The influence of organisational control practices on knowledge production

This is a full-research dissertation presented in fulfilment of the requirements for the Masters of Commerce Degree.

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Abstract

This study explores the relationship between knowledge creation and organisational and managerial control. I explore how organisational control impacts, influences, shapes, fashions and lay the foundation for the creation of the various types of knowledge within a research organisation. In particular, the aim of the study is to explore the influence that organisational control systems have on knowledge workers' capacity to generate new research knowledge.

The literature on knowledge management reveals that there has been a lot of focus on knowledge creation. However, from my review of the literature there have not been sufficient research studies that explore organisational control mechanisms in facilitating or inhibiting the creation of knowledge. In addressing the research problem, this study intends to explore this gap. From an organisational control aspect, I draw on the Foucauldian toolbox using disciplinary power, pastoral power, and technologies of the self. Thereafter I develop a conceptual model in which I integrate knowledge creation and organisational control mechanisms.

The research approach that I employed is a qualitative approach. In particular, I adopted a case study research design. Data was primarily collected using interviews and observation. Data analysis was conducted using a thematic approach. The research site was a national research company with their head office in Cape Town. All individuals within the organisation, including the managing director were comprehensively interviewed.

From the data analysis, using the conceptual model I formulated, I made the claim that mechanisms of organisational and managerial control aided and facilitated certain modes of knowledge creation. Furthermore, the findings highlighted that employees acknowledged that organisational and managerial practices aided them in producing knowledge. The data analysis further confirmed the explanatory power of my conceptual model. The original model was structured on the premise that a particular organisational mechanism was dominate for each of the various stages in the knowledge creation process. The data provided evidence that all organisational control mechanism overlapped for each of the knowledge creation processes and therefore the model was re-worked. However, due to certain limitations, more research in this field is required to be able to explore further the nature of the relationship between knowledge creation and organisational control practices.

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In the Name of Allah, the Beneficent, the Merciful

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Peace and blessings on Prophet Mogammad SAWS, the last of all prophets. His teachings will continuously be my guidance.

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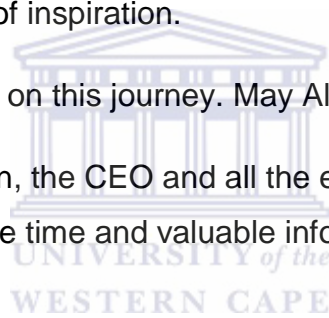
Declaration

I, Mogamat Adeel Sambo, hereby declare that the thesis entitled "*The influence of organisational control practices on knowledge production,*" is my own work and that I have received no other assistance in completing the said work other than stated sources and citations. Furthermore, I declare that this thesis has not been submitted at any other university, college or institution of higher learning for any degree or academic qualification.

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Date: 8 December 2016

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List of Abbreviations

R&D	Research and Development
KM	Knowledge Management
SECI	Socialisation, Externalisation, Combination, Internalisation
HRM	Human Resource Management
CEO	Chief Executive Officer
SOM	Senior Operations Manager
SCSA	Senior Corporative Service Associate
SL	Stream Leader
PLA	Participative Learning Activities
POAW	Preliminary Opportunity Assessment Worksheet
PDP	Project Definition Package
PIR	Project Inception Report
WPRs	Weekly Progress Reports
MPRs	Monthly Progress Reports
SLA	Service Level Agreement
DPR	Daily Progress Report
WAR	Weekly Activity Report

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1. Introduction Chapter

This study explored the effects of organisational control on the knowledge creation process. In essence, this study addressed contemporary organisational control, based on the Foucauldian theoretical framework of disciplinary power, pastoral power and technologies of the self. In terms of the knowledge creation process, this study explored how knowledge is acquired, disseminated and stored as well as how this process is influenced by organisational control.

It is now a common conviction that knowledge is "a key driver of value creation both within firms and within economies" (Heiman, Nickerson, and Zenger, 2009: 25). Knowledge is viewed as a source of competitive advantage while there are those that view it as wealth and others equate knowledge to power. Arguably, it should be acquired whenever and wherever possible. With the increase use of the internet, knowledge has become a core competency within in an organisation, especially when it facilitates to co-ordinate diverse production skills as well as integrates numerous streams of technology. (Prahalad & Hamel, 1990). Knowledge within organisations can comprise of R&D and intellectual property, internet, social media, knowledge economy just to name a few.

Bhatt (2001) states that in an organisational context, knowledge takes form as a resource and capability. In terms of resources, almost the entire organisation's resources including organisational culture and identity, policies, routines, documents, systems, and employees' experiences can be viewed as knowledge resources. The ability of organisations to create knowledge is a core capability and competency in contemporary hyper-changing business contexts. However, there is not enough exploration of how organisations create and co-ordinate knowledge.

In terms of producing knowledge there are those who argue that it is via organisational control that knowledge flows and is embedded within an organisation. All organisations have degrees of control. Some organisations controls are more overt in other organisations. Generally, individuals perceive organisational control negatively and employees feel stifled by organisation control systems (Seeck & Kantola, 2009). Without control, anarchy will prevail within an organisation and therefore control is productive.

The conventional bureaucratic management system seems to be dwindling with the advent of globalisation and stiffer competitiveness. Most large organisations have become less

vertically in structure and more horizontally with fewer stringent controls (Raelin, 2010). We seemed to have entered the post-bureaucratic age of organisations where knowledge production is increasingly tied to covert control. These covert controls need to be explored and more specifically within South Africa to better understand the relationships between organisational controls and knowledge.

1.1. The Research Problem

There is a perception that knowledge creation can be most dynamic in organisations free of any form of control or power. Individuals tend to view any form of organisational control as repressive and dominating.

Power is decentred within organisation's structures, policies, cultures, etc. It is also negotiable in terms of negotiating actions in practice. Power produces particular discourses within organisations and these discourses enact the controls systems of the organisation. It is said that power and knowledge are two sides of the same coin, but how does this relationship come to be in organisations. Knowledge and power are inter-related. Thus, Gordon and Grant (2005), Kelly (2007), Karreman (2010), Rechberg and Syed (2013) and Hislop (2013) indicate that the concept of power within knowledge management remains under-explored.

The problem, as I conceived, is that there is insufficient conceptualisation around the relationship and connections between managerial discretion and managing information. The problem encompasses managers' abilities to disseminate useful knowledge among employees with the hope of achieving the organisation's goals and objectives. When these managers set up controls in guiding employees in embracing the organisation's culture and to condition themselves in aligning their needs to the objectives of the organisation, then how do these systems, policies, and structures influence the creation or destruction of information and knowledge. In other words, the influence of organisational control may facilitate or inhibit the knowledge creation process within an organisation.

Many scholars discuss knowledge, its creation, the dissemination and the storing of knowledge but there are those who do not consider the platform on which knowledge should be shared or created. Some scholars speak about managing knowledge through management systems while others seek to exercise knowledge governance as a means of power to permit the creation of knowledge.

The problem I envisage and what this study explored is how do management systems, policies and process aid in the creation, dissemination and storing of knowledge.

To elaborate on my research problem, in my experience, I was introduced to an organisation where the managing director instituted various rules, management decisions, policies and procedures, unspoken institutional way of doing things. He believed that the organisation could be observed through the implementation of certain management control practices as a knowledge creation organisation. To address the research problem, this study conducted in-depth interviews with the employees of a research organisation. The research organisation's head office is in Cape Town with an office in Johannesburg. Prior to conducting any interviews, consent and ethical clearance from the University of Western Cape was provided.

Both from a theoretical and practical perspective there is a mystery around information and knowledge innovation and trying to have a hold over this process. This led me to my research question.

1.2. Research Question

Based on the research problem, I propose the following primary research question:

➢ How is the production of knowledge within a research organisation influenced by managerial control practices?

In addition, I explore the following secondary research questions:

- How do managerial controls enhance knowledge creation?
- How do managerial controls impede knowledge creation?
- How do managers use organisational controls to enable knowledge management?

1.3. Research Objective

The primary objective of this study is:

Exploring how managerial control practices influence the knowledge generation process

The secondary objectives are:

- Determining the way in which organisational and managerial controls enhance knowledge creation
- Determining the way organisational and managerial controls impede knowledge creation
- Exploring managers' usage of organisational control to enact knowledge management system

Limitations of the study

With regard to the limitations of this study, research was conducted on a single research organisation. Interviews were only conducted at the head office that is situated in Cape Town, South Africa. Although the organisation has two offices, none of the employees in the other geographical area (Gauteng province) was interviewed. In addition, the organisation in which the research was carried out consisted of ten to fifteen fulltime employees situated in Cape Town. At the time of the research study, only ten employees were available to partake in the research study. None of the temporary employees (fieldworkers) was interviewed. Furthermore, no specification on race or gender has been considered during the analysis of the results.

Structure of the Thesis

The structure of the thesis is divided into four interrelated parts.

Part 1: Theoretical and Contextual premise (Chapters 2 and 3)

Part 2: Research Methodology (Chapter 4)

Part 3: Research Results, Analysis and Discussions (Chapter 5)

Part 4: Conclusion and Recommendation (Chapter 6)

Part 1 consists of distinctively of two sections. The first section, Chapter 2 is titled, the literature review. This part is segmented into two sub topics. The first part of the chapter, explore knowledge by seeking an unambiguous definition of knowledge and, investigating general typologies of knowledge. The literature scrutinise the knowledge creation process and review knowledge governance and other forms of knowledge management literature.

The latter part of Chapter 2, review the different organisational control mechanisms, more specifically, the literature highlights the Foucauldian typologies of power.

Chapter 3 consists of a conceptual model based on the review of chapter 2. It aims at conjugating the knowledge creation process with organisational control through contextualising the different processes.

Part 2 consists of the research methodology, research paradigm and data collection methods. It provides a brief overview of the sampling technique as well and how the data was collected.

Part 3 explores, explains and discusses the results. The conceptual model is used as a tool for analysing the results and analysis is drawn. Prior to analysing the results, an overview of the organisation is provided illustrating the management practices implemented.

Part 4 comprises of the concluding statements of the study. The conclusion draws on each of the research questions and a summation of the results are discussed. The chapter concludes with a recommendation based on the overall study.

1.4. Concluding thoughts

In this chapter, I briefly introduced the importance of knowledge from an organisational perspective. I identified the research problem, highlighted the research objectives and identified my research question. To answer my research question I used a qualitative approach specifically a case study research design because I wanted to explore the topic in depth and in a real-life situation. In-depth interviews were conducted among key employees involved in a research organisation. This included interviewing the chief executive officer, senior managers, middle management and regional field managers. The research site was a national research company with their head office in Cape Town. The research organisation was purposively selected and is a Small, Medium and Micro-sized Enterprise (SMME) competing in the research services market.

2. Literature Review Chapter

2.1. Introduction

Any new research is based on previous knowledge. By interacting with the scholarly literature related to the topic, multiple perspectives and insights can be accumulated on a particular subject. It is the foundation for the new research. I am compiling a literature review to explore my research question, namely, "How is the production of knowledge within a research organisation influenced by managerial control practices?"

In this literature review, I explore the literature concerning knowledge, knowledge creation and organisational control. The literature review seeks to understand knowledge, its taxonomies before exploring the usage of knowledge. Thereafter, I explore the literature on organisational control.

To address the primary research objective, I examine Nonaka's knowledge creation theory. It has received a lot of interest since the mid-1990 and is proclaimed as one of the best and most persuasive models in knowledge strategy literature (Fascia, 2012). In addition, Nonaka's knowledge creation model is one of the most cited models, (more than 5000 citations) with regards to knowledge creation. Furthermore, Nonaka has written many articles with other authors building on his initial ideas relating to knowledge creation and knowledge management. Based on the large number of citations, I have decided to adopt Nonaka's knowledge creation model to address my research problem.

In terms of organisational control, the literature review provides a brief overview on knowledge governance and further explores the influence that management control mechanisms have on the development of knowledge in an organisation. Within the domain of organisational control, I draw on the Foucauldian notions of power and use it as a framework for examining the different techniques of powers as mechanisms for organisational control.

