2: Literature Review. Data analysis for this study came in the form of context analysis and axial coding. Reliability and validity were then discussed. Finally, and with great import, ethics were covered in this chapter. The researcher was and will continue to be dedicated to the ethical requirements and guidelines associated with this study's undertaking.

The following chapter, Chapter 4: Data Analysis, was used to analyse the data which has been collected, compiled and identified throughout the course of this study.

CHAPTER 4: DATA ANALYSIS

4.1. INTRODUCTION

The study aimed to determine the nature and magnitude of the impact that social media has had on knowledge management within organisations. To achieve this aim, the primary research question of, “What are the key characteristics of social media’s impact on knowledge management?” was stated, along with the sub research questions of “Is organisational knowledge management understood and employed by employees?”, “Is social media collaboration influencing knowledge management?” and “What are the challenges and barriers associated with social media and knowledge management?”

To answer these questions, data was collected in two ways. The first and second data collection methods were the ethical collection of data from consenting participants in both an online questionnaire as well as semi-structured interviews.

This chapter pertained to the analysis of this data, along with the findings which stem from said analysis. The techniques employed to harness the data include the qualitative analysis techniques of content analysis and axial coding. The following section of this chapter will outline the demographical information of the participants who took part in the online questionnaire.

4.2. DEMOGRAPHIC INFORMATION

On the 17th of May 2021, the online questionnaire was emailed to MNSE company employees across the globe. On the 10th of August 2021, a second email was sent out, thanking all who took part and including a link to the questionnaire for those who had not had a chance. In total, 70 submissions from MNSE employees were received.

Table 4.2.1 shows the job titles or fields held by the respondents. 30.00% of respondents were Software Engineers, 22.86% were Consultants, 10.00% were Quality Assurance Engineers, 4.29% were Specialists, Support, Documentation and Sales and Project

Managers made up 2.85% each. The remaining positions were held by individuals, comprising of 1.43% each, which can be seen in Table 4.2.1:

Table 4.2.1: Job Title/ Job Field

Job title/ field	Number of respondents	Percentage of respondents (%)
Software Engineer	21	30.00
Consultant	16	22.86
Quality Assurance Engineer	7	10.00
Specialist	3	4.29
Support	2	2.85
Documentation	2	2.85
Sales	2	2.85
Project Manager	2	2.85
Product Owner	1	1.43
Business Analyst	1	1.43
Marketing	1	1.43
Chief R&D Officer	1	1.43
Chief Technology Officer	1	1.43
Line Managing Consultant	1	1.43
Team Lead	1	1.43
Junior Service Consultant	1	1.43
Quality Assurance Specialist	1	1.43
E-Learning and Instructional Designer	1	1.43
Data Analyst	1	1.43
Operations	1	1.43
Instructional designer	1	1.43
Accountant	1	1.43
Functional analyst and ABAP Developer	1	1.43

Table 4.2.2 provides a breakdown of the managerial level held by each respondent, namely Executive Management, Management and General staff. 72.86% of respondents were at the General staff level, 20.00% of the respondents were on the Management level and the remaining 7.14% were on the Executive Management level.

Table 4.2.2: Managerial Level

Managerial Level	Number of respondents	Percentage of respondents (%)
General staff	51	72.86
Management	14	20
Executive Management	5	7.14

Table 4.2.3 illustrates the number of years' experience that the respondent had at an MNSE company. Most respondents have worked at the company for 3-5 years at 34.28%, followed by 22.86% having been there for 1-2 years, then 17.14% having been there for 6-10 years, 14.29 for 11-15 and finally 11.43% having been there for over 15 years.

Table 4.2.3: Number of Years' Experience at their Organisation

Number of Years' Experience at their Organisation	Number of respondents	Percentage of respondents (%)
3-5	24	34.28
1-2	16	22.86
6-10	12	17.14
11-15	10	14.29
Over 15 years	8	11.43

While this section discussed respondent demographics, the following section details the remainder of the questions asked of the questionnaire participants.

4.3. QUESTIONNAIRE ANALYSIS

The participants of the online questionnaire were asked 30 questions. Three related to demographic information, while the remaining 27 involved questions surrounding the subject matter being investigated.

Table 4.3.1 shows the number of years' experience the respondents had using social media applications designed for business use. Most participants had 3-5 years' experience at 35.71%. 27.14% had 6-10 years' experience, 18.57% had 11-15 years' experience, 12.86% had over 15 years' experience and finally, only 5.71% had only 1-2 years' experience using social media applications designed for business use.

Table 4.3.1: Number of Years' Experience using Social Media Applications designed for Business use

Number of Years' Experience using Social Media Applications designed for Business use	Number of respondents	Percentage of respondents (%)
3-5	25	35.71
6-10	19	27.14
11-15	13	18.57
Over 15 years	9	12.86
1-2	4	5.71

Table 4.3.2, conversely, shows the number of years' experience the respondents had using social media applications designed for personal use. Unlike Table 4.3.1, most participants had 11-15 years' experience at 38.57%. 32.86% had 6-10 years' experience, 24.29% had over 15 years' experience, only 2.86% had 3-5 years' experience and only one person had 1-2 years' experience using social media applications designed for personal use at 1.43%.

Table 4.3.2: Number of Years' Experience using Social Media Applications designed for Personal use

Number of Years' Experience using Social Media Applications designed for Personal use	Number of respondents	Percentage of respondents (%)
11-15	27	38.57
6-10	23	32.86
Over 15 years	17	24.29
3-5	2	2.86
1-2	1	1.43

Table 4.3.3 illustrates the social media platforms selected for written communication in virtual teams. As a multiple-choice question, there were a number of possible options for the respondent to select. The most used social media application for written communication within virtual teams was Microsoft Teams at 82.86% of respondents. Close behind it was Slack at 75.71%. The next most used were Skype at 48.57%, WhatsApp at 35.71% and Google Hangouts Chat at 31.53%. Email was only selected 5.71%, Signal 4.29% and finally, Telegram and WebEx were the least used at 1.43%.

Table 4.3.3: Social Media Platforms used for Written Communication in Virtual Teams

Social Media Platforms used for Written Communication in Virtual Teams	Number of respondents	Percentage of respondents (%)
Microsoft Teams	58	82.86
Slack	53	75.71
Skype	34	48.57
WhatsApp	25	35.71
Google Hangouts Chat	22	31.53
Email	4	5.71
Signal	3	4.29
Telegram	1	1.43
WebEx	1	1.43
Note: Respondents could select multiple options, so the percentages column will not add up to 100%, but rather indicate the percentage of respondents who employed the indicated platform.		

Table 4.3.4, similarly, illustrates the social media platforms used for oratory and visual communication in virtual teams. As this was also a multiple-choice question, there were again a number of possible options for the respondent to select. The most used social media application for oratory and visual communication within virtual teams was Microsoft Teams at 94.29% of respondents. Slightly further behind it was Slack at 67.14%. The next most used were Google Meet at 52.86%, GoToMeeting at 50.00% and Skype at 44.29%. Google Hangouts was selected by 14.29% and WhatsApp was selected by 12.86%. Google Drive, Google Slides, Email, Zoom and Discord were each only selected once, at 1.43% each.

Table 4.3.4: Social Media Platforms used for Oratory and Visual Communication in Virtual Teams

Social Media Platforms used for Oratory and Visual Communication in Virtual Teams	Number of respondents	Percentage of respondents (%)
Microsoft Teams	66	94.29
Slack	47	67.14
Google Meet	37	52.86

Social Media Platforms used for Oratory and Visual Communication in Virtual Teams	Number of respondents	Percentage of respondents (%)
GoToMeeting	35	50.00
Skype	31	44.29
Google Hangouts	10	14.29
WhatsApp	9	12.86
Google Drive	1	1.43
Google Slides	1	1.43
Email	1	1.43
Zoom	1	1.43
Discord	1	1.43
Note: Respondents could select multiple options, so the percentages column will not add up to 100%, but rather indicate the percentage of respondents who employed the indicated platform.		

Table 4.3.5 expanded on Table 4.3.3 by illustrating the respondents' preferred social media platform for written communication. The resounding favourite, at 52.86%, was Slack. The next most preferred were Microsoft Teams at 21.43% and Email at 15.71%. Skype was selected by 5.71% and WhatsApp, Microsoft SharePoint and Face-to-Face were selected by only 1.43% of respondents each.

Table 4.3.5: Preferred Social Media Platform for Written Communication

Preferred Social Media Platform for Written Communication	Number of respondents	Percentage of respondents (%)
Slack	37	52.86
Microsoft Teams	15	21.43
Email	11	15.71
Skype	4	5.71
WhatsApp	1	1.43
Microsoft SharePoint	1	1.43
Face-to-Face	1	1.43

Table 4.3.6 consists of the emerging themes identified for why the respondents preferred the selected social media platform above all others. The number one differentiating factor was that of the *functionality and features* offered by the preferred social media platform, with a frequency count of 38. *Ease of use* and *convenience* also had considerable frequencies at 23 and 22 respectively. *Quality* was also important, at 11, while the *design* of the application and the respondent's *experience with the application* shared a frequency of 10 each.

Table 4.3.6: Emerging Themes for Preferred Social Media Platform for Written Communication

Emerging Themes for Preferred Social Media Platform for Written Communication	Frequency
Functionality and Features Searching, Archiving, Message Grouping, Integration, Recording, Screensharing, Collaboration, File sharing, Adapted for Code, Mobile app, Organisational ability, Multiple OS Support	38
Ease of Use	23
Convenience Immediacy, Common use, Customer Communication, Company Allocated	22
Quality Trust, Works well, Comfort, Reliability, Security	11
Design Interface, Simplicity	10
Experience with Application	10

Table 4.3.7 elaborated on Table 4.3.4 by demonstrating the respondents' preferred social media platform for oratory and visual communication. There was again a clear favourite, in the form of Microsoft Teams, at 52.86%. Slack was next, at 15.71%, with Google Meet and GoToMeeting following behind with 12.86% and 11.43% respectively. Skype was next at 4.29% and last were "*Face-to-Face"* and "*The App that works for most participants*" which were selected by only 1.43% of respondents each.

Table 4.3.7: Preferred Social Media Platform for Oratory and Visual Communication

Preferred Social Media Platform for Oratory and Visual Communication	Number of respondents	Percentage of respondents (%)
Microsoft Teams	37	52.86
Slack	11	15.71
Google Meet	9	12.86
GoToMeeting	8	11.43
Skype	3	4.29
Face-to-Face	1	1.43
The App that works for most participants	1	1.43

Table 4.3.8 pertains to the emerging themes discovered regarding why the respondents preferred the selected social media platform for oratory and visual communication. Much like the preferred social media platform for written communication, the theme with the highest frequency count was that of *functionality and features*, with a frequency of 36. The next most frequently identified themes were those of *quality* at 17 and *convenience* at 15. *Ease of use* and *design* were equally frequent at 14 each, while *experience with the application* had a frequency of 8. At a frequency of one, the last was that there was *no reason* that the application was preferred.

Table 4.3.8: Emerging Themes for Preferred Social Media Platform for Oratory and Visual Communication

Emerging Themes for Preferred Social Media Platform for Oratory and Visual Communication	Frequency
Functionality and Features Integration, Recording, Screensharing, Collaboration, File sharing, Archiving, Mobile app	36
Quality Audio and Visual, Works well, Stability	17
Convenience Opportunity, Company use, Customer use	15

Emerging Themes for Preferred Social Media Platform for Oratory and Visual Communication	Frequency
Ease of Use	14
Design Interface, Simplicity	14
Experience with Application	8
No reason	1

Table 4.3.9 exhibits the emerging themes for the respondent's understanding of knowledge management. The most occurring theme was that of *management*, with a frequency of 28. It was closely followed by the theme of *sharing*, which had a frequency of 26. The theme of *creation* had a frequency of 24, while *storing* had a frequency of 21. The themes of *organisation* and *accessibility* were identified evenly at 20 each. *Maintenance* and *application* were the least frequently occurring themes, with 17 and 11 counts respectively.

Table 4.3.9: Emerging Themes for Knowledge Management Understanding

Emerging Themes for Knowledge Management Understanding	Frequency
Management Employees, Knowledge, Experience, Collective knowledge, Communication, Application, Support, Guide, Information, Policy, Flow, Training	28
Sharing Distribution, Teams	26
Creation Collection, Capturing, Locating	24
Storing Location, Centralisation, Preservation, Indexing, Classification	21
Accessibility Availability, Ease, Platform, Access Control, Knowledge Managers, Internal, External	20
Organisation Structure, Development, Resources, Documents, Methodology	20

Emerging Themes for Knowledge Management Understanding	Frequency
Maintenance Validation, Change Tracking, Updates, Security, Relevance	17
Application	11

Table 4.3.10 illustrates the frequency of themes identified for the respondents' understanding of knowledge sharing. The theme with the highest frequency was that of *sharing*. *Accessibility* and *exchange* were the next most identified, with frequencies of 21 and 20 respectively. The themes of *platform* and *benefit* arose the next most often, with frequencies of 15 each. *Effectiveness* was next, with a frequency of 10, while the two lowest frequency themes were those of *other knowledge management* and *existing knowledge*, with frequencies of 7 and 4 respectively.

Table 4.3.10: Emerging Themes for Knowledge Sharing Understanding

Emerging Themes for Knowledge Sharing Understanding	Frequency
Sharing People, Teams, Environments, Distribution, Transfer, Special Issues, Experience, Specific Subject	47
Accessibility Access, Contactless, Organisational, Learning	21
Exchange People, Teams, Discussion, Internal, External, Skills	20
Platform Means, Links, Authorisations, Types, Methods, Manner	15
Benefit Organisation, People, Teams, Customer, Growth, Objectives, Experience	15
Effectiveness Helping People, Saving Time, Productive, Usefulness	10
Other Knowledge Management Storing, Capturing, Consuming, Generation	7
Existing Knowledge	4

Table 4.3.11 pertains to the themes which emerged when analysing the respondents' understanding of knowledge generation. The overarching theme was that of *creation*, with a frequency of 41. The next highest occurring theme was that of *new knowledge*, with a frequency of 33. The themes of *specific* and *useful* were next, each having a frequency of 16. With a frequency of 4, the penultimate lowest frequency came from the theme of *misconception*, where respondents misunderstood knowledge generation to be the age-generation which created the knowledge. Finally, one respondent indicated that they did not know, resulting in *unknown* having a frequency of 1.

Table 4.3.11: Emerging Themes for Knowledge Generation Understanding

Emerging Themes for Knowledge Generation Understanding	**Frequency**
Creation Platforms, Ideation, Production, Formats, Creativity, Generation	41
New Knowledge Acquiring, Capturing, Experiences, Research, Training, Problem Solving, Sharing, Documenting, Expansion, Collaboration, Learning	33
Specific Subject, Process, Purpose, Scenario, Phases, Platform, Tools	16
Useful Use, Transfer, Application, Goals, Storage, Access	16
Misconception Age generation	4
Unknown	1

Table 4.3.12 indicates the themes identified when analysing the respondents' understanding of knowledge application. *Applying knowledge* had the highest frequency count, with 58. The theme of *existing knowledge* was also prevalent, with a frequency of 23. The themes of *process, specific* and *opportunity* were similarly occurring, with frequencies of 18, 14 and 12 respectively. Finally, there was 1 frequency count for the theme *unknown*.

Table 4.3.12: Emerging Themes for Knowledge Application Understanding

Emerging Themes for Knowledge Application Understanding	Frequency
Applying Knowledge Use, Application, Goals, Consistent	58
Existing Knowledge Shared, Employees, Generated, Known, Experience	23
Process Design-making, Explanation, Problem solving	18
Specific Situations, Goals, Tasks, Platform	14
Opportunity Gain, Generate, Enablement, Solution, Access	12
Unknown	1

Table 4.3.13 illustrates the emerging themes for the respondents' understanding of knowledge storage. The most commonly occurring theme was that of *storage*, with a frequency of 64. *Formal* was the next most occurring theme, with a frequency of 40. *Access* was another strong theme, with a frequency of 30. *Platform* had a frequency of 22 and *informal* was identified with a frequency of 14.