Through exploring the literature, I hope to create a theoretical understanding of knowledge creation and its relationship to organisational control.

2.1.1. Thematic overview of knowledge

Exploring what is knowledge has occupied philosophers for eons. The most common definition of knowledge is that it is "justified true belief" (Nonaka, Toyama and Konno,

2000a: 7). Knowledge occurs through the emergence from the application, analysis and creative use of data and or information (Hislop, 2005). Knowledge is therefore information that is intellectually processed and interpreted with meaning that is organised and related with current systems of philosophies and bodies of knowledge. Churchman's (1971) concludes that knowledge exists in the individual and not in the accumulation of information. It is how the individual responds to the acquisition of knowledge, is important (Fascia, 2012). Marakas, 1999 as cited by Bhatt (2001) further states that knowledge is "meaning" comprehended by the brain. Without making sense knowledge will remain information or data. When individuals interpret data, it becomes information and the fusion of the information becomes knowledge. Generally, regarding data to be raw facts, information is the systemisation of data and describing knowledge as information that makes sense (Bhatt, 2001).

2.1.2. Information and Knowledge

Information and knowledge need to be critically differentiated. Information is processed data and possibly existing within computers whereas humans process knowledge. Therefore, knowledge can be delineated as comprehendible, cognisant and observable or as acquired experience over the course of time. It is how individual interprets the information based on personal experiences, expertise and capabilities (Bollinger & Smith, 2001). Previous perceptions of knowledge were that knowledge is as an external resource capable of influencing operational purposes. Whereas now, knowledge needs to be integrated in these functions as key elements. This is a challenging undertaking considering the characteristics of it as intangible (Bratianu & Orzea, 2012). Thompson and Walsham (2004) claim that because knowledge is a personal viewpoint of an individual's experience, related problems are inseparably linked to the context of the knowledge itself. This claim supports a view that subjectivity is the defining attribute surrounding the content of knowledge. Alvesson and Karreman (2001) further emphasise that due to this subjective definition, problems connected with knowledge are indeed a common occurrence. In addition, they state knowledge is difficult to describe and manage because it is an equivocal, undefined and a dynamic development. Szulanski (2000: 2) endeavour to settle the knowledge definition by stating that knowledge is merely a "causally ambiguous set of routines". However, there are various definition of knowledge but as further stated by Alvesson and Karreman (2001), there is no definition that has been agreed upon within management literature, thus causing knowledge to be ambiguous, general and an activity to marvel over.

Despite contradictory viewpoints on the definition of knowledge, I will use the definition provided by Nonaka, et al., (2000a). They state that knowledge is based on sufficient information that an individual gathers and provides proof that it can be truthful and justified.

Knowledge is a core component to advancing economies and crucial to an organisation's performance. Organisations need to become more knowledge intensive (Hislop, 2005).

2.1.3. Categorization of Knowledge

Many knowledge theorists have classified knowledge into two categories namely, explicit knowledge and tacit knowledge. Nonaka (1994) suggest that tacit and explicit knowledge are complementary rather than exclusive. In other words, all knowledge has a tacit dimension. Explicit knowledge can be expressed through articulation, formally expressed in terms of writing of instructions and shared in a variety of ways and that variation exists between tacit and explicit knowledge as well as the magnitude to which they should be distinguished (Nonaka, et al, 2000a ; (Nonaka & Peltokorpi, 2006). Tacit knowledge is a critical resource that can provide an organisation with a competitive advantage (Bhatt, 2001). Nonaka, et al (2000a), accentuate that tacit knowledge is difficult to express and is embedded in actions, systems, emotions, ideas and therefore becomes difficult to formulate. Expressing knowledge, constructing sentences and illustrating in writing and drawings is explicit in nature. This makes it available through consciousness. Knowledge related to physical experiences, motor skills, unspoken mental modes is tacit in nature (von Krogh & Nonaka, 2009).

Different categories of knowledge are highlighted by Singley and Anderson (1989) who claim that knowledge can either be declarative or routinely. Declarative knowledge is similar to knowledge pertaining to facts and therefore adequately comparing it to explicit knowledge. Routinely knowledge on the other hand relate to processes, "know how" and can therefore be categorised as tacit knowledge (Fascia, 2012). Bhatt (2001) states that organisations hold two types of knowledge, namely, foreground knowledge and background knowledge. Foreground knowledge is easier to interpret, replicate and capture. Background knowledge is tacit as it difficult to copy and duplicate. To emphasise the different types of knowledge, Fascia (2012) enunciates that knowledge can be categorised into two attributes, embedded and migratory. Migratory knowledge can be easily understandable as documenting into a codified form. Attributing to the organisation's culture, relationships that exist amongst individuals and teams, decision-making systems and the methods used in the organisation is embedded knowledge, as it is less receptive.

Nonaka & Takeuchi (1995) following Polanyi (1975) suggest that organisational knowledge comprise of two types. It is easy to understand and interpret explicit knowledge while delineating tacit knowledge is difficult for expertise to explain or interpret (Smith, Collins & Clark (2005). On the other hand, Tsoukas (1996) debates that one cannot convert tacit knowledge to explicit knowledge and that this is only attainable through "numberless experiences". He further states that there is a misconception of tacit knowledge in management studies (Fascia, 2012). Nevertheless, Nonaka and Takeuchi (1995) clarify tacit knowledge as "knowledge not yet articulated" and it is knowledge that is in the translating and converting process into explicit knowledge. Numerous management studies have agreed to this process. Through their experiences, specialists can transfer their tacit knowledge to others by translating or organising through routine operating standards (Yakhlef, 2010).

Recently, conceptualizations of knowledge as practice-based have been suggested, providing a substitute to the multiple viewpoints of knowledge. Instead of considering knowledge as acquired, analysed, disseminated and collected across various organisational context, the knowledge as a practice approach, highlights the individual's participation in acquiring knowledge. Its core approach is embedded in understanding the knowledge process (Hong, 2011). Practice refers to a useful individual activity inclusive of physical and cognitive elements that are inseparable. The development and usage of knowledge is regarded as a core activity. The practice-based knowledge is inseparable from practice and not just a codified object as the practice of knowledge is how the individual acts on what he knows. In addition, knowledge is embedded in people through culture and socialisation. It is also multi-dimensional as it can be tacit and explicit. Knowledge is contestable as skills are constantly being improved upon (Hislop, 2005).

Based on one of the secondary research objectives, exploring managers' usage of organisational control to enact knowledge management systems, the next subsection explore literature on knowledge management.

2.1.4. Knowledge Management
Another construct that is important in the knowledge debates is knowledge management (KM). There are various conceptualisation of KM. Knowledge management from a practice-based perspective indicates that knowledge should be applied through interaction and communication. Trust should exist as knowledge is shared amongst peers (Hislop,

2005). KM requirements can be considered from three perspectives (Alavi & Leidner, 2001):

- Information-based,
- Technology-based and
- Culture-based

Bollinger and Smith (2001) states that organisations need to manage knowledge as a core competency consisting of the skills and experiences of employees. It is therefore important for organisations to acquire systems that will permit the retention and expansion of knowledge. KM, if strategically applied, can result in an organisation achieving competitive advantage.

According to Michailova & Foss (2009: 3), with the strategic management field there has developed "a number of approaches emphasizing knowledge (Grant, 1996) and giving knowledge assets a centre stage". KM research focuses on providing managers with the knowledge to acquire, disseminate and store the organisation's tacit and explicit knowledge. Knowledge has become an integral part to an organisation due to the increase awareness and advantages it offers. The increased awareness of knowledge is aided by information technologies that allows for the storing and easy access to the acquired knowledge (Easterby-Smith & Prietow, 2008). Explicit knowledge management systems include databases, groupware, internet, intranet and other related systems. Tacit knowledge can only be stored in the human intellect and therefore the conversion of tacit knowledge to explicit knowledge is important (Fascia, 2012). However, a distinction exists between organisational knowledge and knowledge management. Knowledge management is more interested in formulating, classifying and leveraging knowledge for an organisation in order to sustain a competitive advantage. Organisational knowledge as explained by Nonaka (1995) is the creation of interaction between tacit knowledge and explicit knowledge. Nonetheless, both are derived to be beneficial to the organisation and are therefore seen as complementary rather than exclusive (Easterby-Smith & Prietow, 2008). If the practice of knowledge management is the characteristics of an organisational culture and knowledge acquired by individuals, then organisational knowledge could be conceptualised as a strategic asset. The criteria for a resource to be a strategic asset is that it must be valuable, unique, inimitable and not easily substitutable (Bollinger & Smith, 2001). Hislop (2005) expresses that many organisations have initiated several knowledge management projects but many have either not totally succeeded or have completely failed. Research has indicated that failure was largely due to social and cultural factors as

well as management oversight to consider these factors when deciding to manage their knowledge.

An individual's inclination to share information should not be taken for granted. As mentioned earlier, failure to management was due to social and cultural elements. Individual's unwillingness to share knowledge is also due to the following factors in the table below. Intergroup/personal conflict is a crucial feature that can significantly affect the sharing of knowledge among workers. These conflicts can also result in how the worker's status level within the organisation is affected when they share knowledge. Sense of equity/fairness in organisational processes is based on the fairness of the decision-making process undertaken by an organisation. The organisation will determine who are involved in making decisions. This impact upon the worker to share knowledge as they want to be seen as a value to the organisation and will hoard knowledge if they perceive the organisation as being unfair in selecting decision makers. In terms of Interpersonal trust, the worker is reluctant to share knowledge if there is no trust that everyone will partake in sharing of knowledge. The worker might feel he/she has lost out by sharing knowledge and gaining nothing in return.

Table 1: Factors affecting people's willingness to share knowledge

Factors affecting people's willingness to share knowledge	Case study examples
Intergroup/Personal Conflict	De Long & Fahey 2000; Empson 2001; Newell et al. 2000; Storey & Barnett 2000; Ward 2000
Concerns over whether status/expertise affected	Morris 2001; Willman et al. 2001; Andrew & Delahaye 2001
Sense of equity/fairness in organisational processes	Kim & Mauborgne 1998
Interpersonal trust	Andrew & Delahaye 2001; Morris & Empson 1998; Roberts 2000
Organisational commitment	Storey & Quintas 2001; Guest & Patch 2000; Byrne 2000
General organisational culture	De Long & Fahey 2000; McDermott & O'Dell 2001; Pan & Scarbrough 1999; Ribiere 2001; Robertson & O'Malley Hammersley 2000; Robertson & Swan 2003
HRM Practices (reward/recognition)	Beaumont & Hunter 2002; Hansen et al. 1999; Hunter et al. 2002; Jarvenpaa & Staples 2000; Swart & Kinnie 2003
Visibility of knowledge, attitudes and values to senior level of organisational hierarchy	Ciborra & Patrotta 1998; Hayes & Walsham 2000

Cited by (Hislop, 2005)

In table 1, workers willingness to share knowledge is based on their commitment to the organisation. This commitment is also influenced by the amount of trust an employee has in the organisation. Hislop (2005) further states that organisational culture and human resource management practices have a significant impact on knowledge sharing initiatives concerning training and remunerations. Lastly, the table highlights the concerns of how subordinates will be treated when they share knowledge with senior managers. This could impede on employees sharing knowledge to senior staff employees.

The establishment of knowledge management in numerous organisations concentrates mostly on technology and more particular on information technology (Alavi & Leidner, 2001). Managers in many organisations believe that as soon as the desired technology is in place, the correct knowledge sharing behaviour will ultimately continue. However, the largest obstacle that management faces is the willingness of employees to share their knowledge with the rest of the staff (Chumg, Seaton, Cooke & Ding, 2016). They further state that studies have indicated that individuals share knowledge out of selflessness and the pleasure attained in assisting others.