Table 4.3.13: Emerging Themes for Knowledge Storage Understanding

Emerging Themes for Knowledge Storage Understanding	Frequency
Storage Where, How, Physical, Retention, Archiving, Cloud	64
Formal Physical memory, Preservation, Documentation, Repositories, Safe, Regulated, Policies, Curation, Codifying, Structured, Organised	40
Access Availability, Future, Searching, Software	32
Platform Software, Searching, Sorting, Central, Sharable, Access control, Generation	22

Emerging Themes for Knowledge Storage Understanding	Frequency
Informal Ideals, Beliefs, Individuals, Memorising, Personal notes, Emails	14

Table 4.3.14 exhibits the themes identified when analysing the respondents' beliefs for what would constitute a positive social media impact on knowledge management. *Access to knowledge* had the highest frequency, with a count of 30. *Sharing knowledge* and *platform* were the next highest, with frequencies of 25 and 24 respectively. The themes of *value*, *verified* and *acquired knowledge* were similarly occurring, with frequencies of 17, 14 and 13 respectively. Finally, *unknown* was last with a frequency of 5.

Table 4.3.14: Emerging Themes for Positive Social Media Impact on Knowledge Management

Emerging Themes for Positive Social Media Impact on Knowledge Management	Frequency
Access to Knowledge Repository, Ease, Visualisation, User-friendly, Exposure, Community, Real-time, FAQ	30
Sharing Knowledge Team, Customers, Removing barriers, Regular meetings, Global, Ease	25
Platform Application, Integration, Improved search, Storage, Consolidation, Tools, Frictionless, Business, Personal, Questions, Intranet, Portal, Tagging, APIs	24
Value Content, Specific, Problem Solving, Relationships, Stability, Efficiency, Relevance, Useful, Convenience	17
Verified Verified, Security, Guidelines, Credible	14
Acquiring Knowledge Flow of ideas, Brainstorming tools	13
Unknown None, No idea	5

Table 4.3.15, illustrates the social media applications which the respondents' believed had a positive impact on knowledge management. As this was a multiple-choice question, there were a variety of possible selection options for the respondents to select. The social media application with the highest believed positive impact on knowledge management was Microsoft Teams, with a percentage of 77.14%. It was followed closely by Slack, which received 74.29% of responses. With less than half of that, Google Meet had the third-highest percentage of 34.29%. Skype was next with a percentage of 25.71%. The following two were GoToMeeting, WhatsApp and Google Hangouts with percentages of 17.14%, 12.86% and 10.00% respectively. A platform internal to the organisation under investigation was selected as 4.29% of the responses. Google Drive, Microsoft SharePoint and *no application* had 2.86% each. Finally, LinkedIn, Trello, GitLab, Gmail, Zoom, Azure DevOps and the Microsoft Stream (referring to the Microsoft Suite) each made up 1.43% of the respondents.

Table 4.3.15: Social Media Applications with a Positive Impact

Social Media Applications with a Positive Impact	Number of responses	Percentage of responses (%)
Microsoft Teams	54	77.14
Slack	52	74.29
Google Meet	24	34.29
Skype	18	25.71
GoToMeeting	12	17.14
WhatsApp	9	12.86
Google Hangouts	7	10.00
Internal platform	3	4.29
Google Drive	2	2.86
Microsoft SharePoint	2	2.86
None	2	2.86
LinkedIn	1	1.43
Trello	1	1.43
GitLab	1	1.43
Gmail	1	1.43

Social Media Applications with a Positive Impact	Number of responses	Percentage of responses (%)
Zoom	1	1.43
Microsoft Stream	1	1.43
Azure DevOps	1	1.43
Note: Respondents could select multiple options, so the percentages column will not add up to 100%, but rather indicate the percentage of respondents who believed there was a positive impact.		

Table 4.3.16 exhibits the themes identified for why respondents believed that the selected social media application in Table 4.3.15 had a positive impact on knowledge management. *Functionality* emerged as the most predominant theme, with a frequency of 30. *Ability to share* was the next highest, with a frequency of 24. *Improved communication* came next, occurring 20 times. *Access to knowledge* and *use* were next, each having a frequency of 19. Finally, the theme of *not applicable* occurred only once.

Table 4.3.16: Emerging Themes for Social Media Applications with a Positive Impact

Emerging Themes for Social Media Applications with a Positive Impact	Frequency
Functionality Audio, Visual, Categorisation, Ease, Pinning, Storage, Recording, Channels, Generation, Integration	30
Ability to Share Content, Ease, Experience, People	24
Improved Communication Teams, Requirements, Regions, Collaboration, Experience, Centralised	20
Access to Knowledge Experts, Global, Ease	19
Use Company, Customer, Training, Professional	19
Not applicable	1

Table 4.3.17 illustrates the positivity level which the respondents believed social media applications had on knowledge management, sharing, generation, application and storage.

Knowledge sharing had the highest positivity, with 50.00% believing it had the highest possible positive impact. 45.72% of respondents believed that knowledge management had the second-highest possible positivity level. Knowledge generation was seen to have a medium positive impact, with 37.14% of respondents indicating the middle option to be the most appropriate. Knowledge application was similar, with 44.28% of the responses falling for the middle option. Finally, knowledge storage had the highest number of the least positive impact, which was none, at 10.00% of the responses.

Table 4.3.17: Social Media Application Positivity Level

Social Media Application Positivity Level	1 (None)		2		3		4		5 (Highest Possible)	
	#	%	#	%	#	%	#	%	#	%
Knowledge Management	4	5.71	11	15.71	18	25.72	32	45.72	5	7.14
Knowledge Sharing	0	0	1	1.43	7	10	27	38.57	35	50
Knowledge Generation	5	7.14	12	17.14	26	37.14	18	25.72	9	12.86
Knowledge Application	3	4.29	10	14.29	31	44.28	21	30	5	7.14
Knowledge Storage	7	10	11	15.71	23	32.86	22	31.43	7	10

Table 4.3.18 indicates where a particular social media application was ranked in terms of its positive impact on knowledge management. Slack ranked first, with 42.86% of participants having chosen it as the number one application. Microsoft Teams was given the top spot the next most times, with a 24.29% of respondents believing it has the greatest positive impact. On the other end of the spectrum, WhatsApp was seen to have the same percentage, 24.29%, but as the lowest possible positive impact. It was only followed by Google Duo, with 41.44% of respondents believing it had the least positive impact on knowledge management.

Table 4.3.18: Social Media Application Positive Impact Ranking

Social Media Application Positive Impact Ranking	1 (High)		2		3		4		5		6		7		8 (Low)	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Slack	30	42.86	11	15.71	4	5.71	3	4.29	2	2.86	4	5.71	7	10	9	12.86
Microsoft Teams	17	24.29	23	32.86	8	11.43	0	0	1	1.43	1	1.43	9	12.86	11	15.71
Skype	9	12.86	7	10	13	18.57	13	18.57	10	14.29	10	14.29	6	8.57	2	2.85
Google Hangouts	1	1.43	5	7.14	10	14.29	12	17.14	15	21.43	19	27.14	7	10	1	1.43
Google Meet	1	1.43	7	10	15	21.43	15	21.43	18	25.71	11	15.71	3	4.29	0	0
GoToMeeting	0	0	5	7.14	12	17.14	16	22.86	18	25.71	15	21.43	3	4.29	1	1.43
Google Duo	5	7.14	9	12.86	2	2.86	2	2.86	2	2.86	2	2.86	19	27.15	29	41.44
WhatsApp	7	10	3	4.29	6	8.57	9	12.86	4	5.71	8	11.43	16	22.87	17	24.29

Table 4.3.19 exhibits the emerging themes which were identified when analysing why certain social media applications were ranked above the alternatives. There were two clear themes, those of *features* and *use*, which had frequencies of 39 and 38 respectively. *Ease of use* was next, with a frequency of 11. Finally, the least identified theme was that of *quality*, which had a frequency of 9.

Table 4.3.19: Emerging Themes for Social Media Application Positive Impact Ranking

Emerging Themes for Social Media Application Positive Impact Ranking	Frequency
Features Sharing, Recording, Archiving, Aligned to Knowledge Generation, Channels, Threads	39
Use Most used, Company use, Customer use, Experience, Convenience	38
Ease of Use	11
Quality Works well, Audio and Visual, User-friendliness	9

Table 4.3.20 illustrates the social media applications which the respondents believed had a negative impact on knowledge management. WhatsApp was believed to have the most

negative impact, with 35.71% of the respondents believing that it had a negative impact. Google Hangouts was next, with 15.71%. It was followed closely by Google Duo, with 14.29%. Slack had a percentage of 0%, with not one respondent believing it to have a negative impact. Else, 40.00% of the respondents believed that none of the applications had a negative impact on knowledge management.

Table 4.3.20: Social Media Applications with a Negative Impact

Social Media Applications with a Negative Impact	Number of respondents	Percentage of respondents (%)
None	28	40
WhatsApp	25	35.71
Google Hangouts	11	15.71
Google Duo	10	14.29
Skype	7	10
Microsoft Teams	5	7,14
Google Meet	4	5.71
GoToMeeting	3	4.29
Other	3	4
Applications which are not 'standard' within the company	1	1.43
Do not know all media types	1	1.43
All of them depending on connection issues	1	1.43
Slack	0	0

Table 4.3.21 exhibits the emerging themes for why certain social media applications had a negative impact on knowledge management. The most occurring theme was that of *non-corporate*, which had a frequency of 24. It was followed by *none*, which had a frequency of 18. *Missing features, lack of quality* and *cycling through platforms* each had a frequency count of 18. *Lack of use* and *missing regulations* were last, with frequencies of 8 and 5 respectively.

Table 4.3.21: Emerging Themes for Social Media Applications with a Negative Impact

Emerging Themes for Social Media Applications with a Negative Impact	Frequency
Non-Corporate Company Policy, Personal use only, Distractions, Knowledge rights, Lack of Access, Lack of Training, Client boundaries, Purpose	24
None None, N/A, Human-error	18
Missing Features	12
Lack of Quality	12
Cycling through Platforms Changed too often, Many in use, Lost Knowledge, Scattered Knowledge	12
Lack of Use	8
Missing Regulations No regulations, No Privacy considerations, Facebook ownership	5

Table 4.3.22 shows the negativity level which the respondents believed social media applications had on knowledge management, sharing, generation, application and storage. Knowledge storage, generation and management had the highest possible negativity levels, with 15.71%, 14.29% and 12.86% respectively. However, for knowledge management and knowledge sharing, 48.57% of respondents believed that there was no negative impact. For knowledge generation, 42.86% of respondents believed that there was no negative impact. For knowledge application and knowledge storage, 45.71% of respondents believed that they had no negative impact from social media applications.

Table 4.3.22: Social Media Application Negativity Level

Social Media Application Negativity Level	1 (None)		2		3		4		5 (Highest Possible)	
	#	%	#	%	#	%	#	%	#	%
Knowledge Management	34	48,57	11	15,71	8	11,43	8	11,43	9	12,86

Social Media Application Negativity Level	1 (None)		2		3		4		5 (Highest Possible)	
	#	%	#	%	#	%	#	%	#	%
Knowledge Sharing	34	48,57	9	12,86	14	20	6	8,57	7	10
Knowledge Generation	30	42,86	8	11,43	12	17,13	10	14,29	10	14,29
Knowledge Application	32	45,71	13	18,57	10	14,29	8	11,43	7	10
Knowledge Storage	32	45,71	15	21,43	8	11,43	4	5,72	11	15,71

Table 4.3.23 indicates the percentage of respondents who believed that their organisation would benefit from an increase in knowledge management practices, enabled through social media platforms. 38.57%, the highest number, believed that their organisation would have the highest possible benefit from an increase in knowledge management practices enabled through social media applications. 35.71% believed they would have the next highest benefit and 18.57 chose the middle option. Only 5.71% selected the second-lowest option and only 1.43% chose the lowest possible benefit.

Table 4.3.23: Benefit of increased Knowledge Management through Social Media

Benefit of increased Knowledge Management through Social Media (1 – 5, 5 being the highest benefit)	Number of respondents	Percentage of respondents (%)
5	27	38.57
4	25	35.71
3	13	18.57
2	4	5,71
1	1	1.43

Table 4.3.24 exhibits the emerging themes identified for the benefit of increased knowledge management through social media. *Enablement* was the predominant theme, with a frequency of 36. The next highest was that of *increased access*, with 15. *Improved technology* was next, with 9. *Unknown, people over platform* and *team communication* were last, with frequency counts of 8, 7 and 5 respectively.

Table 4.3.24: Emerging Themes for the Benefit of increased Knowledge Management through Social Media

Emerging Themes for the Benefit of increased Knowledge Management through Social Media	**Frequency**
Enablement Long term storage, Digitising, Growth, Wiki Structure, Formalising, Job Effectiveness, Management, Training	36
Increased Access Knowledge, Intra-regional, Experts, Dissemination, Sharing, Knowledge Training, Central Repository	15
Improved Technology	9
Unknown Hard to say, Already in use, Impersonal, Currently sufficient	8
People over Platform Use is important, Excess	7
Team Communication	5

Table 4.3.25 illustrates the emerging themes for the challenges or barriers to knowledge management through social media. *Access to knowledge* was the number one theme, with a frequency of 36. The next highest was that of *lack of authenticity*, with a frequency of 29. *User resistance* was next, with a frequency count of 22. *None* was last, with a frequency of only 1.

Table 4.3.25: Emerging Themes for the Challenges or Barriers to Knowledge Management Through Social Media

Emerging Themes for the Challenges or Barriers to Knowledge Management Through Social Media	Frequency
Access to Knowledge Long term, Platform limits, Organisation of Data, Training, Configuration, Internet reliance, Intellectual Property concerns, Access control	36
Lack of Authenticity Data overload, Constant change, Platform volume, Context	29
User Resistance Adoption, Security, Time, Informality, Lack of sharing, Dependency, Privacy	22
None	1

Table 4.3.26 exhibits the themes which emerged when analysing how the respondents would improve their organisation's knowledge management practices through social media. *None/ unknown* was the most occurring theme, with a frequency of 24. The number one theme for how to improve was by *reducing the number of platforms* used by the organisation, with a frequency of 20. *Knowledge training* was next, with 17. Finally, *access to knowledge* was last, with a frequency of 14.

Table 4.3.26: Emerging Themes for How the Respondent would improve their organisation's Knowledge Management Practices through Social Media

Emerging Themes for How the Respondent would improve their organisation's Knowledge Management Practices through Social Media	Frequency
None/ Unknown	24
Reduce Platform Volume	20
Knowledge Training	17

Emerging Themes for How the Respondent would improve their organisation's Knowledge Management Practices through Social Media	Frequency
Naming conventions, Tagging, Knowledge Handling, Security, Guidelines, Camera Enablement, Participation Encouragement, Knowledge Specialists	
Access to Knowledge Old knowledge, Platforms, FAQ, Internet, Ease, Business and Personal separated, Notifications, Social Media Presence	14

Table 4.3.27 indicates the emerging themes for the additional comments the respondents had towards the topic under investigation as well as the questionnaire. *None* was the most commonly occurring theme, with a frequency count of 39. *Knowledge management enablement* was the next highest, with 17. Finally, *questionnaire related* responses had a frequency of 14.

Table 4.3.27: Emerging Themes for Additional Comments on the Questionnaire and Topic

Emerging Themes for Additional Comments on the Questionnaire and Topic	Frequency
None	39
Knowledge Management Enablement Access, Relevance, Covid, Personal vs Business Use, Monthly open platform, Fleeting, New platforms	17
Questionnaire related	14

4.4. INTERVIEW ANALYSIS

Further to the above questionnaire data which was collected, interviews were conducted to garner further, more detailed information from a group of six interview participants in an effort to enrich and further understand the findings from the questionnaire. These six were selected as they were a diverse spread of nationalities and occupations that could provide input and enrich the questionnaire data. A total of 16 questions were asked, with a mixture of demographical and phenomenon related questions.

Table 4.4.1 indicates the job titles held by the respondents. There was a diverse mix of interviewees, resulting in each interview, and each position, being held by an even 16.67% of participants.

Table 4.4.1: Job title/ field

Job title/ field	Number of interviewees	Percentage of interviewees (%)
Documentation and Training Publicist	1	16.67
Quality Assurance and Support	1	16.67
Software Engineer	1	16.67
Global Support and Consultancy	1	16.67
Global SAP Support	1	16.67
Software Engineer and Team Lead	1	16.67

Table 4.4.2 demonstrates the managerial level held by the interviewees. The MNSE company to which the interviewees belong has a very flat structure, resulting in three managerial level options. These are general staff, which comprised of 83.33% of interviewees, team leads, which comprised of 16.67% of interviewees, and executive management, which none of the interviewees were.

Table 4.4.2: Managerial Level

Managerial level	Number of interviewees	Percentage of interviewees (%)
General staff	5	83.33
Team lead	1	16.67
Executive management	0	0

Table 4.4.3 exhibits the countries in which the interviewees were born. As they work for an MNSE company, the interviewees were from a diverse range of countries around the world.

Half of the interviewees were born in South Africa, with a percentage of 50.00%. The remaining percentage was comprised of interviewees from Germany, Greece and the United States of America, at 16.67% each.

Table 4.4.3: Country of Birth

Country of Birth	Number of interviewees	Percentage of interviewees (%)
South Africa	3	50.00%
Germany	1	16.67
Greece	1	16.67
The United States of America	1	16.67

Table 4.4.4 illustrates the number of years' experience that the interviewee had at their MNSE company. Two interviewees had three years of experience at their organisation, making up 33.33% of the total. The remaining interviewees had seven, 10, 11 and 14 years of experience, making up 16.67% each.

Table 4.4.4: Number of Years' Experience at their Organisation

Number of Years' Experience at their Organisation	Number of interviewees	Percentage of interviewees (%)
3	2	33.33
7	1	16.67
10	1	16.67
11	1	16.67
14	1	16.67

Table 4.4.5 demonstrates the number of years' experience the interviewees had with social media applications designed for business use. Each interviewee had a different number of years' experience, resulting in each having a percentage of 16.67%.

Table 4.4.5: Number of Years' Experience using Social Media Applications designed for Business use

Number of Years' Experience using Social Media Applications designed for Business use	Number of interviewees	Percentage of interviewees (%)
4	1	16.67
5	1	16.67
10	1	16.67
11	1	16.67
14	1	16.67
15	1	16.67

Table 4.4.6 indicates the number of years' experience the interviewees had with social media applications designed for personal use. Two interviewees had 20 years of experience, resulting in 33.33%. The remaining interviewees had 0, 11, 13 and 15 years of experience, resulting in 16.67% each. The respondent with zero years of experience indicated that they have never used social media applications for personal use and instead made phone calls to contact friends and family.

Table 4.4.6: Number of Years' Experience using Social Media Applications designed for Personal use

Number of Years' Experience using Social Media Applications designed for Personal use	Number of interviewees	Percentage of interviewees (%)
20	2	33.33
0	1	16.67
11	1	16.67
13	1	16.67
15	1	16.67

Table 4.4.7 exhibits the preferred social media application employed by the interviewee for business use. Slack was the favourite, with 66.67% of interviewees preferring it for business use. Microsoft Teams and Twitter received 16.67% each.

Table 4.4.7: Preferred Social Media Application for Business use

Preferred Social Media Application for Business use	Number of interviewees	Percentage of interviewees (%)
Slack	4	66.67
Microsoft Teams	1	16.67
Twitter	1	16.67

Table 4.4.8 illustrates the emerging themes for why the above social media platforms were preferred by the interviewees for business use. *Ease of use* and *features and functionality* had the highest frequency, with 5 each. *Enablement* was next, with a frequency of 3. *Quality* and *collaboration* were lowest with frequencies of 2 each.

Table 4.4.8: Emerging Themes for Preferred Social Media Application for Business use

Emerging Themes for Preferred Social Media Application for Business use	Frequency
Ease of Use	5
Features and Functionality Screen sharing, Drawing, Emojis, GIFs, Sharing documents, File types, Mobile app, Feed, Subscriptions, Multi-language detection, spellchecking, Quote comments, Groups, Channels, Integration, Threads	5
Enablement Brainstorming, Consumption, Learning, Diversity	3
Collaboration Personal, Business, Developer community	2
Quality Reliability, Consistency	2

Table 4.4.9 demonstrates the understanding that the interviewees had of knowledge management. *Process*, with a frequency of 5, emerged as the primary theme. *Maintenance* was next, with a frequency of 4. *Storage, access* and *sharing* came next, with frequencies of 3 each. Finally, with a frequency of 2, *creation* was the last emerging theme.

Table 4.4.9: Emerging Themes for Understanding of Knowledge Management

Emerging Themes for Understanding of Knowledge Management	Frequency
Process Design making, Knowledge, Critical, Crucial, Sharing, Use	5
Maintenance Business, Personal, Documents, Processes, Longevity, Updating, Deleting, Sensitivity	4
Storage	3
Access Availability	3
Sharing Communicating	3
Creation Collection	2

Table 4.4.10 exhibits the emerging themes for social media's impact on knowledge management. *Positive* was the most frequently occurring theme, with a frequency of 6. Next was that of *sharing*, with 5. *Abundance* and *speed* followed, with frequencies of 4 each. *Misinformation, features, accuracy* and *negative* were the next four most occurring themes, with frequency counts of 3 each. Finally, *generation* was last with a frequency of 2.

Table 4.4.10: Emerging Themes for Social Media's Impact on Knowledge Management

Emerging Themes for Social Media's Impact on Knowledge Management	Frequency
Positive	6
Sharing Transfer	5
Abundance Sourcing, Validation	4
Speed Immediacy	4
Misinformation Disinformation, Inaccurate,	3

Emerging Themes for Social Media's Impact on Knowledge Management	Frequency
Accuracy Validation	3
Negative	3
Generation Creation	2
Features Topics, Workspaces, Longevity, Pinning, Search	3

Table 4.4.11 illustrates the understanding that the interviewees had of knowledge sharing. The theme of *sharing* had a frequency of 5, *communication* 3 and *speed* 1.

Table 4.4.11: Emerging Themes for Understanding of Knowledge Sharing

Emerging Themes for Understanding of Knowledge Sharing	Frequency
Sharing Skills, Understanding, Teams, Knowledge	5
Communication People, Communities	3
Speed	1

Table 4.4.12 indicates the emerging themes for social media's impact on knowledge sharing. *Positive* was the theme with the highest frequency, with a count of 6. *Sharing, speed* and *negative* were next, with 4 each. *Ease* followed, with a frequency count of 3. Finally, *accessibility* and *regulations* were last, with a count of 2 each.

Table 4.4.12: Emerging Themes for Social Media's Impact on Knowledge Sharing

Emerging Themes for Social Media's Impact on Knowledge Sharing	Frequency
Positive Empowering, Learning, Opportunities, Fast	6
Sharing	4

Emerging Themes for Social Media's Impact on Knowledge Sharing	Frequency
Volume, Accuracy	
Speed	4
Negative Reliability, Inaccuracy, Too easy, Reply all, Relevance, Overshare	4
Ease	3
Accessibility	2
Regulations Ethics, Legality	2

Table 4.4.13 exhibits the emerging themes for the interviewees' understanding of knowledge generation. *Creation* was the primary theme, with a frequency of 4. *Explanation, ideation* and *accumulation* had a frequency count of 1 each.

Table 4.4.13: Emerging Themes for Understanding of Knowledge Generation

Emerging Themes for Understanding of Knowledge Generation	Frequency
Creation	4
Explanation	1
Ideation	1
Accumulation	1

Table 4.4.14 illustrates the emerging themes for social media's impact on knowledge generation. *Positive* was the overarching theme, with a frequency of 6. *Accessible, creation* and *speed* were next with frequencies of 4 each. They were followed by the themes of *expanding on existing, new knowledge*, *sharing* and *quality*, which all had frequency counts of 3 each. Finally, *negative* was last, with a frequency of 1.

Table 4.4.14: Emerging Themes for Social Media's Impact on Knowledge Generation

Emerging Themes for Social Media's Impact on Knowledge Generation	Frequency
Positive Empowerment, Possibilities	6
Accessible	4
Creation Business or personal, Capturing	4
Speed Immediacy, Ease	4
Expanding on Existing Repackaging	3
New Knowledge Ideation	3
Sharing Explaining, Wikis, Groups, Channels	3
Quality Availability, Reliability	3
Negative Accuracy	1

Table 4.4.15 indicates the emerging themes for the interviewees' understanding of knowledge application. *Application* was the leading theme, with a frequency of 6. *Understanding* followed, with a frequency of 3. *Sharing* and *acquisition* were last, with frequencies of 2 each.

Table 4.4.15: Emerging Themes for Understanding of Knowledge Application

Emerging Themes for Understanding of Knowledge Application	Frequency
Application Practice, Effective	6
Understanding	3
Sharing	2
Acquisition	2

Emerging Themes for Understanding of Knowledge Application	Frequency
Effective	1

Table 4.4.16 illustrates the emerging themes for social media's impact on knowledge application. *Use* and *positive* were the primary themes, with frequency counts of 4 each. *Negative* followed, with a frequency of 3. *Theoretical versus practical, interaction* and *not sure* were next, with frequencies of 2 each. *Ease* was last, with a frequency of 1.

Table 4.4.16: Emerging Themes for Social Media's Impact on Knowledge Application

Emerging Themes for Social Media's Impact on Knowledge Application	Frequency
Use	4
Positive Possibilities	4
Negative Validity, Ability, Relevance, Not for everyone, Conflicting sources, Minimal	3
Theoretical versus Practical Ability, Gathering	2
Interaction Relevant, Channels, Users	2
Not sure	2
Ease	1

Table 4.4.17 exhibits the emerging themes for the interviewees' understanding of knowledge storage. *Storage* emerged as the most frequent theme, with a count of 6. *Structure* followed closely behind, with a frequency of 5. *Use* and *value* were last, with counts of 1 each.

Table 4.4.17: Emerging Themes for Understanding of Knowledge Storage

Emerging Themes for Understanding of Knowledge Storage	Frequency
Storage	6

Emerging Themes for Understanding of Knowledge Storage	Frequency
Structure Bookmark, Organisation, Detailed	5
Use Decision making	1
Value Business or personal	1

Table 4.4.18 indicates the emerging themes for social media's impact on knowledge application. *Storage* and *positive* were the most identified, with frequencies of 6 each. *People* and *structure* followed, with counts of 4 each. *Negative* was last, with a frequency count of 3.

Table 4.4.18: Emerging Themes for Social Media's Impact on Knowledge Storage

Emerging Themes for Social Media's Impact on Knowledge Storage	Frequency
Storage Servers, Cloud, Availability	6
Positive	6
People Understanding, Use, Regulation, Workspaces	4
Structure Pinning, Maintenance, Labelling, Control, Infrastructure	4
Negative Permanence, Clutter, Resource waste, Environment	3

Table 4.4.19 illustrates the emerging themes for a positive social media impact on knowledge management. *Use* had the highest frequency, with 5. It was followed by *sharing* and *maintenance*, which had frequencies of 4 each. *Accessibility* had a frequency of 3, while *building knowledge* had a count of 2.

Table 4.4.19: Emerging Themes for a Positive Social Media Impact on Knowledge Management

Emerging Themes for a Positive Social Media Impact on Knowledge Management	Frequency
Use Training, Business	5
Sharing	4
Maintenance Updating, Reliability, Quality, Organisation	4
Accessibility Storage	3
Building knowledge Adding, Creating	2

Table 4.4.20 exhibits the interviewees' belief for whether their organisation would benefit from superior knowledge management practices. All interviewees agreed that their organisation would benefit, with a percentage of 100.00%.

Table 4.4.20: Belief that their Organisation would Benefit from Increased Knowledge Management Practices

Belief that their Organisation would Benefit from an Increase in Knowledge Management Practices	Number of interviewees	Percentage of interviewees (%)
Yes	6	100.00
No	0	0

Table 4.4.21 indicates the emerging themes for how their organisations could benefit from an increase in knowledge management practices. *Platform* arose as the primary theme, with a frequency of 4. *Communication* and *people* were next, with frequencies of 3 each. *Ease* and *accessibility* followed, with frequency counts of 2 each. *Storage* and *constant improvement* were last, with each theme having counts of 1.

Table 4.4.21: Emerging Themes for How their Organisation would Benefit from Increased Knowledge Management Practices

Emerging Themes for How their Organisation would Benefit from an Increase in Knowledge Management Practices	Frequency
Platform Design, Filtering, Search, Wildcards	4
Communication Sharing, Customer, Internal	3
People Productivity, Training, Interaction	3
Ease	2
Accessibility Organised	2
Storage Retention, Structure	1
Constant improvement	1

Table 4.4.22 exhibits the emerging themes for the challenges or barriers to knowledge management through social media. *Organisation* was the overarching theme, with a frequency of 5. It was closely followed by *accuracy*, which had a count of 4. *Employees* was next, with a frequency of 3. *Sourcing knowledge, relevance* and *regulations* followed, with counts of 2 each. *Constant communication* and *insufficient competition* were last, with frequencies of 1 each.

Table 4.4.22: Emerging Themes for the Challenges or Barriers to Knowledge Management through Social Media

Emerging Themes for the Challenges or Barriers to Knowledge Management through Social Media	Frequency
Organisation Overload, Uniformity, Multiple platforms, Change management	5
Accuracy Consistency, Credibility, Data loss	4

Emerging Themes for the Challenges or Barriers to Knowledge Management through Social Media	Frequency
Employees Resistance, Decision making, Age	3
Sourcing Knowledge Accessibility, Ability	2
Relevance	2
Regulations Privacy	2
Constant Communication	1
Insufficient Competition Choice	1

Table 4.4.23 illustrates the emerging themes for further comments or opinions on social media's impact on knowledge management. *Benefit* was the primary theme, with a frequency of 3. *Concern* and *none* followed, with frequencies of 2 each.

Table 4.4.23: Emerging Themes for Further Comments or Opinions on Social Media's Impact on Knowledge Management

Emerging Themes for Further Comments or Opinions on Social Media's Impact on Knowledge Management	Frequency
Benefit Processes, Business, Retention, Structure, Sharing, Efficiency, Immediate gratification	3
Concern Overflow	2
None	2

4.5. CONCLUSION

Chapter 4 endeavoured to establish the essence and extent of social media's impact on knowledge management within an organisational context. To this end, data was analysed from two sources.

The first was a questionnaire, which was distributed throughout an MNSE organisation. The questionnaire contained 30 questions and had a total of 70 respondents. The second was a semi-structured interview, which contained 16 questions. Across the questionnaire and semi-structured interview, each respondent answered questions related to demographics, their experience at their organisation, their experience with social media, their understanding of knowledge management and its core concepts and a variety of questions related to social media and its positive and negative effects on knowledge management.

The data collected from these sources was analysed and the findings will be integrated and explored in the following chapter, Chapter 5: Discussion of the Research Findings.

CHAPTER 5: DISCUSSION OF THE RESEARCH FINDINGS

5.1 INTRODUCTION

The purpose of this chapter was to demonstrate the researcher's contribution to the academic and business communities through the discussion of data findings from various sources. The first of these sources is that of the literature review, which forms chapter 2 of this study. The second is that of a questionnaire, which comprised of 30 questions and had a total of 70 respondents. The third and final source was a semi-structured interview, which had six participants. In this chapter, an integration of these three sources was discussed and the secondary research questions were evaluated.

The next section of this chapter will discuss the integration of data compiled from the literature review, the questionnaire, and the semi-structured interviews.

5.2 DATA INTEGRATION

5.2.1 Knowledge Management within Organisations

Knowledge management can be characterised as the precise and meticulous governance of crucial knowledge (Mardani et al., 2018). This governance takes many shapes, such as the creation, modelling, communication, dissemination and utilisation of the aforementioned crucial knowledge (Mardani et al., 2018). The effective management of knowledge provides organisations with the skills and capacity necessary to capture, understand and make use of key knowledge resources to create new knowledge – both within and outside of the organisation (Abualoush et al., 2018).