2.1.4.1. Communities of Practice

Hislop (2005) emphasises that much of the literature written on knowledge management, communities of practice have been the most popular. More prescriptively, a vast number of authors have indicated that communities of practices are crucial to knowledge management inventiveness. Communities of practice are casual clusters of individuals who share familiar work-related experiences. In addition, a community of practice is defined as an exclusive taxonomy of three components; a sphere of knowledge that outlines a group of subjects; a cluster of individuals who portrays an interest in the domain of knowledge and lastly, the shared practice that these individuals develop in order to be operative in their domain (Karvalics, 2009). Communities of practice are developing in organisations that succeed on knowledge. Firstly, managers need to identify what these communities are and how they function. Secondly, managers should recognise that these communities are hidden jewels in knowledge development and are therefore essential to challenge knowledge economies. Lastly, managers should thrive to develop these informal structures into the organisation in order to implement them strategically (Wenger & Snyder, 2000). Communities of practice are closely connected with practice-based philosophy where it presumes that knowledge that individuals have is indivisible from the functions that individuals execute. In addition, unlike formal employees, communities of

practices are not linked to a specific organisation and as such are not registered to a particular organisation. He further states that there are many advantages of communities of practice in organisational knowledge processes. It assists in the disseminating and supporting of knowledge as well as encourages individual and group learning (Hislop, 2005).

The figure 1 provides a snapshot comparison of characteristics between community of practice, formal work groups, teams and informal networks.

Figure 1: Characteristics of different groups

	What's the purpose?	Who belongs?	What holds it together?	How long does it last?
Community of practice	To develop members' capabilities; to build and exchange knowledge	Members who select themselves	Passion, commitment, and identification with the group's expertise	As long as there is interest in maintaining the group
Formal work group	To deliver a product or service	Everyone who reports to the group's manager	Job requirements and common goals	Until the next reorganization
Project team	To accomplish a specified task	Employees assigned by senior management	The project's milestones and goals	Until the project has been completed
Informal network	To collect and pass on business information	Friends and business acquaintances	Mutual needs	As long as people have a reason to connect

(Wenger & Snyder, 2000)

Communities of practice can equally constrain and enable the knowledge process. Consequences of power and conflict within communities associated with a powerful community identity may constrain the knowledge sharing process. Nevertheless, literature on communities of practice depicts an affirmative image of them (Hislop, 2005).

2.1.4.2. Organisational Learning

Another theoretical perspective that attempts to explore knowledge creation is the organisational learning perspective. Organisation learning is the process by which the organisation constantly questions existing product, process and system, identify strategic position, and apply various modes of learning, to achieve sustained competitive advantage (Wang & Ahmed, 2002). Organisational learning "is the exchange of interactions, policies, and procedures that emerge from the collectivity of individuals learning, continuous improvement, the development of culture, innovation, and systems operations" (Valerie & London, 2015: 163). They further explicate that learning organisations through their people

and groups are able to execute this as they possess the culture, structure and resources to aid and inspire on-going organisational learning. Organisation learning is often associated with an organisation having to discard certain learning methods previously implemented in order to make milestone improvements. To operate competently in the marketplace, a learning organisation should continuously improve in its management procedures by improving its knowledge base, strengthen capabilities strategically and be able to focus on the organisation's specific situation (Wang & Ahmed, 2002).

Organisational learning is a vibrant and ongoing developing process, construing, assimilating never stagnant. Individuals and groups share new knowledge among each other through technology and other forms for the betterment of doing things (Wenger & Snyder, 2000). Wang and Ahmed (2002) identify five concepts to help with organisational learning. These six concepts are:

1. Individual learning
2. Process or system
3. Culture and metaphor
4. Knowledge management
5. Continuous improvements
6. Innovation and creativity

Table 2 provides a more comprehensive explanation the five concepts and practices.

Table 2: Summary of organisational learning concepts and practices

Focus	Concepts of organisation learning	Practices
Individual learning	"Organisational learning occurs when individuals within an organisation experience a problematic situation and inquire into it on the organisational behalf" (Argyris & Schon, 1996 p. 16)	Training & development of staff
Process or system	Organisational learning is the procedure where organisations comprehend and administer their experiences (Glynn *et al* 1992)	Development of information systems and problem solving capabilities
Culture and metaphor	"A learning organisation should be viewed as a metaphor rather than a distinct type of structure, whose employees learn conscious communal processes for continually generating, retaining and leveraging individual and collective learning to improve performance of the organisational system in ways important to all stakeholders and by monitoring and improving performance" (Drew & Smith, 1995)	Creating and sustaining a learning culture: This is achievable through shared teamwork, empowering of employees and establishing employee commitment.
Knowledge management	Organisational learning is the changes	Assistance of interaction and

Focus	Concepts of organisation learning	Practices
	in the state of knowledge (Lyles, 1992, 1998). Involves knowledge acquisition, dissemination, refinement, creation and implementation: the ability to acquire diverse information and to share common understanding so that this knowledge can be exploited (Fiol, 1994) and the ability to develop insights, knowledge, and to associate among past and future activities (Fiol & Lyles, 1985)	consolidation of knowledge platforms
Continuous improvements	"A learning organisation should consciously and intentionally devote to the facilitation of individual learning in order to continuously transform the entire organisation and its context (Pedler *et al* 1991)	The adoption of Total Quality Management (TQM) practices. Long-term success through customer satisfaction
Innovation and creativity	In the business perspective, organisation learning is the method by which the organisation continually questions existing product, procedure and structure, recognising strategic position, applying numerous methods of learning, and strive to attain sustained competitive advantage	Assisting with triple-loop learning and knowledge creation; focus on creative quality and value innovation

(Wang & Ahmed, 2002)

They further highlight that successful implementation of organisational learning requires an effective blend of focuses according to the organisation's specific situations.

I have briefly highlighted some of the theoretical perspectives related to knowledge, such being, knowledge taxonomies, knowledge management, knowledge from practice-based epistemology, communities of practice and organisational learning.

Nonaka and Toyama (2005) state that within Western philosophy knowledge can be delineated as 'justified true belief'. They further claim that knowledge is "objective, absolute and context-free". In addition, von Krogh and Nonaka (2009) explain that information that is processed brings about "true" perception of the organisation or individual's reality. Reality therefore serves as a benchmark to which the truth can be measured (von Krogh & Nonaka, 2009). To explain knowledge is to describe it as dynamic. Furthermore, they proclaim that knowledge is "context-specific" and without the context, the knowledge has no meaning. When an individual makes sense of information, it becomes knowledge.

Western epistemology has always seen knowledge as explicit but to comprehend the real essence of knowledge we need to acknowledge that both tacit and explicit knowledge is the core to knowledge creation (Nonaka, et al., 2000a). Undertaking knowledge creation only through theoretical thinking is not possible, unless accomplishing it through physical experience as well (Wang & Ahmed, 2002). To contribute further to the knowledge

conversion process, Marsick and Watson (1999) state that organisations are incorporating knowledge creation in developing employees to enhance their potentiality in fulfilling the organisation's goals.

However, in my research, I employ Nonaka and associates' knowledge creation model. The premise of the research objective is to explore the influence of organisational control on the knowledge creation process.

2.2. Knowledge Creation
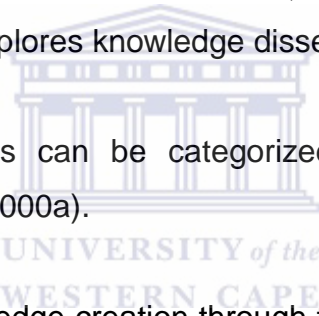
Resources are assets that an organisation possesses and how it is used in achieving the organisation's objectives. Human resources comprise of an employee's knowledge and skill sets and are an intangible resource (Grant & Jordan, 2012). In the knowledge-based view of the firm organisations are perceived as knowledge creating organisations. Maintaining the ability to generate and develop knowledge is thus the most important resource of an organisation for upholding a competitive advantage (Nonaka, Toyama & Nagata, 2000b). Lynn, Morone & Paulson (1996) as cited by Bhatt (2001) proclaim that knowledge creation is an occurring and crucial process that motivates, inspires and cause one to experiment. Nonaka, et al (2000a) define knowledge creation as a process through which an individual surpasses his old self through the acquisition of new information to become a new enriched self and views the world through an improved lens. It is a process of becoming. Smith, Collins & Clark (2005), refers to Boland & Tenkasi, (1995) that knowledge creation is dependent on the firm's expertise. The connection between key employees with other stakeholders is crucial in determining the extraction of knowledge in the exchange and combination process. As previously mentioned, Nonaka (1984) states that knowledge creation as a "justified true belief" and human beings only hold this viewpoint. Therefore, the existence of knowledge is dependent on human subjectivity and the circumstances that incumbent's humans. On the other hand, truth differs from individual to individual as well as in our values and from our perceptions. In organisational knowledge creation, the subtleties of human subjectivities aid us in creating new knowledge (Nonaka & Toyama, 2005).

Organisational knowledge creation is the method of creating availability and magnifying knowledge created by individuals as well as to clarify and to connect it to an organisation's knowledge process (von Krogh & Nonaka, 2009). Bhatt (2001) explains that organisational knowledge occur when exclusive methods of interaction among people, processes and methods which cannot be replicated or duplicated by other organisations as these

collaborations are exclusive to a specific organisation. Kogut & Zander (1992); Nonaka & Takeuchi (1995) proposes that organisational knowledge creation is reliant on the members of the organisation to interchange and connect existing information, knowledge and concepts, as cited by Smith, Collins & Clark (2005). In addition, Nonaka & Toyama (2005) suggest that commitment by the individual is of paramount importance for acquiring knowledge. In other words, the individual must have the intention and have an active approachable concept that assumes the way they approach the world (Agile Innovation, 2010). Some organisations have applied part of the knowledge creation process but had to make some modifications to their original organisational structure (Nonaka & Konno, 1998).

To explain the knowledge creation process my research study will use the theoretical framework of Nonaka, Toyama, & Konno, (2000a) as it have been accepted by a diversity of management disciplines, including, organisational learning, new product developments, information technology and joint ventures. In addition, the model incorporates more than just knowledge creation; it also explores knowledge dissemination (Choi & Lee, 2002).

The knowledge creation process can be categorized under three elements. These components are (Nonaka, et al., 2000a).

   i.   The SECI process – knowledge creation through the transition between explicit and tacit knowledge consisting of Socialisation, Externalisation, Combination and Internalisation

   ii.   Ba – context that are shared for knowledge creation

   iii.   Knowledge assets – inputs, outputs and mediation of the knowledge creation process

I will now discuss each of the three elements of the knowledge creation model.

2.2.1. SECI Process – The Knowledge Conversion Process

Work conducted by Nonaka and Takeuchi (1995) expounded a theory of organisational knowledge creation which they labelled as the SECI Model (Socialisation Externalisation Combination Internalisation, see figure 2). In this model, they explain, "A spiral is created when the conversion of tacit and explicit knowledge results in higher epistemological and ontological levels".

Figure 2: The SECI Process
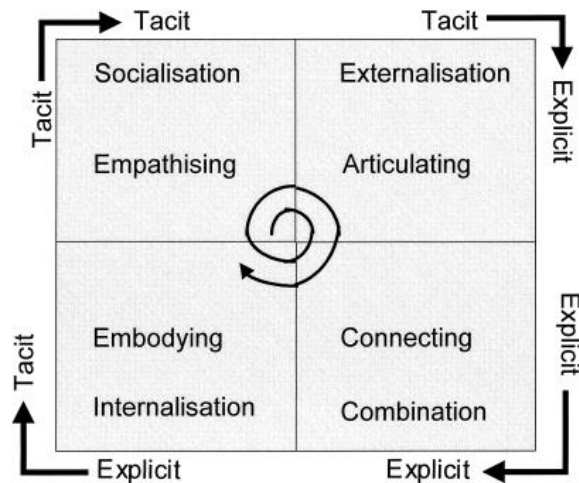
(Nonaka, et al, 2000a)

Nonaka and Takeuchi demonstrated in their model that knowledge is created through the spiral process of reflecting and sharing. This is process include converting tacit knowledge to tacit knowledge (Socialisation), tacit knowledge to explicit knowledge (Externalisation), explicit knowledge to explicit knowledge (Combination) and explicit knowledge to tacit knowledge (Internalisation). Through these processes (SECI), creating knowledge through the rectification of management practices. The SECI Model typifies the prominence of knowledge in an organisational environment and has established a starting point to analyse knowledge. The model has developed into the keystone of knowledge creation theory concerning factors related to explicit knowledge and tacit knowledge. In addition, it has allowed a platform to examine these categories in an organisational context (Fascia, 2012). On the other hand, Nonaka's SECI Model discards what he refers to as the "mechanistic" outlook of the organisation through which intervention by means of training is necessary to introduce double loop learning which brings about innovation. Referring more to the model as "information process", where building continuous knowledge creation into the constructs of an organisation as a creator of knowledge (Agile Innovation, 2010).