When asked for their understanding of knowledge management, certain questionnaire participants (QP) and interview participants (IP) aligned well to the above, stating:

> QP47: *"Knowledge management is the process of creating, sharing, using and managing the knowledge and information of an organization."*

QP58: "*Processes, approaches, policies and methodologies related to controlling, organizing, accessing, distributing and interacting with collections of information within a specific context (e.g., business).*"

QP69: *"Knowledge management involves managing all of the elements which knowledge management is comprised of, such as the sharing, generation, application and storage of knowledge."*

IP1: *"it's the ability to, to create, store and maintain knowledge in a way that's easily accessible for decision making purposes later on."*

Each component of knowledge management, namely knowledge generation, knowledge sharing, knowledge storage and knowledge application, was mentioned by at least one of the respondents when asked for their understanding of knowledge management. Many research participants referred to knowledge generation, stating:

QP22: *"Creating and sharing information."*

QP37: *"Content creation (CRUD) of information relating to an organization or topic."*

QP62: *"Generation of artifacts (formal and informal); storage of artifacts, sharing of content using artifacts."*

Knowledge sharing was alluded to, with participants stating:

QP6: *"It's the capturing, sharing of data, and how to communicate that data with others."*

QP14: *"The art of organising knowledge areas individually and sharing information adequately."*

IP6: *"…any form of communication or, uh, information sharing from what I know or understand."*

Knowledge storage had particular mention, with respondents stating:

> QP15: *"Managing knowledge obtained by managing how it is stored, updated and applied."*
>
> QP30: *"How, when, where and why information is being maintained and stored with colleagues."*
>
> QP32: *"How you handle the information that you have/ the information that you need to give - where you store it, how you access it and how you use it."*

Finally, knowledge application (and use) too had mention, with respondents stating:

> QP17: *"The flow of information throughout a company and the storing and documenting of such information to be accessible and usable by proceeding members that require access or use of such information."*
>
> QP35: *"Knowledge Management to me means how I gather, save and use knowledge acquired over time."*
>
> QP56: *"How to use the right knowledge."*

However, there were some who believed that knowledge management had more to do with the managers of knowledge themselves, stating:

> QP36: *"My understanding of management is people in positions that should lead, develop, and support employees assigned to them as they carry out the mission of the company to help it thrive."*
>
> QP48: *"Knowing where in the organisation certain pieces of knowledge (e.g. expertise, experience, know-how) sits, who is the "keepers" of that knowledge and where to go if I need to find something."*

QP63: *"Wisdom from top management."*

Abualoush et al., (2018) believed that knowledge management is a process, stating that the management of knowledge is not stagnant, but rather a consistent cycle of knowledge capturing, conception, propagation and execution. Many research participants alluded to a process, stating:

QP4: *"The process of capturing, storing, sharing and effectively managing the knowledge and experience of employees to increase the workforce's overall knowledge."*

QP52: *"The process of creating, storing and sharing knowledge within a team or organisation."*

QP54: *"The process of storing, sharing & accessibility of knowledge of specific topics. Whether this be formal or informal and either for internal or external use."*

While knowledge management as a process was touched on by many, there were no research participants, either in the questionnaire nor the study, which mentioned that the process was continuous in nature.

Organisations operating in the contemporary environment will find benefit in considering knowledge management as crucial to organisational success and improved competitiveness (Abualoush et al., 2018; Archer-Brown & Kietzmann, 2018; Bolisani & Bratianu, 2018b; Ferreira et al., 2018; Maravilhas & Martins, 2019; Mardani et al., 2018; Shujahat et al., 2017). Knowledge-based resources, obtained through trustworthy and dependable sources, can have an increased benefit over traditionally highly regarded and recognised corporate assets (Archer-Brown & Kietzmann, 2018). In response, businesses have begun to manage knowledge (Ferreira et al., 2018). To do this, businesses have taken strides to improve their technical foundations, tools, hardware and software in order to enable active knowledge management (Abualoush et al., 2018; Barley et al., 2018).

Knowledge management's importance and asset value were alluded to by participants, with some stating:

> QP60: *"In my field of learning of training, knowledge management is crucial to meeting the company's goals (and training objectives)."*

> IP5: *"… knowledge management for me is a very critical and current crucial factor, especially within our, within companies like us as we are, very knowledge sensitive, cause obviously we are not, not a producing company. Knowledge is our main asset."*

Knowledge management is comprised of multiple concepts – each of which are vital to effective knowledge management. As previously alluded to, these concepts are knowledge generation, knowledge storage, knowledge sharing and knowledge application.

Knowledge generation is considered as a combination of explicit and tacit knowledge, working in tandem to expand upon existing knowledge as well as generate novel knowledge (Abualoush et al., 2018). The concepts of knowledge creation and existing knowledge expansion were commonplace across many participants, who stated that knowledge that their understanding of knowledge generation involved:

> QP36: *"My understanding of knowledge generation is when two or more people collaborate on an issue by combining their existing knowledge or exploring new areas to accomplish a goal."*

> QP60: *"To create information (brainstorming comes to mind) by creatively discussing and thinking out ideas and processes that can later on be managed and organized."*

> IP3: *"… you would take your current mental model of, of any type of knowledge and, and kind of construct your own ideas."*

Learning, training and research were prominent elements of knowledge generation, with participants stating that these concepts were part of the fabric of knowledge generation:

QP1: *"The creation of knowledge, or rather the process to obtain new knowledge on a subject matter. The process that occurs when learning more and understanding more of a topic and capturing that information."*

QP48: *"identifying an area where there's a lack of knowledge in an organisation and doing deliberate effort to research & study the topic until the lack of knowledge dissipates."*

QP64: *"If I research something or learn from an experience and gain some new insights, knowledge has been generated."*

IP1: "Knowledge generation? I kind of feel is, like the first thing I think of, are like all these YouTube videos on showing me how to do things right."

However, while some perceived knowledge generation's definition as clear and obvious, stating:

IP1: *"So, knowledge generation is obviously the creation of knowledge."*

IP3: "So knowledge generation is obviously, I would say since I'm using mental model as a word, I would say you would take your current mental model of, of any type of knowledge and, and kind of construct your own ideas."

Others had distinct misconceptions of what knowledge generation is commonly believed to be, stating:

QP6: *"I would think it to be the generation your age group fits into and how they understand or perceive knowledge, or their level of knowledge."*

QP39: *"The new generation in the workforce that is more prone to use electronic access to information."*

QP56: *"Each person knows something different depending on its generation."*

QP59: *"A generation of people who share knowledge and information."*

This suggests to us that while some find knowledge generation a clearly understandable term, there are a decent number of people who do not understand the term in this context.

Knowledge storage concerns the method in which one chooses to gather, keep and retrieve knowledge when it is required. Knowledge storage involves garnering novel or present knowledge and storing it in such a way that it is not only saved, but also preserved, developed and available when required (Abualoush et al., 2018). Many participants aligned to this definition, stating that their understanding of knowledge storage was:

QP8: *"Archiving and storing information in such a way that any user can easily find information specific to their problem."*

QP58: *"Preparation, clean-up, encoding, access control and persistence of a collection of information in such a way as to enable and/or control knowledge application, knowledge sharing and knowledge management, whilst simultaneously supporting knowledge generation to expand a body of knowledge."*

QP60: *"The first thing that comes to mind is drives, servers, archives etc. Anything that can organize and store (memory) the knowledge and information that becomes part of the core of the organizations knowledge management and how they reach their goals."*

IP1: *"Knowledge storage is the ability, I would say, to structure, to manage, and to retain knowledge for use at a later stage for decision making processes."*

Many participants specifically alluded to the mechanism or platform used to enable knowledge storage when asked for their understanding of it, with participants stating:

QP9: *"The underlying mechanism to store said information. DB/Wiki/etc."*

QP12: *"The process of storing knowledge making use of software where it is accessible by all."*

QP51: "The mechanism or software used to permanently store knowledge documents."

Others mentioned specific formats which the knowledge could be found within, namely:

QP11: *"What the employees "know" are stored, this can be in the form of documents (word, excel, PowerPoint), media files (video and audio), image files, business process descriptions."*

QP13: *"Establishing an accessible repository of information related to a theme. This can be in a person, document, recording, presentation…"*

QP23: *"Curating, codifying, structuring and disseminating productive information in transmissible formats."*

Knowledge Sharing concerns the diffusion and propagation of knowledge across individuals within both personal and organisational contexts. The knowledge shared can be explicit or tacit, resulting in knowledge sharing aiding in knowledge generation. The research participants agreed with this sentiment, stating:

QP15: *"Sharing information with colleagues in order to benefit the whole team. Helping team members to perform tasks by relying on your experience and documentation rather than figuring it out themselves."*

QP39: *"The process of structuring and capturing tacit knowledge to make it more tangible so that other people can benefit from it."*

QP48: *"Sharing expertise, know-how, experience with others in the organisation so that they can better perform their job functions, assist a customer, overcome a problem etc."*

IP2: *"… that if you have a skill or a, a good understanding of something, then you should be sharing it with people on your team or within your personal circle, if it's relevant."*

A common theme, which enriches the literature definition, is that of exchange. Rather than knowledge sharing being one-directional, many perceive it to be an exchange of knowledge between friends and colleagues. Participants stated:

QP1: *"Everything around the sharing, exchange, and accessibility of existing knowledge in the company."*

QP25: *"The exchange of information internal and external to the company."*

QP37: *"Sharing/ exchanging information with other people in relation to a specific topic."*

Another common element believed to be part of the participants' understanding of knowledge sharing is the platform or means of sharing that knowledge. Participants stated:

QP19: *"The capacity to which a person or group can distribute knowledge in a conventional way through the help of different platforms and for the benefit of everyone."*

QP32: *"Anything from meetings where you discuss or explain something, to sharing documents over some platform. Giving the knowledge you have or have gained to someone (or more) else."*

Knowledge Application involves taking novel, existing and attained knowledge stores and applying the knowledge to achieve personal or organisational objectives in the most valuable and efficient way possible. When asked for their understanding of knowledge application, participants stated:

QP17: *"The use of information within its context to solve a problem, contribute, or enable others within the organisation in a meaningful and productive way."*

QP41: *"I assume this is how you apply your current knowledge. In this scenario we also have sessions where we state a problem and based on the team's current experience and research, we do see different approaches/solutions to the same problem statement from where we evaluate, and the team decide on the best approach. Sometimes this leads to combined approach."*

QP58: *"The act of accessing, consuming, interpreting and contextualizing a collection of information with the primary purpose of using the understanding gained in the performance of some duty, act, responsibility or task with specific and measurable outcomes/ success criteria."*

The familiar thread across participants was that knowledge application was performed with a specific goal or task in mind. Participants stated that knowledge application involved:

QP42: *"Where a person needed valuable information, have access to it and then apply it to the task at hand. An experienced person applies the existing knowledge to the task at hand."*

QP60: *"To apply the knowledge that has been generated and organized. It makes me think of policies for example. So, any decisions and tasks that have to be made or done with the information at hand, that can be used to help make future processes and actions."*

IP4: *"Application would be doing certain things, having acquired as much knowledge as possible in order to do them right."*

5.2.2 Social Media Collaboration

Social media has ingrained itself into the everyday lives of most people globally, being present in one's personal and professional lives in both official and casual capacities (van Dijck & Poell, 2013; Vogel et al., 2014). There are a variety of different purposes which social media possess, such as social communication, business collaboration, forums, media and file sharing and more (Whiting & Williams, 2013). Some social media platforms are specifically designed for use within business environments. These platforms provide all

members of an organisation with the means to link with one another across organisational departments and boundaries and across continents (Evans et al., 2017). With each passing year, organisations are experiencing a further dependence on employees being able to reach one another using virtual means, making their employees experience with these applications undoubtedly important (Pinto, 2014).

When asked for their preferred social media platform for written communication, most questionnaire participants indicated that Slack was their platform of choice. This sentiment was mirrored by some interview participants, with each having stated:

> QP60: *"Slack works best for me when communicating to my team. It also allows for a lot of shortcuts, reminders, abilities to pin messages and different ways to forward and share messages and documents (and Gifs) easily."*
>
> QP69: *"Slack has features which Teams has yet to implement, such as typing emojis, better gif support and being able to paste links without having to go through an additional linking step."*
>
> IP1: *"Slack offers the collaboration tools that I enjoy. So, if you're in a meeting with somebody and you are sharing a screen people can actually draw on the screen gives a lot of brainstorming capabilities. And it's pretty much easy to access, it's obviously across PC use and mobile. And then it also brings in the social aspects where you could send emojis and gifs and that sort of thing. And obviously, sharing of documents. It offers a wide range of file types, I suppose. Or it's compatible with a wide range of file types. So, you're not restricted to only sending like a PDF, you can send text files, font files, like everything can actually be shared over Slack, which is what I like."*
>
> IP4: *"I prefer Slack. It's better made… easier to use and it's got better features, especially when you use more than one language… so you can set the languages that you use and it uses a spellchecker, having detected the language automatically."*

When asked for their preferred social media platform for oratory and visual communication, the participants, interestingly, preferred Microsoft Teams. Exemplary reasons for this included:

> QP20: *"Most of [my organisation's] customers have MS Teams."*

> QP54: *"Teams is the chosen platform for our company and for me it is easy to use and does the job well and efficiently."*

> IP6: *"… because it's so diverse. You can have your calls there. You can have your calendar which is very big… you can have these spaces where you have a whole team… you have this whole, let's say topic that you have and subtopics underneath there, and you can bundle all of this information in there and you can reply to specific threads that somebody mentions and it's in one chat."*

According to some areas within the literature, social media applications designed for personal use, such as Facebook and Twitter, are distinctly different from applications designed for business use (J. Cao et al., 2013). However, other areas of the literature support a melding of personal and business social media platforms, propagating that there are several social media applications which can be used for personal or business use, such as Google Meet, Google Hangouts, Skype and Zoom (Basilaia & Kvavadze, 2020; Hanna, 2012; Janghorban et al., 2014; Lo Iacono et al., 2016). Across the participants, WhatsApp, Telegram, Signal, and Discord, applications traditionally considered for personal use, were indicated as used platforms for business use. An interview participant indicated that their preferred platform for business use was Twitter, stating:

> IP3: *"I just find it very easy to actually go through the feed and consume, like, mint material. I mainly use it for actually learning things for my job, which is quite surprising, even though it is a personal use social media platform. I just find it really easy to scroll through the media. And you can subscribe to what you want. It's not very influenced by an algorithm even that there are some suggestions, but it's not as influential as the other personal social platforms… there's quite a big software developer community on Twitter, so you learn a lot of new things on Twitter."*

5.2.3 Social Media's Impact on Knowledge Management

Social media sites and applications provide their users with the power and means to produce, handle, evaluate and communicate content made by themselves and others (Mladenović & Krajina, 2020). The interview participants were asked to indicate the impact which social media has on knowledge management and its core concepts, which produced a mixture of positive and negative results. For social media's impact on knowledge management, the participants said:

> IP1: *"… there's obviously an abundance of information that's being generated all the time. But it doesn't necessarily, it isn't necessarily always like, honest, straightforward. information. There's a lot of misinformation and disinformation. There's a lot of knowledge that is shared that sometimes is not 100%. factual, or accurate. So I feel that social media, even though it's allowed for so much knowledge to be shared and generated, there's still the issue of it not being 100% correct, which makes it harder for you to find the information or the knowledge that you need to make decisions. Yeah, so that's what, yeah, so it's a good thing and a bad thing at the same time, I feel."*

> IP2: *"I think in some areas, social media has helped the transfer of knowledge, ensuring knowledge to be quicker than in the past, without, you know, previous to these platforms. But I also think because it moves so fast, a sometimes people don't take the time to validate the source or validate the information they've received. And I think that's a big issue."*

> IP4: *"Well, social media have, I think two main features. One is that they are instantaneous… another feature is volume and the kind of information that can be transmitted… the volume of information that can be transmitted is much bigger than what we've had in the past. So, that creates new opportunities."*

> IP6: *"Using social media has become more immediate. So, if you need to share something or get something from somebody, you can immediately get it, it's not a wait a day or half a day or even two hours."*

For the impact of social media on knowledge sharing, they stated:

IP1: *"In terms of social media, it is definitely more of a positive in terms of knowledge sharing, because it's just so freely available to most people... definitely social media has had a very positive spin on knowledge sharing."*

IP2: *"Social media, I think, makes it too easy. So, some the ways I view social media in kind of like a business context is it's more of like a reply all. So, people will share things and they're just sharing it with everybody on their platform instead of perhaps a targeted audience or people that really need to know the information you're trying to share."*

IP5: *"Social media, when it comes to, speeds, when it comes to quantity, it might be sometimes maybe less quality of the information because there is much more quantity. So, yeah, it's very important that the information that is being shared is well, it's split into different channels, the information, so only the receptions, receive the information who are, who really need it."*

IP6: "Social media impact, it's mostly because it's more immediate. And also, maybe because it's kind of cross-platform as well. It's not, a lot of times, it's not just one tool that you use to communicate knowledge or information at least."

When asked for the impact on knowledge generation, the participants stated:

IP1: *"… it's so easily accessible, people are able to create information and knowledge at any time, I mean, I can pick up my phone right now, and I can communicate with somebody about something that I know, something about, like I'm knowledgeable in. So, it's definitely allowed for better communication for a much bigger range of or an area of people to have access to share that knowledge with those people."*

IP3: *"Social media has had a very good impact in terms of knowledge generation… because there's such empowerment with social media, it's just, everyone wants to be*

able to see, they can easily just post something and share what they know, and it will give someone else ideas which will lead to knowledge generation."

IP4: *"Social media gives you access to more information and then there are more possibilities of adapting it. So, you can find information more easily and then you can expand it so that you can combine it with other information."*

IP6: *"Social media wise, I guess the best way is that if you have something like Teams, it's nice that you have a place where you can go and organize all of your thoughts and all of the information you have. So, there you can go and create a group and the subgroup, or let's say in Slack, you have a channel for instance and in the channel, you can go and capture all of the information there. So, the organizational aspect in social media would be very beneficial in terms of knowledge generation."*

When asked about social media's impact on knowledge application, the participants stated:

IP1: *"Application is not as easy as perhaps generation and that sort of thing. But I'm looking at it from more of a practical aspect, rather than like a theoretical. I mean, in theory, if you learn something, and you gain knowledge on something, you can talk about it... in the practical aspects, I think it doesn't really work for application."*

IP2: *"… if you, if you're not sure that the information you've received is valid and you go and apply it, you could be applying it incorrectly and, I could get you into a lot of trouble."*

IP5: *"So, once you have an idea, once you want to share your knowledge, it's the most efficient and effective way, the better the quality of the groups is. So then you are likely to receive answers if you have questions about your knowledge, maybe a lack of knowledge."*

IP6: *"In terms of application, it feels like it has a little bit less of an impact from the social media side. I don't see it impacting it that much as the sharing and the gaining does."*

Finally, when asked about knowledge storage, and the impact that social media has upon it, the participants stated:

> IP2: *"Through social media with this, everything that you put out there is out there forever, even if it's redirected and it's stored somewhere different, it's out there forever. And if you're savvy enough, you know, you can find it… I think that's kind of a problem because I feel like we're, you know, in the cloud or on all these servers, we're just storing so much information. That's just not relevant. Or maybe that shouldn't be stored."*

> IP3: *"Social media gives us a very free way of storing knowledge because you can simply use business social media to write yourself a reminder, or of how to do a certain task or whatever, then it will be there for eternity."*

> IP4: *"Social media has less to do with storage. Unless of course you count the technical infrastructure of the social media providers, say if you put things on Teams, or on Slack, and that stays on the servers."*

Social media applications have the ability to aid in the successful attainment of organisational goals objectives (Annabi et al., 2012). Social media capabilities provide businesses with the opportunity to manage their knowledge, transform their practices, improve their efficiency and maintain positive customer relationships (Annabi et al., 2012). Social media can also aid in the generation, facilitation and retention of knowledge, with features which provide them with the potential to be primary supporters of knowledge management (Annabi et al., 2012). Social media applications provide the capability of individuals and teams to share knowledge across the globe, circumventing organisational confines which have decelerated knowledge sharing for generations (J. Cao et al., 2013). When asked what has the potential to constitute a positive social media impact on knowledge management, the participants stated:

> QP1: *"If social media is able to improve access to and sharing of knowledge in a way where authenticity and the knowledge origin can be verified."*

QP18: *"Increased interest, whether it be in terms or demand of the material itself or the content that the material contains, such as a specific product. If it is quantifiable in terms of profit-generation, this would then also be considered as a direct or indirect positive social media impact."*

QP23: *"1. Challenging the status quo - exposure to social media is exposure to other ideas. If the knowledge management process allows for proper testing of new ideas, that could lead to creative problem solving. 2. Knowledge is transferred through relationships. given proper relationship-building through social media channels, knowledge transfer can benefit, but more importantly, the organization can have stronger societal anchors which gives it more stability."*

QP31: *"Feeling at ease to use social media, people may be more willing to contribute towards the sharing of knowledge. This way information shared will be more up to date and easier distributed"*

IP1: *"Definitely, the knowledge generation. There's such an abundance of information through social media. Obviously going back to organizations, through Slack, you are constantly sharing knowledge, you're constantly adding to other people's knowledge, you're constantly building knowledge."*

When asked why their preferred social media applications had a positive social media impact on knowledge management, there were a number of thought-provoking statements made by the research participants:

QP31: *"The ease of creating groups/channels for bulk communication and knowledge sharing between different people/groups. Being up to date since notifications alert you of new communications. The ability to search for content and to store posts (pin). Recordings can be stored or shared."*

QP34: *"Because we are across all regions and not in the same office space to work with each other its extremely important to have these social media knowledge*

management in place for communication and interaction with team members across regions and teams."

QP48: *"De-facto and default solutions for communication in the organisation means that everybody in the organisation is on the platform, which means everybody can be contacted easily by everybody else. Search solutions are better than say email, as well as organisation of discussions into channels."*

While there are many positive impacts from social media, there are too some negatives. When asked the negative impact of their least preferred social media platform on knowledge management, the participants stated:

QP16: *"All platforms… allow some sort of knowledge sharing. The difficulty, however, is that too many platforms means that the knowledge can be on any platform, so it is hard to remember or track down later where the knowledge is."*

QP17: *"Skype for business is atrocious. Consumes so much system resources. Poor integration. Terrible interface, no message history, long start-up times, brings even the most powerful system to a halt. WhatsApp is unsecure and grossly violates user privacy."*

QP58: *"Technical problems with MS Teams are a nightmare. This, coupled with the "always available/ visible" concept of Google Hangouts and MS Teams itself, means that it is prone to causing serious/ long interruptions to daily workflow. It is also very difficult to quickly locate information on these platforms."*

Social media's popular acceptance is growing amongst organisations' employees and customers alike, resulting in organisations being willing to invest in social media platforms and infrastructure in order to benefit from its value (Luo et al., 2013). The vast majority of participants believed that their organisation would benefit from an increase in knowledge management practices enabled through social media, with every interview participant agreeing. The reasons for these beliefs were stated as:

QP5: *"New employees, especially, can greatly benefit from additional knowledge management practices allowing them to quickly get up to speed with the more senior developers."*

QP16: *"Working virtually we need to share knowledge virtually, and we use social media for this. The better the knowledge management, the more effective our jobs."*

QP37: *"A lot of people in our organization specialize in a topic, but they have the information only in their heads. They also don't have the time to capture that information in an official place. So if you can get the time from such a specialist and record a knowledge session or have the information captured in some way on a social media platform, it would be valuable and can then be shared."*

QP52: *"Channels of knowledge sharing are essential to creating solutions to projects and problems. If one creates formal ways of doing this, it can only increase the efficiency of knowledge transfer and management."*

IP6: *"More interaction and talking between customers or more communication in there, other than just replying on a ticket or increasing the communication that you can have with the customer on social media, that might benefit."*

Along with benefits, participants were asked to discuss challenges or barriers to knowledge management enabled through social media. Some of the issues which arose, according to the participants, included:

QP16: *"Knowledge is not always shared in a structured way, so it is hard to find later. It is hard to find the mentions of information or track down facts or attachments if you can't remember associated words."*

QP37: *"There are too many platforms at the moment being used by our organization. I often find myself searching on 3 different platforms just to find information someone shared with me."*

QP48: *"Adoption, multiple systems (e.g., too many places to store knowledge.) Mixture of business and pleasure (e.g., jokes in a channel meant for serious business conversations.) Clinging to old technologies (email, sending of files etc.)"*

QP52: *"Lack of tone, lack of body language cues to imply meanings and importance of info. Would be easier to be able to converse freely in a face-to-face environment."*

IP6: *"There might be a specific etiquette that you need to follow. There might be certain rules that you need to put in place so that it doesn't get out of control in terms of keeping it organized, keeping people civil. Barriers would be that technology doesn't always live up to what it promises out of the box. It's not as simple to use always. There's always somebody with an issue."*

5.3 CONCLUSION

This chapter served to indicate the researcher's findings with regards to the questionnaire and semi-structured interviews which were sent out and conducted, respectively. Data was collected and analysed from a 30-question questionnaire which had 70 respondents. That data was supplemented by semi-structured interviews, conducted with 6 separate participants. The literature, combined with the data from these sources, provided for in-depth across three sections which helped exemplify social media's impact on knowledge management.

The following and final chapter, Chapter 6: Conclusion and Contribution, presented the researcher's final contribution for this study.

CHAPTER 6: CONCLUSION AND CONTRIBUTION

6.1 INTRODUCTION

This chapter served to exemplify the researcher's contribution to the organisational knowledge creation theory and the SECI model. This chapter discussed knowledge and virtual teams within the context of socialisation, externalisation, combination and internalisation. Originating, interacting, cyber and exercising *Ba* were also considered. Next, the sub-research questions and the primary research question were discussed. Thereafter came a reflection upon both the scientific and methodological process for this study, as well as the researcher's personal reflection upon this endeavour. Finally, the limitations and future research potential for this study were considered.

6.2 KNOWLEDGE IN VIRTUAL TEAMS

6.2.1 Social Media and the SECI Model

In order to consolidate the findings, a table was constructed to establish social media's impact on knowledge management within organisations with specific reference to the SECI model. The table listed each element of the SECI cycle framed within the context of knowledge management.

Table 6.2.1.1: SECI Model in Relation to Knowledge Management through Participant Themes

SECI Area	Questionnaire Respondent	Semi-structured Interview Respondent
Socialisation	Content | Goals | Flow | Experience	Functionality | Mental model | Explanations | Anyone | Possibilities | Individuals
	Knowledge creation | Knowledge generation | Interaction | Brainstorming | Creativity	
Externalisation	Distribution | Access | Documentation | Tacit	Collaboration | Channels | Threads | Groups | Quick
	Sharing | Teams | Communication | Transfer | Skills	
Combination	Collections | Maintenance | Encoding | Documentation | Centralisation | Combination | Servers | Electronic files | Curation | Exchange	Structure | Collaboration | Peer-to-peer | Repackage | Adaptation | Algorithms | Retention | Detail | Format | Standards | Analysis
	Organisation | Teaching | Training	
Internalisation	Knowledge use | Context | Solution | Enablement | Approach | Performance | Understanding | Specific	Theoretical | Practical | Valid
	Learning | Application | How | Practice | Understanding	

Table 6.2.1.1 indicates the themes which were deduced from what was said by the questionnaire participants, the semi-structured interview participants and what was common between both. These themes were placed in one of each of the four SECI rows in order to indicate that the components of knowledge management, enabled through the use of social media, are relevant to the SECI model. The following section discussed the mapping of themes to the SECI model in greater detail and also provided a visualisation of this mapping.

6.2.2 SECI Mapping Visualisation

When considering knowledge and knowledge assets, there is a distinct divide between two core concepts; namely explicit and tacit knowledge (Barley et al., 2018). Explicit knowledge is knowledge which is physical, it can be interacted with, stored, maintained and structured (Barley et al., 2018). Explicit knowledge is formed through the capturing of data, information and knowledge, which is vital to the creation of novel knowledge (Maravilhas & Martins, 2019). The aforementioned data, information and knowledge are not locked to a specific shape or form, but can rather be saved through a range of formats (Maravilhas & Martins, 2019).

On the other side of the divide is tacit knowledge. It is non-physical, intangible knowledge, the understanding of which is linked greatly to its environment and context (Barley et al., 2018). Owing to its incorporeal nature, tacit knowledge cannot be stored on hard drives, servers, in the cloud or through any other physical means (Holste & Fields, 2010). Rather, it is stored within one's brain, and can only be accessed, applied or distributed at the knowledge-bearer's discretion (Holste & Fields, 2010). The procurement of tacit knowledge is not through the capturing of data of facts, but rather through human contact, collaboration, communication and experience (Barley et al., 2018; Garrick & Chan, 2017; Maravilhas & Martins, 2019). The divide between explicit and implicit knowledge allows for knowledge to both dwell within people as well as go beyond them (Barley et al., 2018).

For data or information to be considered knowledge, Nonaka et al., (2000) proposed that the data or information must be placed within an applicable, tangible environment. To this end, the term *Ba* was utilised to express the environment in which knowledge has been produced, shaped, applied and disseminated through collaboration (Bartolacci et al., 2016; Nonaka et al., 2000). The SECI model is able to facilitate and support the phases of knowledge generation and transformation through *Ba* (Bartolacci et al., 2016).

The SECI model can be expanded upon to place it into the modern era, an era where organisations find themselves with an increased reliance upon virtual means to bring about inter-employee and employee-customer communication and collaboration. Social media has enabled face-to-face meetings to take place not only in person but across continents, bringing a new dimension to the SECI model.

The *Socialisation* phase of the SECI model entails individuals instantiating the knowledge creation process by discussing their emotions, beliefs and experiences. Traditionally, this would be face-to-face. However, considering that this is not always possible within a physical context, social media has the power to facilitate face-to-face meetings within a virtual environment. The *Externalisation* phase of the SECI model customarily consists of people collaborating and exchanging their tacit knowledge with one another – a phase which can be practiced globally and virtually through social media. The *Combination* phase of the SECI model encompasses adapting a blend of various explicit knowledge forms into one complex piece of explicit knowledge. This is achieved through individuals and teams exchanging explicit knowledge and generating new forms of explicit knowledge. This is enabled and enriched by social media as it provides cooperative platforms which facilitate collaborative explicit knowledge sharing, manipulation and structuring. The final phase of the SECI model, *Internalisation*, entails individuals internalising the explicit knowledge which has been produced through the other SECI phases, making it tacit through use. Through social media, this tacit knowledge and be applied by friends, peers and virtual teams.

Figure 6.2.2.1: SECI Knowledge Cycle Enabled through Social Media (enriched from (Nonaka & Konno, 1998))

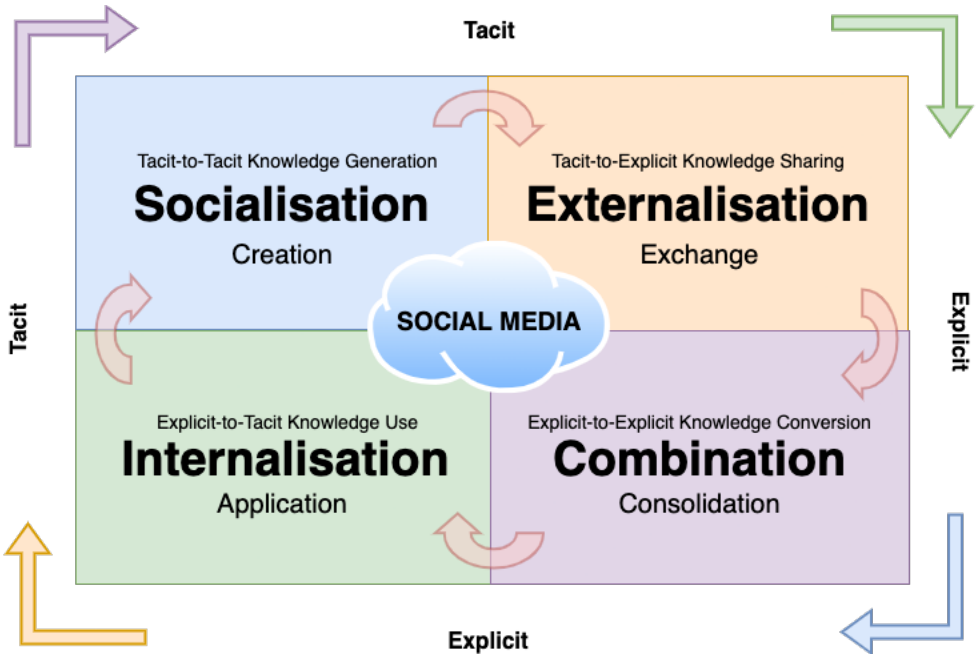


Figure 6.2.2.1 indicates social media's enablement of knowledge management within the SECI model. Each element of the SECI model, namely Socialisation, Externalisation, Combination and Internalisation was placed within its own quadrant. To enrich the original model, social media, enabled through cloud technology, was placed at the centre of this enhanced model. Social media enhances the SECI model by way of the inclusion of *Creation*, *Exchange*, *Consolidation* and *Application* within each quadrant of the SECI model. These terms indicate that through social media, tacit-to-tacit knowledge generation, tacit-to-explicit knowledge sharing, explicit-to-explicit knowledge conversion and explicit-to-tacit knowledge use are possible through *Creation*, *Exchange*, *Consolidation* and *Application*.