Gourlay (2003) criticised the SECI model as inconclusive and there are those that state only two of the four processes can be validated. He further states that the model is a procedural model and therefore further validation is required to validate the process.

Organisations create knowledge whereby individuals exchange explicit and tacit knowledge through a transitional process. There are four ways to convert knowledge. Nonaka and Toyama (1995) have created the SECI Model. The SECI Model is built on the

premise that organisations knowledge creation centres and not just information processes. In order for the SECI Model to be effective there need to exist static business pressures and a continuous change in the business environment (Agile Innovation, 2010). The focal point of knowledge creation can be found in the usage and conversion of tacit knowledge to explicit knowledge. The first component of the knowledge creation process is in the SECI Model (Lin & Wu, 2005). The knowledge creation process that consist of Socialisation, Externalisation, Combination and Internalisation enables an individual's knowledge to be verified socially and combined with other individuals' knowledge thus causing knowledge to continuously expand (Nonaka & Toyama, 2005).

     i)   Socialisation - from tacit to tacit. Sharing experiences that individuals are able to build on their tacit knowledge. An example of this would be through mentoring, job shadowing. It can also be achieved when individuals get together and share their experiences that form the basis of their tacit knowledge. Interaction with suppliers and customers assist in accumulating tacit knowledge (Nonaka, et al., 2000a).

The term "socialisation" refers to the importance of collective activities as it entails converting new tacit knowledge through experiences that are shared (Nonaka & Nishiguchi, 2001). Socialisation occurs through the sharing and experiences of tacit knowledge from individual to individual (Corno, et al., 1999; Nonaka & Toyama 2005). In addition, Nonaka and Takeuchi mention that knowledge creation would first take place through socialisation and later transformed to organisational knowledge (Fascia, 2012).

To denote further, in the socialisation mode, Nonaka and Nishiguchi (2001) provide the example of an apprentice. An apprentice acquires knowledge of a particular trade through observing, following and replicating his mentor's workmanship. He does not learn the trade through books or formal communication. Practically acquiring knowledge by interacting with customers and suppliers is an example of the process of socialisation (Lin & Wu, 2005). It occurs through informal discussions outside the working environment where individuals meet for drinks or meals, creating tacit knowledge to flow freely resulting in mutual trust (Nonaka & Nishiguchi, 2001). An example by Nonaka and Toyama (2005), state that product development starts with socialisation that enable the sharing and gathering of tacit knowledge. As the tacit knowledge is verbalised and documented into the product concept, this brings forth the externalisation process.

ii)   Externalisation – from tacit to explicit knowledge. Through the process of converting tacit knowledge to explicit knowledge, the knowledge becomes understandable and form new knowledge for the organisation to use. This conversion process is highly dependent on the use of metaphors, analogies and creating concepts. Managers assist this process through creativity and conversation (Nonaka, et al (2000a).

Externalisation is underpinned by two crucial factors. The first is for an individual to be able to verbalise his/her tacit knowledge that encompasses thoughts or images in an inductive or deductive manner. The second factor involves converting tacit knowledge from other individuals such as customers, suppliers or subject experts into an easily understandable manner (Nonaka & Nishiguchi, 2001). Choi and Lee (2002) emphasise that externalisation involves creating concepts that is spurred on by conversation or reflecting collectively. In the externalisation stage, individuals use their dianoetic awareness to attempt to verbalise the world in which they interact. Through verbal communication as an active method, an individual will discuss his/her tacit knowledge with others thus creating a sharing environment. These discussions enable discrepancies among individual's tacit knowledge and structures to surface that becomes clear and newly produced knowledge (Nonaka & Toyama, 2003). Lin and Wu (2005) thus further emphasise that the externalisation mode is dependent upon similar outcomes, metaphors and modes expressed through discursiveness. This concept is illustrated practically when through writing, tacit knowledge converted to enunciated knowledge.

An example of the externalisation stage is the use of poetry where complicated and subtle knowledge is converted using metaphors to a more explicit form (Agile Innovation, 2010).

iii)   Combination – from explicit to explicit. Using acquired knowledge that is available within the organisation making it useable for individuals to use in an innovative and creative manner. This process could involve managers to become more involved in strategic planning, using computer imitation programmes for scenario creation, forecasting and collecting previously published articles (Nonaka, et al (2000).

Nonaka and Nishiguchi (2001) state that new knowledge can be created by reconfiguring existing knowledge through a process of categorising, contributing and integrating. In addition, articulation and organising of knowledge are crucial components in the

combination stage. Practically, the combination stage depends upon three stages. In the first stage, knowledge need to acquired and incorporated into new knowledge (explicit). Thereafter, the newly explicit knowledge need to be formalised through formal discussion and presented. Lastly, through redacting, explicit knowledge becomes more practical for strategies and reporting (Lin & Wu, 2005). Nonaka and Nishiguchi (2001) comment that creative use of large database and communication systems would accommodate this type of knowledge conversion. In addition, Lin and Wu (2005) highlight that the conversion of explicit knowledge to become a more intricate set of explicit knowledge. To emphasize, explicit knowledge can be acquired through sources internal or external to the organisation and then integrated. Organisational members share this new explicit knowledge through meetings and presentations (Nonaka & Nishiguchi, 2001). More recently, Bratianu and Orzea (2012) accentuate that the combination stage entails creating new network methods of explicit knowledge by combining segments of explicit knowledge into a synthesised system. Furthermore, the combination process is more of a social structure creating a platform for explicit knowledge to be undertaken, unlike the externalisation stage that is exclusively based on individualism. Due to being more group focused, combination is likely to occur in an organisation context and therefore is closely associated to the concept of ba.

iv) Internalisation – from explicit knowledge to tacit knowledge. Knowledge that has been created is shared among individuals within a particular organisation. The process involves converting explicit knowledge to tacit knowledge. Managers incorporate on the job training to assist trainees to create an understanding of the vision and mission of the organisation and of themselves. On the hand, individuals that acquire tacit knowledge can share their newly acquired knowledge through social interaction (Nonaka, et al (2000a).

In this mode, the individual execute instructions from manuals or formal documentation by applying it practically (Lin & Wu, 2005). Furthermore, changing explicit knowledge to tacit knowledge is the customary way of learning and it attributed to action in acquiring new knowledge (Agile Innovation, 2010). Bratianu and Orzea (2012) academically announce that internalisation is closely associated to "learning by doing". In other words, new knowledge that is disseminated within the organisation causes individuals to increase their tacit knowledge. The internalisation process enables newly acquired knowledge to be combined with current knowledge and at times, this combination will cause the old knowledge to be re-organised. The combination process causes the individual

understanding and absorbent levels to increase as well as causing an increase in the individual's socialisation process by sharing tacit knowledge. This results in an upward movement in the knowledge spiral concluding the knowledge creation circle that is an ongoing social reciprocal. The spiral within the SECI Model permits continuous conversion and expansion of tacit and explicit knowledge in terms quality and quantity from individuals to groups and ultimately to the organisation (Nonaka & Toyama, 2005). Figure 3 depicts in more detail the knowledge conversion process. The spiral indicates that knowledge can happen simultaneously. It further highlights when individuals intermingle in acquiring knowledge and in what modes groups interact in procuring knowledge.

Figure 3: Organisational Knowledge Creation Process SECI Model
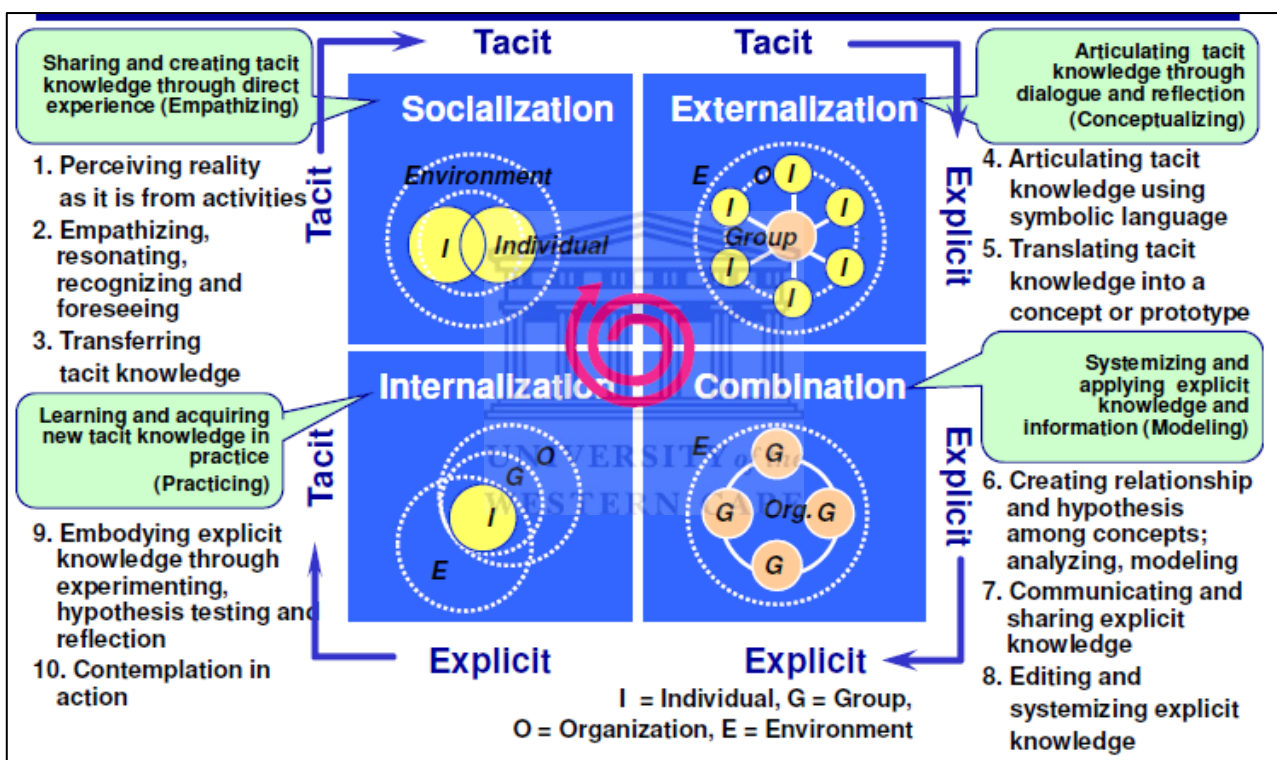
(Nonaka, 2011)

Marsick & Watkins (1999) state that for learning organisations to create innovative products or services they need to be actively involved in enabling knowledge creation at an operational level. In addition, organisations should be prepared to undergo a transformational process if necessary to enhance continuous learning.

In order for knowledge creation to be processed, it requires a context-specific base. This base is referred to as ba as part of the knowledge model (Nonaka, et al., 2000a).

2.2.2. Ba

Knowledge is not tangible, has no boundaries and cannot be stored. However, to be able to exploit knowledge it needs a place and time in order to generate value from it (Nonaka & Nishiguchi, 2001). Knowledge creation needs space and time. Ba is a Japanese word that means space. During a particular time and space, undertaken among individuals and their environments is shared knowledge (Nonaka, et al., 2000b). Through this process, knowledge creation takes place and the participants in this process surpass their own self-boundaries (Nonaka, et al, 2000). Lin and Wu (2005) claim that ba does not refer to a physical space but conceptually refer to an office space, cyberspace (e-mails) and psychological space where ideas is shared. This place is also a coliseum of dialogue, a method of writing and conversing about research (Watson, 2003). The most crucial element of the ba is the "interaction". Knowledge is created not only individually but "through interactions among individuals and with the environment" (Nonaka & Nishiguchi, 2001).They further state that the knowledge creating process includes the creating process of ba, which refers to creating a border of new interaction. In sharing and creating knowledge through interactions among employees in different departments and among outside sources, the ba therefore serves as a social context that has a positive influence on the knowledge creation process. To encourage innovative ideas, individuals must surpass all limitations from within themselves and within their societies and engage with diverse social groups to acquire new knowledge (von Krogh & Nonaka, 2009). The four characteristics of ba permit the sharing and creation of knowledge (see figure 4). Through these processes, tacit and explicit knowledge allow the creation and shared knowledge among individuals and communities (Nonaka, et al, 2000a).