6.3 PRIMARY FOCUS OF THE STUDY

6.3.1 Sub-Research Question Analysis

This section of Chapter 6 involved answering the research sub-questions identified in Chapter 1 of this study. These questions were formulated to aid in the answering of the primary research question, which was "What are the key characteristics of social media's impact on knowledge management?"

6.3.1.1 Research sub-question 1:

Research sub-question 1 was "Is organisational knowledge management understood and employed by employees?" To determine whether knowledge management was comprehended and used within organisations, it was important to determine the research participants' understanding of not only the term knowledge management but of its core concepts of knowledge sharing, storage, generation and application as well. When asked for their understanding of knowledge management, each of its core components were mentioned several times across all research participants.

The respondents identified knowledge management as a process whereby knowledge is generated, stored, shared and applied. This is not a process in which a specific set of practices take place and are then never visited again, it is a continuous process which facilitates an active and ongoing management of knowledge.

Knowledge is understood to be a critical, fundamental element of an organisation's assets, with respondents indicating that knowledge is crucial to the ongoing success and growth of organisations. Knowledge has the potential to become, and in some instances has become, more valuable to organisations than the traditional assets, such as capital or inventory.

The concepts of knowledge management are generally well understood, with each concept being confidently defined by most participants. However, some concepts, such as generation and application, had some disconcerting misconceptions. Some participants believed knowledge generation to be the generation responsible for creating knowledge rather than the act of creating or expanding on knowledge. As for knowledge application, a small group of participants did not understand how knowledge application can work within the physical realm, believing it to be a purely theoretical concept.

6.3.1.2 Research sub-question 2:

Research sub-question 2 was "Is social media collaboration influencing knowledge management?" Social media has become a fundamental element of the daily lives of billions of human beings across the globe. While, traditionally, people interact with one another in the same physical location to create and apply knowledge, social media has enabled an entirely new plane for knowledge management to exist and thrive within. Social media has allowed for knowledge management to take place across organisational departments and international boundaries, at any time of the day or night. The lines separating social media applications designed for personal use and business use are becoming blurred, with the functionality of most applications allowing for collaboration to take place regardless of intended use.

There are, however, applications which people believe are superior to their counterparts when it comes to features which enable effective and efficient collaboration. The research participants indicated Slack and Microsoft Teams as platforms which stand above the rest, enabling the highest possible collaborative potential. Quality, features, quality, reliability, security, comfort and ease of use were resounding elements of their ability to swing users to their use. This is what you would expect from these applications as their purpose for being is to allow users to collaborate in a virtual environment.

However, when it comes to applications designed for personal use, results varied. WhatsApp was seen in two lights: a tool for successful knowledge management and a tool disrupting both collaboration and effective knowledge management. WhatsApp has the potential to allow knowledge to be generated, stored, shared and used, with considerable ease, but it also has the ability to distract, to be insecure and to be open to privacy concerns, especially with organisational intellectual property. Enterprise social media platforms are at a point where knowledge management, through employee collaboration, can be facilitated. However, while the functionality is there, security and people's perceptions of personal social media applications prevent them from being ideal for organisational knowledge management.

6.3.1.3 Research sub-question 3:

Research sub-question 3 was "What are the challenges and barriers associated with social media and knowledge management?" While there are a number of benefits to allowing and enabling knowledge management through social media, it is not without its challenges. Knowledge management cannot thrive within an organisation if employees are reluctant to facilitate and drive it. Hence, a considerable barrier to knowledge management through social media is employee resistance. There are a number of factors contributing to this, with the most prominent being a reluctance to change from existing, increasingly obsolete methods of knowledge management. Employees are hesitant to learn new methods and are overwhelmed by the number of platforms they need to learn how to use.

Three major challenges come in the form of data access, data overload and data accuracy. Access to data is a concern with respect to long term access, platform limitations, data organisation, configuration and access control limitations. With data overload, employees are concerned with the fact that with social media, information and knowledge can be shared at all times, resulting in a constant downpour of knowledge that can overload one's mind and computer, resulting in harmful clutter rather than productive and fruitful knowledge. Data accuracy is a resounding concern. Consistency, credibility and data loss are concepts which require the utmost care. If data is inconsistent, it is impossible to know which can and cannot be used. Credibility is also crucial. There are countless sources of knowledge across people, websites, articles, and co-workers. Ensuring that data is entirely factual and accurate is no small task, and it is one that requires time, patience and resources to get right. Data loss,

especially loss of factual, relevant and verified data, is detrimental to a data-driven organisation.

Knowledge management enabled through social media requires exactly that: social media. The platform of choice, be it an enterprise social media platform, a personal-use social media platform or a mixture of both, must be up to the task. Knowing which platform is right for each organisation is no small task, resulting in many organisations employing several platforms at once, either through mandate or through employees employing their own preferred platforms for use. The result is twofold: firstly, employees are overburdened with the number of platforms they need to learn how to use. The second is that data is being too widely dispersed and losses are inevitable. No one platform seems to be able to do everything that everyone wants it to be able to do, but a solution of having three platforms serving similar purposes is also not acceptable and leads to further employee reluctance to organisational knowledge management through social media.

6.3.2 Research Question Analysis

The primary research question for this study was “What are the key characteristics of social media’s impact on knowledge management?” To aid in the answering of this research question, three sub-research questions were formulated in Chapter 1. These sub-research questions were then answered in Section 6.3.1.

An important element of identifying the abovementioned key characteristics is to ensure that terms of social media and knowledge management are defined and understood, as well as identifying the relationships which exist between them. The literature proposed that the term social media encompasses a number of applications which enable their users to make and spread content of their own making. Furthermore, they allow the users to create, edit, analyse and disseminate content created by others. This ties in well to knowledge management and its components, namely knowledge generation, sharing, storage and application. As a result, social media, as propagated by the literature, has the potential to be an invaluable contributor and facilitator to knowledge management.

The data collected from the questionnaire and interview participants of this study corroborated, enriched and in some cases opposed the findings put forth by the literature.

Knowledge management and its core concepts were understood by the majority of participants, making their input on the various questions asked of them instrumental to this study.

Across the various data sources, a few elements came through as fundamental characteristics of social media's impact on knowledge management. These included social media, its definition, its forms, its types and the platforms available. For both positive and negative reasons, the platform of choice employed within an organisation is the cornerstone of its potential to facilitate knowledge management. The functionality and features of an application, such as its ability to search, archive, record, screen share, send files and organise chats are fundamental to user experience and acceptance of the application. Ease of use, convenience and immediacy all help to navigate employees towards regular use and knowledge management propagation. Quality, reliability and security are also all important factors as if they are not considered employees will resist making use of a platform and hinder knowledge management within an organisation.

While there are a considerably greater number of positive characteristics, there are negatives which mar adoption and negatively influence the potential for knowledge management through social media. This comes in the form of data overload, platform overload, the need to always appear online and data inaccuracy and trustworthiness.

Taking this all into account, the researcher put forth an enriched SECI model. Traditionally, SECI and its phases of socialisation, externalisation, combination and internalisation have been considered to require elements of in-person and virtual interaction. With the newly proposed model, social media forms the central element of the four phases and indicated that there is no separation between in-person and virtual interaction, but rather only virtual interaction enabled through social media.

6.4 REFLECTION

6.4.1 Scientific Reflection

An important first step in determining the methodology for this study was deciding upon a research philosophy to employ in this study. The researcher chose the philosophy of

interpretivism. This allowed the researcher to establish social media's impact on knowledge management by considering the thoughts, feelings, emotions, experiences and beliefs of the employees using social media within the MNSE company under scrutiny in this study. The researcher, who sent out a questionnaire and conducted semi-structured interviews, fulfilled the role of interpreter and observer, making interpretivism the opportune philosophy. Subsequently, a research approach was chosen, with the qualitative approach being chosen over quantitative and mixed methods approaches. The qualitative approach aligns well with the interpretivist approach, enabling the researcher to distribute a questionnaire and conduct semi-structured interviews with special consideration on the respondents' personal feelings and experiences regarding social media's impact on knowledge management within organisations. As mentioned above, a questionnaire was sent out and semi-structured interviews were conducted. This research strategy was employed owing to its alignment with interpretivism and the qualitative approach, along with the nature of the data which was required to write this study. Ultimately, the outcome of this study contributed to the body of knowledge by indicating novel insights into MNSE organisation employees' opinions on social media's impact on knowledge management. These insights outlined a number of fascinating findings which managers and directors of existing and future organisations could take into account when making decisions on their company's employment of social media applications designed for use within business or personal contexts.

6.4.2 Personal Reflection

Owing to the COVID-19 pandemic, and the special circumstances within which it thrust the world, the researcher was presented with a unique challenge in terms of interaction, observation and data collection. Sending out a questionnaire was unaffected, but conducting semi-structured interviews was restricted to only virtual means. Ironically, this presented the researcher with a situation related directly to the phenomena under investigation, whereby knowledge was being generated and shared across the social media platforms employed to conduct the semi-structured interviews. This forced reality offered a unique perspective for the researcher and the research participants and exemplified social media's connection to organisations which operate within the global and virtual environments. Throughout the course of this study being conducted, the researcher learned invaluable lessons about research, organisations, technology and social media, lessons which were employed in this study and have the potential to be employed in future research.

The impact of COVID-19 on the requirement to still share knowledge, albeit digitally, was emphasised through the interviewees having remarked that social media applications have become the most employed form of communication and knowledge sharing within their organisation. This suggests that the propensity to share knowledge remained possible, albeit in a format which was not the accepted norm prior to the pandemic's arrival.

6.5 LIMITATIONS OF THIS STUDY AND FUTURE RESEARCH

This study had one delineation and one limitation. The delineation resulted from the fact that the new data collected in this study was procured from a single MNSE company based in South Africa. As a result, a limitation grew in the form of the findings being unable to be generalised to any other company.

In terms of future research, further research will be required to enhance the data which was collected from only one company for this study. Multiple cases from companies across the globe can enrich, confirm, supplement or possibly negate the findings of this study. Further research will provide for a deeper investigation into social media's impact on knowledge management within organisations.

REFERENCES

Abualoush, S., Masa'deh, R., Bataineh, K., & Alrowwad, A. (2018). The role of knowledge management process and intellectual capital as intermediary variables between knowledge management infrastructure and organization performance. *Interdisciplinary Journal of Information, Knowledge, and Management*, *13*, 279–309. https://doi.org/10.28945/4088

Adamovic, D., Potgieter, A., & Mearns, M. (2012). Knowledge sharing through social media: Investigating trends and technologies in a global marketing and advertising research company. *SA Journal of Information Management*, *14*(1), 1–7. https://doi.org/http://dx.doi.org/10.4102/ sajim.v14i1.514

Adams, S. K., Williford, D. N., Vaccaro, A., Kisler, T. S., Francis, A., & Newman, B. (2017). The young and the restless: Socializing trumps sleep, fear of missing out, and technological distractions in first-year college students students. *International Journal of Adolescence and Youth*, *22*(3), 337–348. https://doi.org/10.1080/02673843.2016.1181557

Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of Economic Perspectives*, *31*(2), 211–236. https://doi.org/10.1257/jep.31.2.211

Annabi, H., McGann, S. T., Pels, S., Arnold, P., & Rivinus, C. (2012). Guidelines to align Communities of Practice with business objectives: An application of social media. *2012 45th Hawaii International Conference on System Sciences*, 3869–3878. https://doi.org/10.1109/HICSS.2012.297

Archer-Brown, C., & Kietzmann, J. (2018). Strategic knowledge management and enterprise social media. *Journal of Knowledge Management*, *22*(6), 1288–1309. https://doi.org/10.1108/JKM-08-2017-0359

Barley, W. C., Treem, J. W., & Kuhn, T. (2018). Valuing multiple trajectories of knowledge: A critical review and agenda for knowledge management research. *Academy of Management Annals*, *12*(1), 278–317. https://doi.org/10.5465/annals.2016.0041

Bartolacci, C., Cristalli, C., Isidori, D., & Niccolini, F. (2016). Ba virtual and inter-organizational evolution: a case study from a EU research project. *Journal of Knowledge Management*, *20*(4), 793–811. https://doi.org/10.1108/JKM-09-2015-0342

Basilaia, G., & Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research*, *5*(4). https://doi.org/https://doi.org/10.29333/pr/7937

Behringer, N., & Sassenberg, K. (2015). Introducing social media for knowledge management: Determinants of employees' intentions to adopt new tools. *Computers in Human Behavior*, *48*(1), 290–296. https://doi.org/10.1016/j.chb.2015.01.069

Bolisani, E., & Bratianu, C. (2018a). The Elusive Definition of Knowledge. In *Knowledge Management and Organizational Learning* (Vol. 4, Issue July). https://doi.org/10.1007/978-3-319-60657-6_1

Bolisani, E., & Bratianu, C. (2018b). The Emergence of Knowledge Management. In *Emergent Knowledge Strategies* (Vol. 4, pp. 23–48). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-60657-6_2

Brammer, S., Linnenluecke, M., & Branicki, L. (2020). Covid-19, societalization, and the future of business in society. *Academy of Management Perspectives*, *34*(4), 493–507. https://doi.org/10.5465/AMP.2019.0053

Cao, J., Gao, H., Li, L. E., & Friedman, B. (2013). Enterprise social network analysis and modeling: A tale of two graphs. *Proceedings - IEEE INFOCOM*, 2382–2390. https://doi.org/10.1109/INFCOM.2013.6567043

Cao, Y., Ajjan, H., Hong, P., & Le, T. (2018). Using social media for competitive business outcomes: An empirical study of companies in China. *Journal of Advances in Management Research*, *15*(2), 211–235. https://doi.org/10.1108/JAMR-05-2017-0060

Chatti, M. A., Klamma, R., Jarke, M., & Naeve, A. (2007). The Web 2.0 Driven SECI Model Based Learning Process. *Seventh IEEE International Conference on Advanced*

Learning Technologies (ICALT 2007), 780–782. https://doi.org/10.1109/ICALT.2007.256

Chauhan, A. (2018). *Integrated Methods of Design Research: A Phenomenographic Approach* (Issue August). https://doi.org/10.13140/RG.2.2.12922.95682

Clarke, C. (2009). Paths between positivism and interpretivism: An appraisal of Hay's via media: Research and analysis. *Political Studies Association*, *29*(1), 28–36. https://doi.org/10.1111/j.1467-9256.2008.01335.x

Corral de Zubielqui, G., Fryges, H., & Jones, J. (2019). Social media, open innovation & HRM: Implications for performance. *Technological Forecasting and Social Change*, *144*(July), 334–347. https://doi.org/10.1016/j.techfore.2017.07.014

De Loo, I., & Lowe, A. (2011). Mixed methods research: don't - "just do it." *Qualitative Research in Accounting & Management*, *8*(1), 22–38. https://doi.org/10.1108/11766091111124685

De Silva, T. (2011). Mixed methods: a reflection of its adoption in environmental reporting. *Qualitative Research in Accounting & Management*, *8*(1), 91–104. https://doi.org/10.1108/11766091111124720

De Villiers, M. R. (2005). Three approaches as pillars for interpretive Information Systems research: development research, action research and grounded theory. *South African Institute of Computer Scientists and Information Technologists*, 142–151.

Dlamini, N. N., & Johnston, K. (2018). The use of social media by South African organisations. *Journal of Advances in Management Research*, *15*(2), 198–210. https://doi.org/10.1108/JAMR-05-2017-0063

Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, *117*(1), 284–289. https://doi.org/doi.org/10.1016/j.jbusres.2020.06.008

Elfil, M., & Negida, A. (2017). Sampling methods in Clinical Research; an Educational Review. *Emergency (Tehran, Iran)*, *5*(1), e52. http://www.ncbi.nlm.nih.gov/pubmed/28286859

Ellis, T. J., & Levy, Y. (2008). Framework of Problem-Based Research: A Guide for Novice Researchers on the Development of a Research-Worthy Problem. *Informing Science: The International Journal of an Emerging Transdiscipline*, *11*.

Etherington, K. (2007). Ethical Research in Reflexive Relationships. *Qualitative Inquiry*, *13*(5), 599–616. https://doi.org/10.1177/1077800407301175

Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Etikan, I., & Bala, K. (2017). Sampling and Sampling Methods. *Biometrics & Biostatistics International Journal*, *5*(6), 5–7. https://doi.org/10.15406/bbij.2017.05.00149

Evans, R. D., Ahumada-Tello, E., & Zammit, J. (2017). Yammer: Investigating its impact on employee knowledge sharing during Product Development. *2017 IEEE Technology and Engineering Management Society Conference, TEMSCON 2017*, 409–414. https://doi.org/10.1109/TEMSCON.2017.7998410

Fauci, A. S., Lane, H. C., & Redfield, R. R. (2020). Covid-19 — Navigating the Uncharted. *New England Journal of Medicine*, *382*(13), 1268–1269. https://doi.org/10.1056/nejme2002387

Feilzer, M. Y. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research*, *4*(1), 6–16. https://doi.org/10.1177/1558689809349691

Ferreira, J., Mueller, J., & Papa, A. (2018). Strategic knowledge management: theory, practice and future challenges. *Journal of Knowledge Management*, *24*(2), 121–126. https://doi.org/10.1108/JKM-07-2018-0461

Ford, D. P., & Mason, R. M. (2013). A Multilevel Perspective of Tensions Between Knowledge Management and Social Media. *Journal of Organizational Computing and Electronic Commerce*, *23*(1–2), 7–33. https://doi.org/10.1080/10919392.2013.748604

Ford, D. P., Mason, R. M., Ford, D. P., Mason, R. M., Management, K., Ford, D. P., & Mason, R. M. (2013). Knowledge Management and Social Media: The Challenges and Benefits. *Journal of Organizational Computing and Electronic Commerce*, *23*(1–2), 1–6. https://doi.org/10.1080/10919392.2013.748603

Garrick, J., & Chan, A. (2017). Knowledge management and professional experience: the uneasy dynamics between tacit knowledge and performativity in organizations. *Journal of Knowledge Management*, *21*(4), 872–884. https://doi.org/10.1108/JKM-02-2017-0058

Golafshani, N. (2003). Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*, *8*(4), 597–607. https://doi.org/10.46743/2160-3715/2003.1870

Goldkhul, G. (2012). Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems*, *21*(2), 135–146.

Gorra, A., & Kornilaki, M. (2010). Grounded theory: experiences of two studies with a focus on axial coding and the use of the NVivo qualitative analysis software. *Methodology: Innovative Approaches to Research*, *9*(1), 76–99.

Gourlay, S. (2003). The SECI model of knowledge creation: Some empirical shortcomings. *4th European Conference on Knowledge Management*, *1*(1), 377–385.

Gregor, S. (2006). The Nature of Theory in Information Systems. *MIS Quarterly: Management Information Systems*, *30*(3), 611–642. https://doi.org/10.2307/25148742

Hanna, P. (2012). Using internet technologies (such as Skype) as a research medium: a research note. *Qualitative Research*, *12*(2), 239– 242. https://doi.org/10.1177/1468794111426607

Hanson, W. E., Creswell, J. W., Plano Clark, V. L., Petska, K. S., & Creswell, J. D. (2005). Mixed Methods Research Designs in Counseling Psychology. *Journal of Counseling Psychology*, *52*(2), 1–13. https://doi.org/10.1037/0022-0167.52.2.224

Harrison, H., Birks, M., Franklin, R., & Mills, J. (2017). Case study research: Foundations and methodological orientations. *Forum Qualitative Sozialforschung*, *18*(1), 1–12. https://doi.org/10.17169

Hauptmann, S., & Steger, T. (2013). "A brave new (digital) world"? Effects of In-house Social Media on HRM. *German Journal of Research in Human Resource Management*, *27*(1), 26–46. https://doi.org/10.1688/1862-0000

He, W. (2012). A review of social media security risks and mitigation techniques. *Journal of Systems and Information Technology*, *14*(2), 171–180. https://doi.org/10.1108/13287261211232180

Hemsley, J., Mason, R. M., Hemsley, J., & Mason, R. M. (2013). Knowledge and Knowledge Management in the Social Media Age. *Journal of Organizational Computing and Electronic Commerce*, *23*(1–2), 138–167. https://doi.org/10.1080/10919392.2013.748614

Holste, J. S., & Fields, D. (2010). Trust and tacit knowledge sharing and use. *Journal of Knowledge Management*, *14*(1), 128–140. https://doi.org/10.1108/13673271011015615

Houston, J. B. (2021). COVID-19 Communication Ecologies: Using Interpersonal, Organizational, and Mediated Communication Resources to Cope With a Pandemic. *American Behavioral Scientist*, *65*(7), 887–892. https://doi.org/10.1177/0002764221992837

Janghorban, R., Roudsari, R. L., & Taghipour, A. (2014). Skype interviewing: The new generation of online synchronous interview in qualitative research. *International Journal of Qualitative Studies on Health and Well-Being*, *9*(1), 1–4. https://doi.org/10.3402/qhw.v9.24152

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher*, *33*(7), 14–26. https://doi.org/10.3102/0013189X033007014

Johnson, R. B., Onwuegbuzie, A. J., & Lisa A. Turner. (2007). Toward a Definition of Mixed Methods Research. *Journal of Mixed Methods Research*, *1*(1), 112–133. https://doi.org/10.1177/1558689806298224

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*(1), 59–68. https://doi.org/10.1016/j.bushor.2009.09.003

Karim, N. S. A., Razi, M. J. M., & Mohamed, N. (2012). Measuring employee readiness for knowledge management using intention to be involved with KM SECI processes. *Business Process Management Journal*, *18*(5), 777–791. https://doi.org/10.1108/14637151211270153

Laitinen, K., & Sivunen, A. (2021). Enablers of and constraints on employees' information sharing on enterprise social media. *Information Technology and People*, *34*(2), 642–665. https://doi.org/10.1108/ITP-04-2019-0186

Lee, C. S., & Kelkar, R. S. (2013). ICT and knowledge management: perspectives from the SECI model. *The Electronic Library*, *31*(2), 226–243. https://doi.org/10.1108/02640471311312401

Lehrer, K. (2015). *Theory of Knowledge*. Routledge. https://doi.org/10.4324/9780203870198

Leidner, D. E., Gonzalez, E., & Koch, H. (2018). An affordance perspective of enterprise social media and organizational socialization. *Journal of Strategic Information Systems*, *27*(2), 117–138. https://doi.org/10.1016/j.jsis.2018.03.003

Leonardi, P. M., Huysman, M., & Steinfield, C. (2013). Enterprise social media: Definition, history, and prospects for the study of social technologies in organizations. *Journal of*

Computer-Mediated Communication, *19*(1), 1–19. https://doi.org/10.1111/jcc4.12029

Lo Iacono, V., Symonds, P., & Brown, D. H. K. (2016). Skype as a Tool for Qualitative Research Interviews. *Sociological Research Online*, *21*(2), 103–117. https://doi.org/10.5153/sro.3952

Luo, X., Zhang, J., & Duan, W. (2013). Social media and firm equity value. *Information Systems Research*, *24*(1), 146–163. https://doi.org/10.1287/isre.1120.0462

Maravilhas, S., & Martins, J. (2019). Strategic knowledge management a digital environment: Tacit and explicit knowledge in Fab Labs. *Journal of Business Research*, *94*(January 2018), 353–359. https://doi.org/10.1016/j.jbusres.2018.01.061

Mardani, A., Nikoosokhan, S., Moradi, M., & Doustar, M. (2018). The Relationship Between Knowledge Management and Innovation Performance. *Journal of High Technology Management Research*, *29*(1), 12–26. https://doi.org/10.1016/j.hitech.2018.04.002

Meldrum, R. C., & Clark, J. (2014). Adolescent Virtual Time Spent Socializing With Peers, Substance Use, and Delinquency. *Crime & Delinquency*, *61*(8), 1104–1126. https://doi.org/10.1177/0011128713492499

Mladenović, D., & Krajina, A. (2020). Knowledge Sharing on Social Media: State of the Art in 2018. *Journal of Business Economics and Management*, *21*(1), 44–63. https://doi.org/https://doi.org/10.3846/jbem.2019.11407

Moghaddam, A. (2006). Coding issues in grounded theory. *Issues in Educational Research*, *16*(1), 47–58.

Mohajan, H. K. (2017). The Impact of Knowledge Management Models for the Development of Organizations. *Journal of Environmental Treatment Techniques 2017*, *5*(1), 12–33.

Murphy, G., & Salomone, S. (2013). Using social media to facilitate knowledge transfer in complex engineering environments: a primer for educators. *European Journal of Engineering Education*, *38*(1), 70–84. https://doi.org/10.1080/03043797.2012.742871

Myers, M. D. (1998). Exemplifying Interpretive Research in Information Systems: An Overview. *Journal of Information Technology*, *13*(4), 233–234. https://doi.org/10.1177/026839629801300402

Myers, M. D. (2019). *Qualitative research in business and management*. Sage Publications Limited.

Myers, M. D., & Avison, D. (2002). *Qualitative Research in Information Systems: a Reader*. Sage.

Neti, S. (2011). Social Media and Its Role in Marketing. *International Journal of Enterprise Computing and Business Systems*, *1*(2), 1–15. https://doi.org/10.4172/2151-6219.1000203

Nisar, T. M., Prabhakar, G., & Strakova, L. (2019). Social media information benefits, knowledge management and smart T organizations. *Journal of Business Research*, *94*(August 2017), 264–272. https://doi.org/10.1016/j.jbusres.2018.05.005

Nissen, M. E., & Bergin, R. D. (2013). Knowledge Work Through Social Media Applications: Team Performance Implications of Immersive Virtual Worlds. *Journal of Organizational Computing and Electronic Commerce*, *23*(1–2), 84–109. https://doi.org/10.1080/10919392.2013.748612

Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*, *5*(1), 14–37. https://doi.org/10.1287/orsc.5.1.14

Nonaka, I., & Konno, N. (1998). The concept of “Ba”: Building a foundation for knowledge creation. *California Management Review*, *40*(3), 40–54. https://doi.org/https://doi.org/10.2307/41165942

Nonaka, I., Krogh, G. Von, & Voelpel, S. (2006). Organizational Knowledge Creation Theory: Evolutionary Paths and Future Advances. *Organization Studies*, *27*(8), 1179–1208. https://doi.org/10.1177/0170840606066312

Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and Leadership: a Unified Model of Dynamic Knowledge Creation. *Long Range Planning*, *33*(1), 5–34. https://doi.org/10.1016/S0024-6301(99)00115-6

Noor, K. B. M. (2008). Case study: A strategic research methodology. *American Journal of Applied Sciences*, *5*(11), 1602–1604. https://doi.org/10.3844/ajassp.2008.1602.1604

Onwuegbuzie, A., & Leech, N. (2007). Sampling Designs in Qualitative Research: Making the Sampling Process More Public. *The Qualitative Report*, *12*(2), 238–254. https://doi.org/10.46743/2160-3715/2007.1636

Parise, S. (2009). Social Media Networks: What Do They Mean for Knowledge Management? *Journal of Information Technology Case and Application Research*, *11*(2), 1–11. https://doi.org/10.1080/15228053.2009.10856156

Parveen, F., Jaafar, N. I., & Ainin, S. (2016). Social media's impact on organizational performance and entrepreneurial orientation in organizations. *Management Decision*, *54*(9), 2208–2234. https://doi.org/10.1108/MD-08-2015-0336

Pinto, M. B. (2014). The Use of Yammer in Higher Education: An Exploratory Study Mary Beth Pinto, Ph.D., Black School of Business Penn State Erie, The Behrend College. *Journal of Educators Online*, *11*(1), 1–33. https://doi.org/10.9743/JEO.2014.1.5

Razmerita, L., Kirchner, K., & Nabeth, T. (2014). Social Media in Organizations: Leveraging Personal and Collective Knowledge Processes. *Journal of Organizational Computing and Electronic Commerce*, *24*(1), 74–93. https://doi.org/10.1080/10919392.2014.866504

Regmi, P. R., Waithaka, E., Paudyal, A., Simkhada, P., & Van Teijlingen, E. (2017). Guide to the design and application of online questionnaire surveys. *Nepal Journal of Epidemiology*, *6*(4), 640–644. https://doi.org/10.3126/nje.v6i4.17258

Rice, J. L., & Rice, B. S. (2005). The applicability of the SECI model to multi- organisational endeavours: an international review. *International Journal of Organisational Behaviour*,

9(8), 671–682.

Richtnér, A., Åhlström, P., & Goffin, K. (2014). “Squeezing R&D”: A Study of Organizational Slack and Knowledge Creation in NPD, Using the SECI Model. *Journal of Product Innovation Management*, *31*(6), 1268–1290. https://doi.org/10.1111/jpim.12139

Ryan, G. (2018). Introduction to positivism, interpretivism and critical theory. *Nurse Researcher*, *25*(4), 14–20. https://doi.org/10.7748/nr.2018.e1466

Sandberg, J., & Alvesson, M. (2011). Ways of constructing research questions : gap-spotting or problematization ? *Organization*, *18*(1), 23–44. https://doi.org/10.1177/1350508410372151

Santoro, G., Vrontis, D., Thrassou, A., & Dezi, L. (2018). The Internet of Things: Building a knowledge management system for open innovation and knowledge management capacity. *Technological Forecasting and Social Change*, *136*, 347–354. https://doi.org/10.1016/j.techfore.2017.02.034

Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive, and Critical Research Paradigms. *English Language Teaching*, *5*(9), 9–16. https://doi.org/10.5539/elt.v5n9p9

Scuotto, V., Giudice, M. Del, & Omeihe, K. O. (2017). SMEs and Mass Collaborative Knowledge Management: Toward Understanding the Role of Social Media Networks. *Information Systems Management*, *34*(3), 280–290. https://doi.org/10.1080/10580530.2017.1330006

Shujahat, M., Hussain, S., Javed, S., Malik, M. I., Thurasamy, R., & Ali, J. (2017). Strategic management model with lens of knowledge management and competitive intelligence: A review approach. *VINE Journal of Information and Knowledge Management Systems*, *47*(1), 55–93. https://doi.org/10.1108/VJIKMS-06-2016-0035

Sigala, M., & Chalkiti, K. (2015). Knowledge management, social media and employee

creativity. *International Journal of Hospitality Management*, *45*(1), 44–58. https://doi.org/10.1016/j.ijhm.2014.11.003

Soto-Acosta, P., Cegarra-Navarro, J.-G., & Garcia-Perez, A. (2017). From the Guest Editors: "Enterprise Social Media for Knowledge Management and Innovation in SMEs." *Information Systems Management*, *34*(3), 203–204. https://doi.org/10.1080/10580530.2017.1329995

Stieglitz, S., & Dang-Xuan, L. (2013). Social media and political communication: a social media analytics framework. *Social Network Analysis and Mining*, *3*(4), 1277–1291. https://doi.org/10.1007/s13278-012-0079-3

Sun, Y., Wang, C., & Jeyaraj, A. (2020). Enterprise social media affordances as enablers of knowledge transfer and creative performance: An empirical study. *Telematics and Informatics*, *51*(December 2019), 101402. https://doi.org/10.1016/j.tele.2020.101402

Tsimonis, G., & Dimitriadis, S. (2014). Brand strategies in social media. *Marketing Intelligence and Planning*, *32*(3), 328–344. https://doi.org/10.1108/MIP-04-2013-0056

van Dijck, J., & Poell, T. (2013). Understanding social media logic. *Media and Communication*, *1*(1), 2–14. https://doi.org/10.12924/mac2013.01010002

VanDoorn, G., & Eklund, A. (2013). Face to facebook: social media and the learning and teaching potential of symmetrical, sychronous communication. *Journal of University Teaching & Learning Practice*, *10*(1), 1–14. https://doi.org/ISSN-1449-9789

Väyrynen, K., Hekkala, R., & Liias, T. (2013). Knowledge Protection Challenges of Social Media Encountered by Organizations. *Journal of Organizational Computing and Electronic Commerce*, *23*(1–2), 34–55. https://doi.org/10.1080/10919392.2013.748607

Vogel, E. A., Rose, J. P., Roberts, L. R., & Eckles, K. (2014). Social comparison, social media, and self-esteem. *Psychology of Popular Media Culture*, *3*(4), 206–222. https://doi.org/10.1037/ppm0000047

Vuori, M. (2012). Exploring uses of social media in a global corporation. *Journal of Systems and Information Technology*, *14*(2), 155–170. https://doi.org/10.1108/13287261211232171

Wang, S. S., & Roubidoux, M. A. (2020). Coronavirus Disease 2019 (COVID-19), Videoconferencing, and Gender. *Journal of the American College of Radiology*, *17*(7), 918–920. https://doi.org/10.1016/j.jacr.2020.05.019

Weick, K. E. (1995). *Sensemaking in organizations* (Vol. 3). Sage.