Figure 4: Four Types of Ba
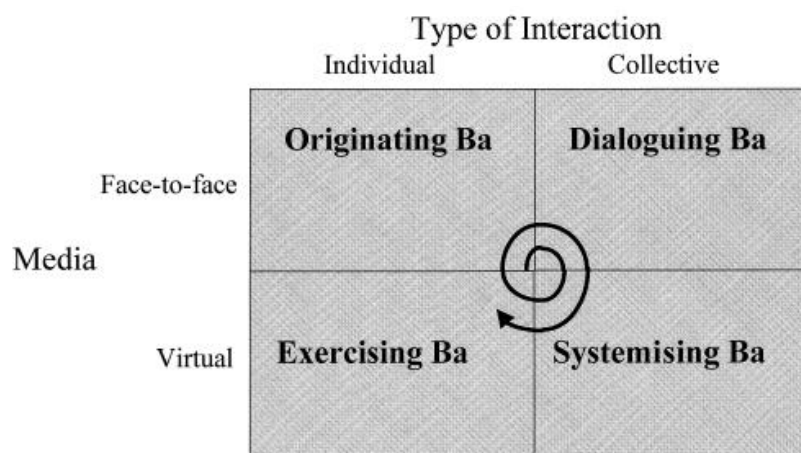
(Nonaka, et al, 2000a)

Nonaka and Konno (1998) allude that the ba is perceived as a structure in activating knowledge as a resource. Supporting the conversion of knowledge between explicit and tacit knowledge are the four different types of ba. Achieving successful knowledge creation lies in understanding the characteristics of the various types ba (Lin & Wu, 2005).

Nonaka et al (2000a) as well as Lin and Wu (2005) describe the Originating ba as face-to-face engagement by individuals sharing emotions, feelings and experiences. This is associated to socialisation in the SECI Model.

Dialogue ba is closely associated to externalisation as mostly executing communication in groups on a face-to-face basis. In this mode, sharing individuals experiences, talents, mental thoughts through converting it into explicit knowledge (Nonaka & Konno, 1998, Lin & Wu 2005).

Cyber ba (Nonaka & Konno, 1998) later became known as systemising ba (Nonaka, et al, 2000a, Lin & Wu, 2005) is defined as group and cyber interaction. It is related to the combination mode in the SECI Model as explicit knowledge and can be easily communicated to groups.

Lastly, the Exercising ba relates to the internalisation process of the SECI Model. It assists in the conversion of explicit knowledge to tacit knowledge (Nonaka & Konno, 1998, Nonaka, et al, 2000 and Lin & Wu, 2005). This is also achieved through education, training and learning while working (Corno, et al., 1999).

The creation and sharing of knowledge requires a base for the process to occur. This base is referred to knowledge assets. Nonaka, et al (2000a) delineate this as firm-specific resources in developing value to the organisation. Within the knowledge creating process, the ba serves as a dais for the "resource-concentration" of the organisation's knowledge base (Nonaka & Konno, 1998).

2.2.3. Knowledge Assets

The final part of Nonaka's knowledge creation model is the knowledge assets, which is the foundation of the knowledge creation process. Knowledge assets comprise of an input, output and moderating elements. An example is that trust among employees is regarded as an output to the knowledge creation process and concurrently it moderates or control how ba operates as a base for the knowledge creation process (Nonaka, et al, 2000a).

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Organisations cannot buy or sell knowledge assets, as it is inherent within the organisation but in order to add value, knowledge assets need to be well worked (Teece, 2000). Erickson and Rothberg (2015) generally define knowledge assets as intellectual capital that comprises of human capital, structural capital and relational capital. Human capital is the skills set an individual possess to complete a specific task. Structural capital consists of the organisation's culture and structure. Relational structures are linked to outside entities that have an effect on the organisation. According to Rodgers (2003), knowledge assets contribute to a firm through two values. The first value referring to "usage value" as it discloses the worthiness of an organisation's knowledge. The second value is termed "exchange value" due to its purchasing power capabilities. Furthermore, the position of knowledge adds to the betterment of intellectual capital. Knowledge assets reinforce an organisation's capabilities and in essence, a firm that wants to improve its capabilities should first recognise and organise their knowledge assets (Li & Tsai, 2009). In addition, there are two major characteristics of knowledge assets, namely; tacit and dynamic (Nonaka et al., 2000b; Nonaka and Toyama, 2002) and these determines an organisation's competitive edge. Tacit knowledge is not easily transferrable and the organisation can exploit it in establishing a competitive edge over its competitors. The dynamic feature enables the organisation to adjust to new circumstances, which variably will connect to an organisation's strategies in attaining a stronger competitive advantage. Li and Tsai (2009) further note that the objective of knowledge assets is to determine the creative value of an organisation. This is achievable through better clarity of knowledge assets and developing measurement tools.

In terms of knowledge management with regard to knowledge assets, there are two primary roles. Firstly, it should formalise, co-ordinate new knowledge assets, and storage distributions. Secondly, it should share current knowledge assets. This could ensure that the organisation reap benefits from their investments (Fascia, 2012). Awareness and usage of knowledge management increased as organisations realised that to achieve competitive advantages was not only dependent labour and capital but on the storing of knowledge and that, the organisational routines increased the organisation's knowledge assets (Erickson & Rothberg, 2015). Knowledge management can be used to explain the organisation's processes and systems in managing their knowledge assets and therefore require dynamic capabilities for an organisation to launch at market opportunities (Teece, 2000a).

Nonaka et al (2000a) state that there are four types of knowledge assets, namely:

a) **Experiential Knowledge Assets**. This asset consists of tacit knowledge that is attained through shared experiences from a micro to a macro level within the environment.

b) **Conceptual Knowledge Assets**. This asset is made up of explicit knowledge and his shared by individuals within the organisation as well as by the organisation's customers

c) **Systemic Knowledge Assets**. This is made up of more formal explicit knowledge that can be disseminated more easily.

d) **Routine Knowledge Assets**. This asset comprises of tacit knowledge that is acquired through know how and is characterised as practical. It is embedded in the organisation's culture as well as the organisation's routinely processes.

As mentioned previously, buying and selling of knowledge assets is not possible, whereas buying and selling individual knowledge is possible. This type of action takes place daily as organisations hire and fire new individuals in order to acquire the correct work skills. On the other hand, acquiring organisational knowledge that is implanted in the organisation's processes, systems and routines may be possible by selling the organisation or through mergers and acquisitions (Teece, 2000). Too strategically manage knowledge assets in an organisation classification of knowledge assets are essential. More so, academic research has suggested a large number of knowledge classifications (Li & Tsai, 2009).

Upon reviewing the knowledge creation model, I turn my focus on exploring how knowledge can be managed. Firstly, I will briefly explore literature on knowledge governance as a means of managing knowledge.

2.3.   Knowledge Governance

According to Michailova & Foss (2009: 3) the concept of knowledge governance is an "attempt to think systematically about the intersection of knowledge and organisation". This could imply the method in which knowledge resources are arranged takes into account some form of control. Knowledge governance is selection of mechanisms that will determine the processes of combination, storing, disseminating and creation of knowledge. It provides guidance on the interaction between an organisational procedures and knowledge process (Foss & Mahoey, 2010). Foss (2011) further states that the need for knowledge governance was ignited through the increase awareness of controlling "human capital inputs".

Organisations whose core resources are their intellectual capital as oppose to organisational systems or machines have developed advanced system for the disbursement of knowledge especially among individuals that holds tacit knowledge (knowledge that is complicated in written communication). Furthermore, due to the competitive nature for individuals to advance in the workplace, the dissemination of knowledge have become challenging and therefore knowledge management systems within organisations have been supplemented with explicit structures to support and incentivise the incorporation of knowledge (Grandori, 2001). "The conjecture that animates knowledge governance is that it is possible to bring knowledge considerations into the body of established organisational economics and organisational design in a "thick" manner, in the sense of dealing substantially with phenomena like tacit knowledge" (Foss, 2011: 21).

Knowledge governance and issues relating to the knowledge process requires further research when comparing it to the immense amount of literature relating to the features of knowledge, knowledge typologies, intricacies involving the sharing of knowledge among organisations and the theoretical platforms of knowledge (Foss, et al., 2010). Michailova & Foss (2009) provide an overview of topics relating to knowledge processes and governance in Figure 5 (knowledge processes and type of knowledge governance). Although each of these topics can be discuss independently, unification emerges in exploring knowledge governance systems. Upon examining the graph in figure 5, the y-axis represents knowledge governance while the x-axis represents knowledge process. The graph examines how knowledge governance influences knowledge processes. Formal knowledge governance is least influence by organisational design and decision structures whereas superordinate identify is mostly influence through informal knowledge governance. Knowledge governance strongly influences motivation that is also the closest to knowledge creation.

Figure 5: Knowledge process and type of governance mechanisms
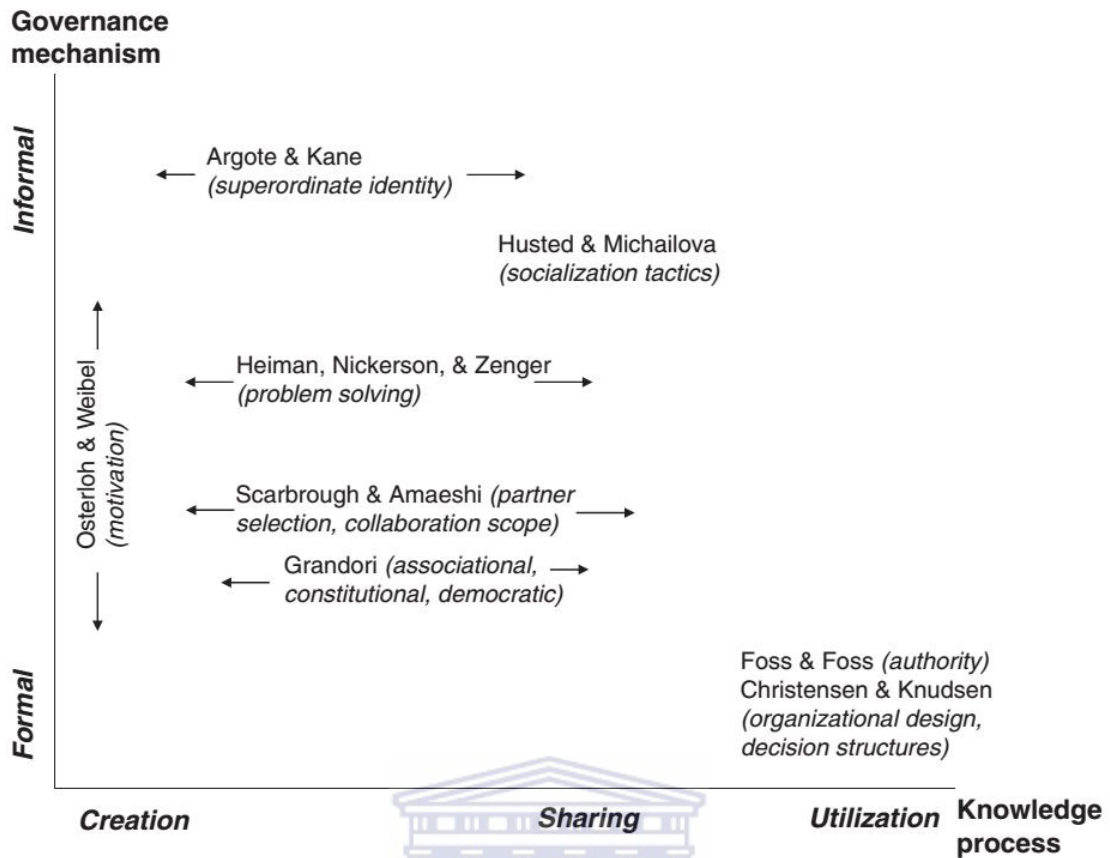
Source: (Michailova & Foss, 2009)

Knowledge management is inclusive of people and therefore the organisation's achievements are dependable on its capability to supervise its work force. In achieving this success, the organisation requires to adjust its current organisational culture through rigidity and through flexibility in its human resource management techniques. This adjustment should connect knowledge management and human resource management to their current business strategy (Bender & Fish, 2000; Carter & Scarbrough, 2001; Farquharson & Baum, 2002; Hislop, 2003; Mink *et al*, 1993; Swan *et al*, 1999; Yahya & Goh, 2002) as cited by Groenewald (2003). These scholars emphasise human resource practices include appraisals, compensation or rewards strategy, decision-making, education, employee relations, empowerment, the design of jobs, job descriptions, leadership, motivation, organisational development, performance-related pay, psychological contracting, recruitment and selection, teamwork, training and development, and trust. In addition, some scholars denote that the relationship between human resource management and knowledge management practices should synergise with each other while there are those who caution that disparity might prevail subtly (Groenewald, 2003).

The knowledge governance framework provides guidance in terms of how governance and control mechanisms work together to enable knowledge creation. In determining the relationship between knowledge and power, I extract literature by exploring the Foucauldian concept on knowledge and power.

2.4. Foucault and power/knowledge

Foucault explains that knowledge and power are related as well as indivisible and that knowledge is power (Foucault, 1980). Foucault suggests that power operates within "a network of relations, constantly in tension, in activity" (Foucault, 1977: 26-27). For Foucault, power "is co-produced in social interactions through the way people negotiate meaning" (Heizmann and Olsson 2015: 758). Importantly, Foucault argues that discourses are the vehicles of power. Foucault, "the submission of bodies [is achieved] through control of ideas" (Foucault, 1977: 102) (Heizmann & Olsson, 2015)

He further claims that knowledge and power are "two sides of the same social relations" (Kearins, 1996). Heizmann and Olsson (2015: 756-757) state, following Foucault (1980) that "power is something that elite individuals or groups possess, which they use to control the thoughts and actions of others." Thus drawing on Foucault (1980) and organisational scholars on power (like Clegg, 1989) "all organisations are relations of power – even the most egalitarian" (Brown, Kornberger, Clegg & Carter, 210: 525).

Another important aspect of power in organisations is that those who use Foucault acknowledge conflict as an "inherent feature" of the relations between social groups "both in business organisations, and society more widely" (Hislop, 2013: 188). This is called the "a dissensus-based view" (Heizmann and Olsson, 2015: 757) of social relations.

In addition, Newman & Newman (2013) mention that the utilisation of power by managers can influence the organisation's behaviour and exercising it over individuals against their own will.

Heizmann and Olsson, (2015: 759) explain how power operates with modern organisations when they state that "In a modern organisation, power is decentred, it is vested not in any individual but rather in the organisational structure itself, the defined roles of its members and the social rules and shared culture which support them."

Finally, Foucault's power/knowledge lens offers us a way to see power as productive and not repressive.

2.5. Concluding Thoughts

There are various definitions of knowledge yet I have decided to adopt the definition of knowledge as justified belief. The current organisational perspective of knowledge is that it is seen as a major contributor to an organisation's profitability. Hislop (2005) further emphasises that knowledge is key to advancing economies and a performance indictor for organisations. More people are becoming aware of knowledge through the increase use of technology with its capabilities of accessibility and easy storage systems managing knowledge is an important organisational capability. The increase use of knowledge may have initiated organisations to using knowledge management systems. Knowledge management systems have been designed to assist organisations in acquiring, disseminating and storing knowledge through network systems. There are different knowledge creation concepts and constructs including communities of practice and knowledge governance. In terms of knowledge creation, organisational learning is a process through which organisations constantly evaluate its product, process and systems in hope of achieving greater competitive advantage. I shall not use these constructs to address my research

However, to pursue my research, I will use Nonaka's knowledge creation process consisting of the SECI model, ba and knowledge assets.

Reflecting on my primary research question, how is knowledge production influenced by managerial control practices? I discovered through perusing my literature some gaps in the knowledge creation model that has not addressed the relationship between organisational control and knowledge. Foucault emphasises that knowledge and power are "two sides of the same coin". The literature review on knowledge creation does not sufficiently address the relationship between knowledge and power.

Teece (2000) indicates that if organisations want to attain continuous knowledge creation processes and maintain strong knowledge assets they need to comply with certain prerequisites. Among these criteria, he highlights that organisations should not have bureaucratic decision makers and that organisations need to have shallow hierarchical structures enabling swift decision-making. Lastly, he mentions that organisations need to adopt an innovative and entrepreneurial culture. The knowledge creation model does not

address issues of how individuals create, disseminate and store knowledge when they have to adhere to control systems prevailing within an organisation. Gourlay (2003: 21) states, "Knowledge concerning for example certainties about how to control things to effect desired goals (such as making tasty bread) remains unaccounted for in this model. It is therefore less a model or theory of knowledge creation through knowledge conversion, than one concerning managerial decision-making".

Most of the literature on knowledge management employs a consensus view of the firm and the resource view of the firm excludes the issues of power merely because they misrecognise power as productive in fashioning knowledge processes (Hislop, 2005).

Storey and Barnette (2000) analysed the failure of a knowledge management project in a single company case study. One of the core reasons for the failure was the internal conflict over leadership of the project. Many individual groups attempted to use the project as a political platform to engage in a broader agenda associated to the future of the organisations' IT infrastructure. Power and knowledge are closely associated and it is for this reason that it needs to be considered in organisational knowledge systems. (Hislop, 2005). He further notes that it cannot be possible when scrutinising the power/knowledge relation to ignore the literature of Michel Foucault, who arguably is the single most influential author in this area.

Foucault's definition on power as he states:

…."*the power exercised on the body is conceived not as a property, but as a strategy,…. short this power is exercised rather than possessed; it is not the 'privilege', acquired or preserveil, of the dominant class, but the overall effect of its strategic positions - an effect that is manifested and sometimes extended by the position of those who are dominated*" (Foucault, 1977: 26)

Foucault (1980) suggests that power and knowledge are so tightly intertwined that they are unitary. Hislop (2005) states that the implication of this suggestion is so insightful to individuals conceptualising the use of knowledge or implementing knowledge in organisations should include the use of power. However, there are implications as to how power should be explained, or how its relationship to knowledge should be theorised.

Before pursuing how knowledge and power complements each other, the next section explores organisational control by addressing different types of power.

2.6. Organisational Control

Organisational control is another way of conceptualising the power that managers have and exercise within organisations. Organisational control addresses the fundamental managerial problem of managers seeking "to align employee capabilities, activities, and performance with organisational goals and aspirations" (Sitkin, Cardinal & Bijlsma-Frankema, 2010: 3). Scholars investigate two aspects of organisational control, "behaviour control based on direct, personal surveillance of behaviour, and outcome control focused on the measurement of the outcomes" (Kreutzer, Walter & Cardinal, 2015: 1317). Max Weber, a German sociologist, defined power as "the probability that one actor within a social relationship will be in a position to carry out his will despite resistance" (Weber, 1978: 53).

Conventional wisdom commonly conceives organisations as metaphors (such as machines, organisms and political entities) with specified properties such as structure, strategies and technologies. These images are used to invoke knowledge on organisations. In bureaucratic management systems, the emphasis is placed on employees to execute their duties with minimal intellectual effort or skills as the system is designed to supervise work processes. Management and bureaucracy accentuate that work can be divided amongst those who work and those who plan, organise, lead and control (Karreman & Alvesson, 2004). Management and organisational control are related concepts in organisational studies. The literature on organisational and management control proposes that different forms of controls are important, either in a type of organisational structure or a type of a specific form of control (Alvesson & Karreman, 2004).

Control lets managers monitor and regulate actions to align performance with expectations". Organisational control is the fourth component of the POLC (Planning, Leading Organising and Control) framework and organisations use it as method to shape its different departments and employees to act in a certain manner that will cause the organisation to achieve the desired effects (Carpenter, Bauer, & Erdogan, 2010). Organisational control is a method of constructing and sustaining control in an organisation. Managers in larger organisations utilise systems in assisting them in examining how the business and its staff are operating to make the correct administrative choices (Business Dictionary, 2016). The system of control illustrates methods of organising the organisation and its staff (Huhtala, 2014). Therefore, organising is critically

examined in terms of organisational control. Carpenter, et al (2010) state that when correctly planned such control lead to better performance because it enable strategies to be better executed in the organisation. Seeck & Kantola (2009) mention that employees view organisational control as an act of exploiting. They therefore perceive it negatively as well as a power tool used by superiors. However, drawing on Foucault's concepts of power, where power is seen as productive, permits the viewing of organisational control as having positive consequences (Seeck & Kantola, 2009; Välikangas & Seeck, 2011).

2.6.1. Power and Control

Max Weber believed that bureaucratic organisations would be greater than other organisations due to its well-developed hierarchy and distribution of power (Miller, 2012). In applying his theory of bureaucracy, he believed that by limiting the power of individuals within organisations through a closed system would mean that discretionary power would be controlled. The Weberian theory of bureaucracy has been one of the most significant organisational control models (Seeck & Kantola, 2009). Heizmann & Olsson (2005: 757) "Power appears as a barrier to the kind of egalitarian social relations that are seen as a requisite for learning, knowledge sharing and innovation".They further state that some philosophies view organisations as having relationships of power. Arendt's (1958; 1970) argued that politics consists of activities that rearrange relations between people and the distribution of goods (broadly defined) through the mobilization of power.

However, Kamoche, Kannan & Siebers, (2014: 993) state that "(e)vidence shows that the use of power and control trigger acts of resistance." Thus, wherever there is power and control there is also resistance. This is something that Foucault commented (amongst other scholars for example Courpasson (2000) has commented on which we will discuss later on in the next section.

2.6.2. A detailed exposition of Foucault on power

Foucault (1980) viewed knowledge and power as inseparable and are mutually constitutive. Foucault (1980: 98) conceptualised, power as "employed and exercised through a net-like organisation" and that it flowed within institutions and human relationships. He identifies various modes of power that include disciplinary power, pastoral power and governmental power (Anita & Seeck, 2011).

Table 3 highlights Foucault's work

Table 3: Foucault main concepts during his intellectual phases

	Main concepts	*Subjectivity*	*Power*
Archaeological works	Discourses, knowledge/power	Subject detached (almost determined) from his/her surroundings.	Power and discourses connected to each other; power/knowledge regimes. Somewhat repressive view of power.
Genealogical works	Practices, disciplinary and pastoral power	Different practices and ways of analysing strongly affect the way(s) in which a human being perceives him/herself.	Institutions often apply disciplinary or pastoral power. Idea of positive power: power does not only repress but also produces.
Ethical/aesthetical works	Care of the self; technologies of the self; work of life as an art	Individual is viewed more as a "self" than a "subject".	Individual can resist existing power relations with the help of technologies of the self.
Governmentality	Administration, population, biopolitics.	Governed subjects are seen more as a population than individual beings.	Power relations are found everywhere in society, and various institutions & authorities exercise power over the population.

(Abel, 2005)

Table 3 highlights a certain pattern from strict discipline to a more subtle way of control. A discussion of each of these power mechanisms will follow.

2.6.3. Disciplinary Power

Discipline is a type of power that coerces. Rosters and the different ranks of soldiers are examples of regulation or routine that drives these types of coercions. Through discipline these controls becomes possible. Foucault traces the roots of discipline to monasteries and armies (Agile Innovation, 2010) He further elaborates that surveillance is another form of discipline that allows control over employees (Anita & Seeck, 2011). Disciplinary power exists in everything, every action, considering it as restraining and facilitating. Perceiving it as a form of power where the individual can view him/herself as an object for examination (Huhtala, 2014). Disciplinary power functions on subjectivity. Subjectivity involves where the individual glances upon himself where he becomes the object through analysis, interpretation and acknowledges himself as a centre of knowledge (Seeck & Kantola, 2009). Through observing the individual, documenting surveillance and performance portfolio occurs. Foucault explains that extracting the mistakes of the individual happens

through this process. Moreover, individuals are constantly aware of their own behaviour despite their incognisant as to when and where the observation transpires (Anita & Seeck, 2011). Disciplinary power comes from the use of three simple tools; namely, hierarchical observation, normalising judgement and examination that is a combination of the previous two concepts (Foucault, 1977).

Hierarchical Observation

A key instrument in this type of discipline is surveillance. Surveillance aids an organisation in being more productive over its employees (Huhtala, 2014). Jeremy Bentham panoptical system is the origin of this type of discipline. He was responsible for designing prisons with towers permitting the guards to monitor the movements of prisoners in the courtyards (Vicencio, 2012). Surveillance has become an essential aspect of disciplinary power as it is indiscreet, omnipresent and supervises employees in a largely silent manner (Foucault, 1977). Modern surveillance in the form of telephone monitoring allows senior staff to observe the time employees spend on the telephone. Other type includes computer surveillance, allowing managers to log in and view the duration employees spent on the computers or what programs they were in (Huhtala, 2014).
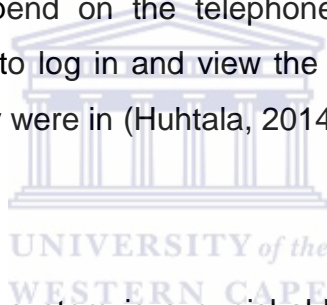
Normalising Judgement

At the core of every disciplinary system is a punishable mechanism. Punishable is any individual that transgress from the norm. Punishment is similar to appearing in court but non-observation punishment is also a practice. Disciplinary punishment has to be remedial and employing it is favourable. Punishment is a component of a two-sided method that delineates behaviour on the principle of right wrong. Discipline reward and punishes by offering ranks (Sparknotes Editors, 2012). When employees are bound to the normal regimes of the organisation, it is considered normalising judgement. Any employee that does not follow the normal practices of the organisation leads to a reprimanding action (Huhtala, 2014). In addition, normalising judgement is actionable when codes of conduct; documentations and standard practises are visible within an organisation. Normalisation makes individuals consistent and it creates a means of distinction amongst one another. It places individuals in a hierarchical system and measures the abnormalities (Sparknotes Editors, 2012).

Examination

Vicencio (2012) alludes that examination includes both hierarchical observation and normalising judgement. It is where knowledge and power overlap. Examination objectifies the individual by controlling them through external specific techniques. Employees' performances are recorded individually and thereafter compared to other employees (Seeck & Kantola, 2009). Foucault (1977) states that examination, as a practice of power does not explicitly show its force on the individual but rather keeps them in the process of objectification. The three various individualising disciplinary modes serve to control, correct and discipline unordinary behaviours. The panopticon emulates the construction of disciplinary power through hidden surveillance and forcible persuasive systems. Such discipline controls behaviour and establishes some practices of subjectivity (Leclercq-Vandelannoitte, 2011).

2.6.4. Pastoral Power

This type of power works on a similar premise of confessions as a doctrine in some Christian faiths. Pastoral power focuses on the individual to examine his inner self thus making him consciously aware of improving his self-actualisation (Foucault, 1982(a)). Pastoral power subjectifies; the individual becomes a subject of himself (Seeck & Kantola, 2009). Huhtala (2014) alludes that the method of confession uses subjectification as its base. The process permits an individual to examine the inner truth through exploring self-knowledge that in turn leads to self-examination. Pastoral power works through subjectivity. In order for pastoral power to function, it requires consciousness and knowledge of conscience, in conjunction with technologies for altering and guiding it. It is for this reason that pastoral power demands the knowledge of an individual's mind and soul (Seeck & Kantola, 2009). Foucault (2000: 332 – 336) states that pastoral power "is coextensive and contiguous with life; it is linked with a production of truth - the truth of the individual himself", cited by (Huhtala, 2014). Pastoral power is a unique relation between complete compliance, self-scrutiny and confession to someone who will serve as a mentor (Macmillan, 2011). Kearins (1996) emphasises that ultimately it is pastoral power that disciplines individuals themselves. It is this form of power that "applies itself to immediate everyday life which categorizes the individual, marks him by his own individuality, attaches him to his own identity, imposes a law of truth on him which he must recognize and which others have to recognize in him. It is a form of power which makes individuals subjects" Foucault, 1982(b): 781).

The Foucauldian concepts enrich the individuals through self-examination to both body and soul. Foucault highlights that power could be implemented positively or negatively in organisations (Abel, 2005). An alternative approach to strict control is to implement soft controls that are synonymous with post bureaucratic approach that does not free workers but rather empower them and create a sense of self in their workplace through team monitoring, censorship and discipline (Raelin, 2010).

2.6.5. Technologies of the self

Foucault (1982b), accentuates that, technologies of the self, defines the individual as an object of knowledge, to himself and others. To know himself, he speaks the truth about himself in order for others to recognise him, an object who acquires knowledge to bring change upon himself. In addition, technologies of the self imply when a person applies the ethics of self-caring. It includes to actively self-examining how a person can act ethically in executing power through self-caring and caring for others. Through this ethical element of self-caring, can exercising of freedom with the possibility to alter the dianoetic, disciplinary practices of power (Markula, 2004).

2.6.6. Governmentality

Seeck and Kantola (2009) state that governmentality proposes an interesting method of understanding the management systems of an organisation; known as regimes of practices. It includes various techniques of power, control and various subject formation methods. Each organisation has its own regimes of practices, that is, practices and methods that an organisation applies.

Governmentality is a concept that Foucault developed later on in his academic career. He subsumed his previous concepts on power underneath it. To govern in this sense is to structure the actions of the individual. Defining the exercise of power as a means of action over others is to categorise the actions through governing the individual who are free and not enslaved. This power entails both organisational governance and self-governance. It highlights the generative way of power and control to that of subject establishment (Seeck & Kantola, 2009). In Foucault's later writings, he admits that he spent too much time of domination of power. Nonetheless, as Foucault states, domination and technologies of the self, manufacture effects that establishes oneself. Together it recognises the individual and controls his behaviour making him an object for the state through exercising a type of power, which Foucault classifies as governmentality – producing resourceful, passive residents (Besley, 2005). Foucault claims that the conclusiveness of government exists in the things it manages and in the quest of precision and intensification of the procedures, it

directs. The procedure of self-flawlessness and improvement will lead to contentment and exceeding flawlessness to the system and the individual. Government power offers a formulation that will accommodate to the mechanics of power (Seeck & Kantola, 2009).

2.6.7. Linking Organisational Control to Foucault's categorisations of power

In order for power to be practiced or exercised, it requires a platform for an individual(s) to exercise power over others. Organisational control is a tool managers use to exercise power in the organisation. Organisational control therefore serves as a framework for power.

The Foucauldian techniques of power enable organisational control to function at various levels throughout the organisation. It provides management with systems to bring order and regularity to the organisation. When an organisation is saturated with disciplinary power techniques, these enable managers to keep account of employees' activities through surveillance, and other disciplinary actions. Pastoral power contributes to managers' abilities to guide employees to align themselves to the organisation's culture. Through subtle coercion, managers can navigate employees to aspire to perform tasks diligently in reaching the organisation's goals and objectives. Lastly, with technologies of self, the employee will transcend boundaries, seeking ways to improve without directives from managers but within the bounds of the organisation.

When individuals are entrusted with some form of control, the power that accompanies it allows the individual to control others.

2.7. Concluding Remarks

I argue that control is an exercise of power. Using, Foucault's concepts of power assists to conceptualise organisational control as a productive means through which managers manage employees while at the same time it provides us with an explanation of how this power can help the individual exercise control over herself or himself.

Pastoral power offers the individuals to correct their inner selves. This is synonymous to a person going to confession. The individual undergoes self-examination with the help of a mentor or someone he regards as a guardian.

Governmentality concludes Foucault's discourses on power. He denotes that the contemporary systems of governance affect both the organisational structures and the individual. Governmentality seeks to free the individual from the clutches of control through self-identification and being ethically and truthful to himself. A branch of governmentality is the regimes of practices that focus on normative systems that an organisation processes. Individuals have to apply self-governance that aligns them to the organisation.

2.8. Conclusion: linking organisational control to knowledge creation

In this chapter, I have broadly explored knowledge philosophies and theories from different perspectives. The literature review reveals that scholars could not reach an agreed definition of knowledge or the different types of knowledge. However, scholars agree that knowledge is one of the core competencies to an organisation's success and competitiveness.

Amongst all the definitions of knowledge, I endorsed the theory of Nonaka where he claims that knowledge as justified true belief. To explore the relationship between knowledge and power I adopted to the knowledge creation model of Nonaka, as a platform. Despite the popularity of the knowledge creation model, it does not address organisational control based on Foucault categories of power. Foucault states that an individual should be truthful and ethical. Furthermore, Foucault claims that knowledge and power are two sides of the same coin. In other words, knowledge and power are indivisible. Unfortunately, not too many knowledge theorists were able to show the connection between knowledge and power, more specifically, between knowledge and organisational powers that conceals in organisational control.

To understand the different types of organisational controls, the literature review explores the Foucauldian concepts of power. Power in a form of discipline is operates through surveillance. The subordinate becomes a subject to the authoritarian powers. The subordinate becomes aware of the regimes of power that he realises in order to be "accepted" he must conform to the authorities. In pastoral power, the individual becomes an object of himself. He succumbs to his guardian or mentor's advice thus conceding his own beliefs for self-betterment. The Foucauldian literature also explores the technologies of the self. This implies that the individual ascribes to complete truthfulness, conforming to his own ethical beliefs with the purpose of transcending his boundaries. Finally, Foucault

uses the concept of governmentality as a way of explain how power is exercised in modern contexts.

Concluding this chapter, the literature review indicates that there is a gap in the literature concerning the relationship between knowledge creation and organisational control. A conceptual framework will be conducted of the literature with a key purpose to demonstrate the gap within this literature review.

3. Conceptual Framework Chapter

3.1. Introduction

In this chapter, I extrapolate from the literature review to formulate my conceptual framework in addressing my research problem.

I have selected the Foucauldian concepts of power as an organisational control framework in exploring Nonaka's, Knowledge Creation Model. I critically examined some of the gaps that the model fails to address by exploring the organisational control techniques. Thereafter, I derive a conceptual framework for my knowledge creation model.

3.2. Knowledge Creation

As stated in the previous chapter, Nonaka, et al. (2000a) developed a knowledge creation process consisting of the SECI model as the knowledge conversion process. In order for knowledge to be created, it needs a place and time. Importantly to note from the theoretical review is that shared knowledge can occur if the holder of that knowledge is willing to share the knowledge. This shared context is known as the ba. The ba serves as the space and time for the SECI process. The four types of ba are assimilated to the SECI process. For example, the Originating ba is where individuals share emotions as in the Socialisation process. The process allows the sharing of tacit knowledge. Dialoguing ba is done collectively on a face-to-face basis where individuals share experiences and convert it into common terms. During this stage, the conversion of tacit knowledge to explicit knowledge is undertaken. This ba is associated to the Externalisation process. Exercising ba is where individuals acquire explicit knowledge through virtual interaction, i.e. Internet. This ba offers a context for Internalisation. Finally, Systemising ba is defined as knowledge acquired collectively through virtual media. In this process, explicit knowledge is acquired and shared explicitly. An example provided from the empirical case study describing the mechanisms of the systemising ba is when employees receive an e-mail that a client has accepted the organisation's proposal and the commencement of the project.

Figure 6 depicts the SECI Model and the different classifications of the ba. As depicted in the diagram, both modes have a spiral that is located in the middle. Based on the explanations of Nonaka and associates, the spiral signifies that knowledge is simultaneously undertaken in any of the four modes. The SECI model cannot emerge without one of the types of ba being present. It can be deduce that the SECI process is depended on the ba and the ba is dependent on the SECI process.

Figure 6: The SECI Model and the Four Type of Ba
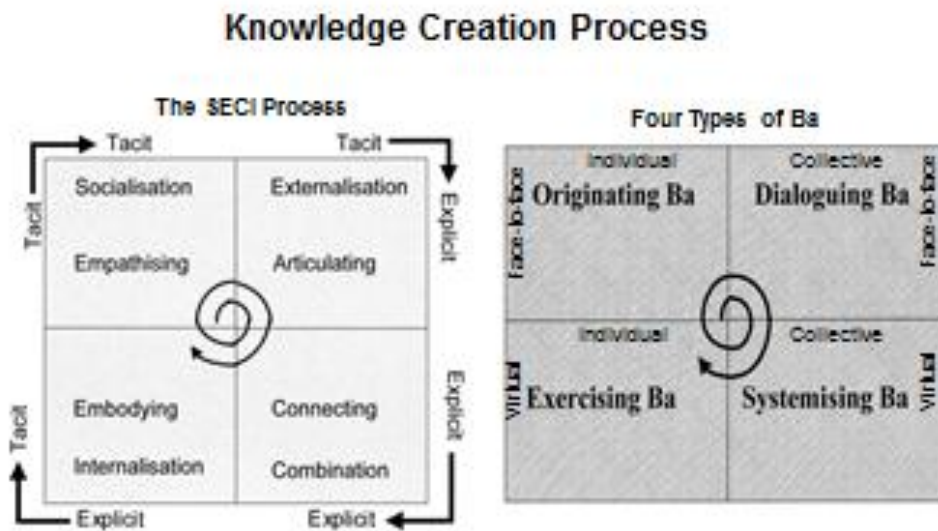
(Nonaka, et al., 2000a)

Figure 7 shows the ba as a platform for the SECI Model. As explained previously, the Originating ba serves as a dais for the occurrence of the Socialisation process. An example of this process is based on my research study when an employee expressed her dissatisfaction to another employee about a decision made by the CEO.

Figure 7: Ba as a Platform for the SECI Process
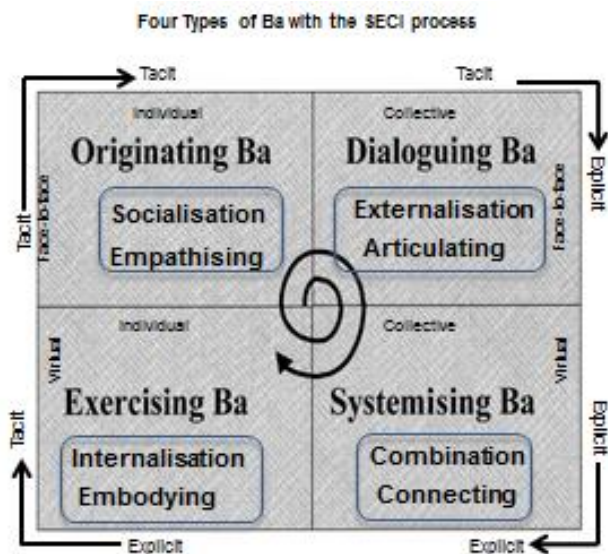
(Nonaka, et al., 2000a)

I propose that organisational control plays a foundational role in the construction of the ba based on my proposal on the premise that organisations space and time are arranged through organisational control. Earlier, I explained that the Originating ba allows emotions

to be shared by individuals. These emotions could only be shared if there was a ba to allow for this. In addition, control strategies can also influence or provoke emotions.

In addition, the Dialoguing ba is used to share tacit knowledge; similarly, feedback and discussion on the performance of employees are spaces and times for dialoguing ba. Furthermore, the Exercising ba and the Systemising ba enable acquisition of knowledge individually and collectively through real and virtual interaction.

3.3. Organisational Control

Based on the literature review presented, control is an exercise in power. Thus in my conceptual framework, organisational control techniques include techniques of power, techniques of confession and techniques of the self. All these techniques can be considered under the umbrella term that Foucault refers to as "governmentality" (Seeck & Kantola, 2009).

Foucault in his earlier research placed much emphasis on disciplinary power. Disciplinary power is a control from a hierarchical position. Foucault identifies monarchism as a type of disciplinary power. Individuals are subjects controlled from powers that the individual perceives as unopposed. The core essence of disciplinary power is surveillance. Surveillance enables the beings of power to monitor the subjects more closely without the subject being consciously aware of the surveillance.

Another type of power that Foucault highlights is pastoral power. This type of power is exemplified in the pastoral practice known as the sacrament of penance. This act is where individuals confess their sins and seek it to be absolved by the priest. This type of power is where an individual subjugates himself to a guide who will instruct him (have power over him).

Another type of power that Foucault terms as techniques of the self or an ethics of the self is concerned with the subject taking himself as an object to be moulded and fashioned.

As an overarching concept, Foucault defines governmentality as the relationship between the techniques of power and the technologies of the self (Le Texier, 2012). In other words, governmentality includes disciplinary power, pastoral power and techniques of the self. Each of these has their own regime of practices that formulate its characteristics. Foucault is of the opinion that governmentality covers both the relationship between the structures

of organisational control and how the individual manages her/himself (Seeck & Kantola, 2009).

Organisational control is exercised through regimes of practice. Regimes of practices as explained earlier, involves a standard practice that an organisation or institution undertakes. These practices are usually exclusive to an organisation and can be imitated by others. For example, at the research site, every morning all senior employees switch on their laptops/computers to act upon what feedback has been provided to them. Importantly to note that regimes of practice can serve as a disciplinary control or as a pastoral control this is dependable on the discourse. More examples of regimes of practice are noted in the research analysis chapter.

Technologies of the self imply that the individual frees himself from some of the elements of control. The individual thus has some liberty to choose what he desire to implement. An example, based on the research site, is when an employee decides through freedom of choice to adopt the organisation's professional outlook into her personal life.

I have designed a diagram (see figure 8) depicting how governmentality is separated into techniques of power and technologies of the self. Figure 8 is based on Le Texier (2005) where he mentions that governmentality connects techniques of power with techniques of the self. In addition, techniques of domination are divided into disciplinary power and pastoral power each with their own regime of practices. Technologies of the self is how employees strive for self-perfection in their workplace.

Figure 8: Framework of Foucault Theoretical Conception
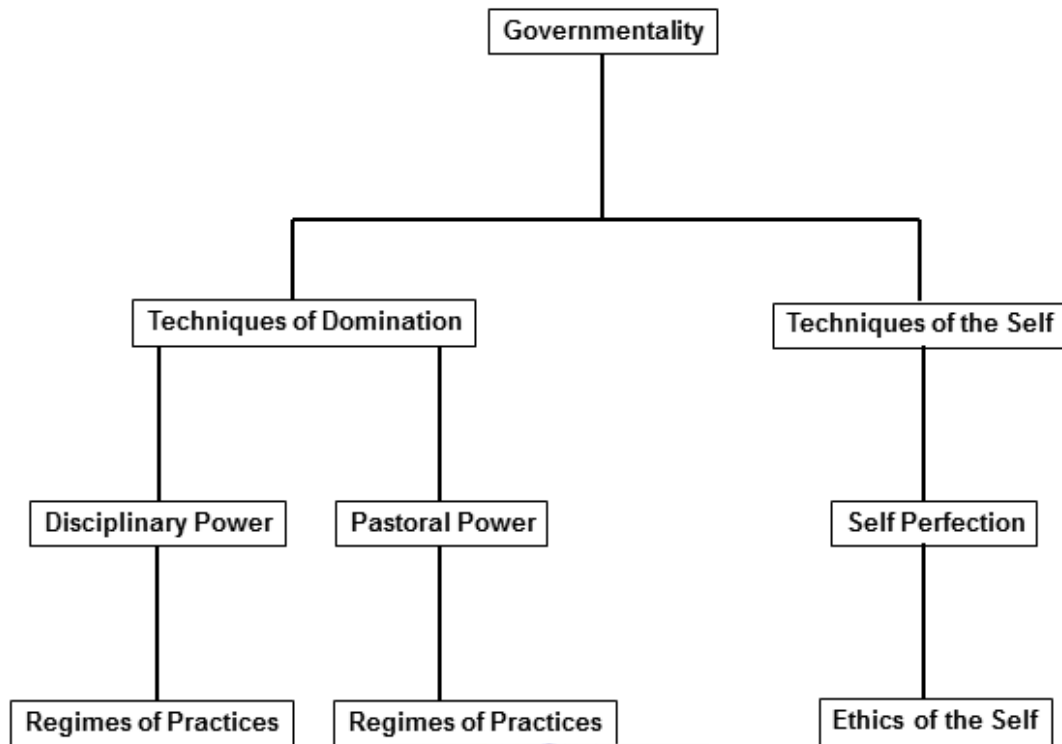
Based on the theoretical perspective of the Foucauldian powers, I have constructed a depiction of the types of powers and their interrelationship in figure 9.

Figure 9: Types of Power
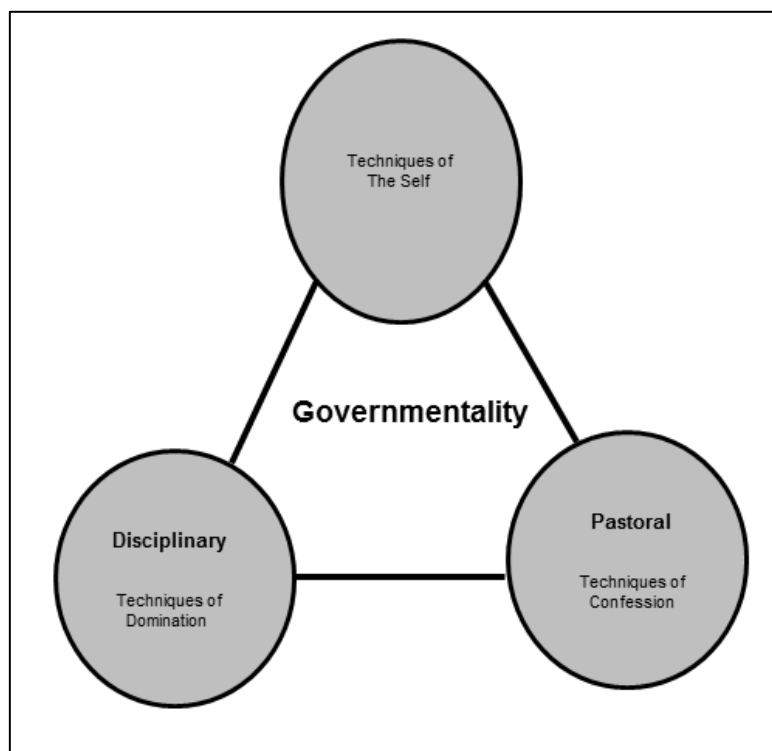
To allow for a clearer understanding of power, each was explained separately with examples from the research organisation. However, all of these three types of powers can occur instantaneously in an organisation. Disciplinary power is used through time keeping. Pastoral power is applied through feedback and is demonstrated when an employee responds positively from the feedback of the CEO. The organisation strongly implements templates that can be applicable through all types of power, thus resulting in less micro-management. An example of templates in a disciplinary power context is that each employee without choice must adhere to the use of template documents. The use of templates in pastoral power is illustrated as senior employees receive daily feedback by completing Daily Progress Report (DPR) and finally, templates as a regime of practice can be considered as a means of creating new knowledge that leads to improve oneself. The new employee is unfamiliar with the layout, standard headings and other formats that a proposal document encompasses and by gaining insight through following the proposal template document, is able to acquire new knowledge. This new knowledge allows the individual to share the knowledge. An employee states that when he acquired new knowledge on how to compile a proposal, he shared the knowledge with other members of communities of practice. These members are not affiliated to the research organisation. Nonetheless, figure 10 is constructed based on the Foucauldian typologies of power practised in the research organisation. It encapsulates the three types of power in an organisation.

Figure 10: Power Usage in an Organisation

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