Wester, K. L. (2011). Publishing Ethical Research: A step-by-step verview. *Journal of Counseling and Development*, *89*(3), 301–307. https://doi.org/10.1002/j.1556-6678.2011.tb00093.x

Whiting, A., & Williams, D. (2013). Why people use social media: a uses and gratifications approach. *Qualitative Market Research: An International Journal*, *16*(4), 362–369. https://doi.org/10.1108/QMR-06-2013-0041

Wiig, K. M. (1995). Knowledge Management Methods: Practical Approaches to Managing Knowledge. In *Schema* (Issue 3). Schema Press, Ltd.

Wright, K. B. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, *10*(3). https://doi.org/doi.org/10.1111/j.1083-6101.2005.tb00259.x

Yates, D., & Paquette, S. (2011). Emergency Knowledge Management and Social Media Technologies: A Case Study of the 2010 Haitian Earthquake. *International Journal of Information Management*, *31*(1), 6–13. https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2010.10.001

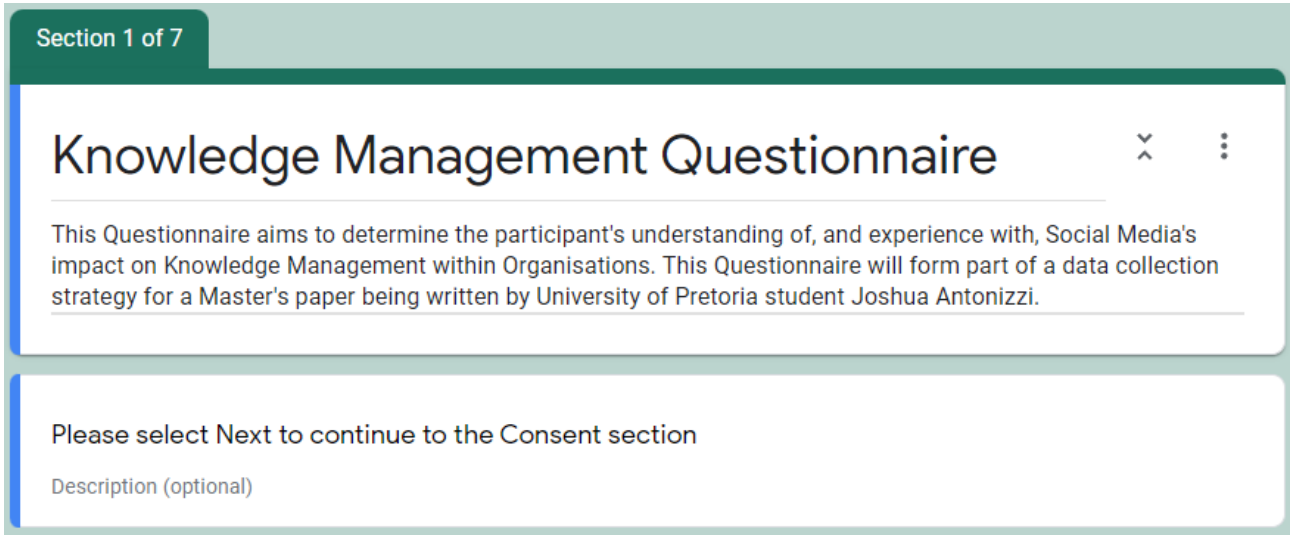
Yin, R. K. (2009). *Case study research: Design and methods* (5th ed.). Sage.

Zafarani, R., Abbasi, M. A., & Liu, H. (2014). Social Media Mining: An Introduction. In

Cambridge University Press (Vol. 9781107018). https://doi.org/10.1017/CBO9781139088510

Zuber-Skerritt, O. (2001). Action Learning and Action Research: Paradigm, Praxis and Programs. In *Effective change Management through Action Learning and Action Research: Concepts, Perspectives, Processes and Applications. Lismore: Southern Cross* (pp. 1–20).

ANNEXURE A: QUESTIONNAIRE



Section 1 of 7

Knowledge Management Questionnaire

This Questionnaire aims to determine the participant's understanding of, and experience with, Social Media's impact on Knowledge Management within Organisations. This Questionnaire will form part of a data collection strategy for a Master's paper being written by University of Pretoria student Joshua Antonizzi.

Please select Next to continue to the Consent section

Description (optional)

Section 2 of 7

Consent

Description (optional)

Research Purpose

This research paper aims to assess the impact that social media has on knowledge management within organisations. This questionnaire seeks to collect data about social media, knowledge management, their relationship and the associated positive and negative effects which this relationship has on organisations.

Privacy, Anonymity and Confidentiality

This questionnaire requires no identifiable personal information of any kind. Your name, email, identification number or any other identifiable metric will not be recorded. Your response will only be collected after you have fully completed this questionnaire and fully consented to participation. If you have provided consent, but later decide to not complete the questionnaire, you can close the questionnaire at any time and no response will be collected. All responses will be stored securely on Google Drive and will be accessible by the researcher alone.

Informed Consent

If you choose to agree to continue with this questionnaire, you will be consenting to the use of the data you provide by the researcher for this research paper only. Please understand that you have the right to choose whether or not to participate and can withdraw this consent at any time. Please understand that the data collected within this questionnaire will be completely confidential and used only for this research paper. Please understand that the results may be published.

If you have any further questions before consenting, or at any time during the questionnaire, please contact either the researcher or the research supervisor using the details below:

Joshua Antonizzi (Researcher) - u15052682@tuks.co.za
Professor Hanlie Smuts (Supervisor) - hanlie.smuts@up.ac.za

After reading and understanding the consent information above, do you consent to participating in this questionnaire, and allow the researcher to use your responses for research purposes? *

- ( ) I consent
- ( ) I do not consent

Section 3 of 7

Knowledge Management Questionnaire

This questionnaire, as previously described, will seek to determine your understanding of, and experience with, Social Media's impact on Knowledge Management within Organisations.

1. What is your job title? *

- ( ) Product Owner
- ( ) Quality Assurance Engineer
- ( ) Software Engineer
- ( ) Support
- ( ) Documentation
- ( ) Business Analyst
- ( ) Sales
- ( ) Marketing
- ( ) Consultant
- ( ) Human Resources
- ( ) Project Manager
- ( ) Specialist
- ( ) Other...

2. What managerial level best describes your position? *

- Executive Management
- Management
- General staff

3. How many years of experience do you have working within your organisation? *

- 1-2
- 3-5
- 6-10
- 11-15
- Over 15 years

4. How many years of experience do you have working with social media platforms designed for business use (Microsoft Teams, Slack, Skype, Google Hangouts, Google Meet, GoToMeeting, etc.) *

- 1-2
- 3-5
- 6-10
- 11-15
- Over 15 years

5. How many years of experience do you have working with social media platforms designed for personal use (WhatsApp, iMessage, Telegram, Signal, Facebook, Twitter, Instagram) *

- ○ 1-2
- ○ 3-5
- ○ 6-10
- ○ 11-15
- ○ Over 15 years

Section 4 of 7

Knowledge Management Questionnaire

This Questionnaire aims to determine the participant's understanding of, and experience with, Social Media's impact on Knowledge Management within Organisations. This Questionnaire will form part of a data collection strategy for a Master's paper being written by University of Pretoria student Joshua Antonizzi.

6. When working with virtual teams, what social media platforms do you employ for written communication? *

- ☐ Slack
- ☐ Microsoft Teams
- ☐ Skype
- ☐ Google Hangouts Chat
- ☐ WhatsApp
- ☐ Telegram
- ☐ Other...

7. When working with virtual teams, what social media platforms do you employ for oratory/ visual communication? *

- [ ] Slack
- [ ] Microsoft Teams
- [ ] Skype
- [ ] Google Hangouts
- [ ] Google Meet
- [ ] GoToMeeting
- [ ] Google Duo
- [ ] WhatsApp
- [ ] Other...

8. When working with virtual teams, what is your PREFERRED social media platform for written communication? *

- ( ) Slack
- ( ) Microsoft Teams
- ( ) Skype
- ( ) Google Hangouts Chat
- ( ) Email
- ( ) WhatsApp
- ( ) Telegram
- ( ) Other...

9. Why do you prefer the above platform above all others? *

Long-answer text

10. When working with virtual teams, what is your PREFERRED social media platform for oratory/ visual communication? *

- Slack
- Microsoft Teams
- Skype
- Google Hangouts
- Google Meet
- GoToMeeting
- Google Duo
- WhatsApp
- Other...

11. Why do you prefer the above platform above all others? *

Long-answer text

12. Please define your understanding of knowledge management. *

Long-answer text

13. Please define your understanding of knowledge sharing. *

Long-answer text

14. Please define your understanding of knowledge generation. *

Long-answer text

15. Please define your understanding of knowledge application. *

Long-answer text

16. Please define your understanding of knowledge storage. *

Long-answer text

17. What, in your opinion, would constitute a positive social media impact on knowledge management? *

Long-answer text

Section 5 of 7

Knowledge Management Questionnaire

This Questionnaire aims to determine the participant's understanding of, and experience with, Social Media's impact on Knowledge Management within Organisations. This Questionnaire will form part of a data collection strategy for a Master's paper being written by University of Pretoria student Joshua Antonizzi.

18. Please indicate which social media platforms you believe have a positive impact on knowledge management within your organisation: *

- [ ] Slack
- [ ] Microsoft Teams
- [ ] Skype
- [ ] Google Hangouts
- [ ] Google Meet
- [ ] GoToMeeting
- [ ] Google Duo
- [ ] WhatsApp
- [ ] None
- [ ] Other...

19. Please provide a reason for your answer above. *

Long-answer text

20. Please indicate the level to which you believe the social media platforms you mentioned above have a positive impact on Knowledge Management and its core concepts within your organisation: (1 being none, 5 being the highest possible) *

	1	2	3	4	5
Knowledge Ma...	○	○	○	○	○
Knowledge Sha...	○	○	○	○	○
Knowledge Gen...	○	○	○	○	○
Knowledge App...	○	○	○	○	○
Knowledge Stor...	○	○	○	○	○

21. Please rank the following social media platforms in the chronological order in which you think they have a positive impact on knowledge management within your organisation (1 - first, 8 - last) *

	1	2	3	4	5	6	7	8
Slack	○	○	○	○	○	○	○	○
Microsof...	○	○	○	○	○	○	○	○
Skype	○	○	○	○	○	○	○	○
Google H...	○	○	○	○	○	○	○	○
Google M...	○	○	○	○	○	○	○	○
GoToMee...	○	○	○	○	○	○	○	○
Google D...	○	○	○	○	○	○	○	○
Whatsapp	○	○	○	○	○	○	○	○

22. Given the social media platform you selected first in the positive rank above, please provide the reason for this selection. *

Long-answer text

23. Please indicate which social media platforms you believe have a negative impact on knowledge management within your organisation: *

- [ ] Slack
- [ ] Microsoft Teams
- [ ] Skype
- [ ] Google Hangouts
- [ ] Google Meet
- [ ] GoToMeeting
- [ ] Google Duo
- [ ] WhatsApp
- [ ] None
- [ ] Other...

24. Please provide a reason for your answer above. *

Long-answer text

25. Please indicate the level to which you believe the social media platforms you mentioned above have a negative impact on Knowledge Management and its core concepts within your organisation: (1 being none, 5 being the highest possible) *

	1	2	3	4	5
Knowledge Ma...	○	○	○	○	○
Knowledge Sha...	○	○	○	○	○
Knowledge Gen...	○	○	○	○	○
Knowledge App...	○	○	○	○	○
Knowledge Stor...	○	○	○	○	○

26. Do you believe your organisation would benefit from increased knowledge management practices, enabled through social media platforms? *

	1	2	3	4	5	
No benefit	○	○	○	○	○	Absolute benefit

27. Please provide an explanation for your answer above. *

Long-answer text

28. What, in your opinion, are challenges or barriers to knowledge management through social media? *

Long-answer text

29. How would you improve your organisation's knowledge management practices through the use of social media?

Long-answer text

30. If you have any comments regarding this questionnaire, or on the topics of social media or knowledge management within organisations, please provide them here. *

Long-answer text

ANNEXURE B: SEMI-STRUCTURED INTERVIEW QUESTIONS

1. What is your job title?
2. What managerial level best describes your position?
3. What country are you from?
4. How many years of experience do you have working within your organisation?
5. How many years of experience do you have working with social media platforms designed for business use (Microsoft Teams, Slack, Skype, Google Hangouts, Google Meet, GoToMeeting, etc.)
6. How many years of experience do you have working with social media platforms designed for personal use (WhatsApp, iMessage, Telegram, Signal, Facebook, Twitter, Instagram)
7. What is your favourite social media platform for written/ oratory/ visual communication at work? Why so?
8. Could you please define your understanding of knowledge management? How, do you believe, knowledge management is impacted on by social media?
9. Could you please define your understanding of knowledge sharing? How, do you believe, knowledge sharing is impacted on by social media?
10. Could you please define your understanding of knowledge generation? How, do you believe, knowledge generation is impacted on by social media?
11. Could you please define your understanding of knowledge application? How, do you believe, knowledge application is impacted on by social media?
12. Could you please define your understanding of knowledge storage? How, do you believe, knowledge storage is impacted on by social media?
13. What, in your opinion, would constitute a positive social media impact on knowledge management?
14. Do you believe your organisation would benefit from an increase in knowledge management practices, enabled through social media platforms? How so?
15. What, in your opinion, are challenges or barriers to knowledge management through social media?
16. Do you have any further comments or opinions on social media's impact on knowledge management?

ANNEXURE C: ETHICAL CLEARANCE LETTER

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie / Lefapha la Boetšenere, Tikologo ya Kago le Theknolotši ya Tshedimošo

Reference number: EBIT/59/2021

Mr JM Antonizzi
Department: Informatics
University of Pretoria
Pretoria
0083

Dear Mr JM Antonizzi

FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY

Your recent application to the EBIT Research Ethics Committee refers.

Conditional approval is granted.

This means that the research project entitled "The Impact of Social Media on Knowledge Management Within Organisations" is approved under the strict conditions indicated below. If these conditions are not met, approval is withdrawn automatically.

Conditions for approval
A signed informed consent form needs to be obtained prior to the interview.

This approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Code of Ethics for Scholarly Activities of the University of Pretoria, or the Policy and Procedures for Responsible Research of the University of Pretoria. These documents are available on the website of the EBIT Ethics Committee.

If action is taken beyond the approved application, approval is withdrawn automatically.

According to the regulations, any relevant problem arising from the study or research methodology as well as any amendments or changes, must be brought to the attention of the EBIT Research Ethics Office.

The Committee must be notified on completion of the project.

The Committee wishes you every success with the research project.

Prof K.-Y. Chan
Chair: Faculty Committee for Research Ethics and Integrity
FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY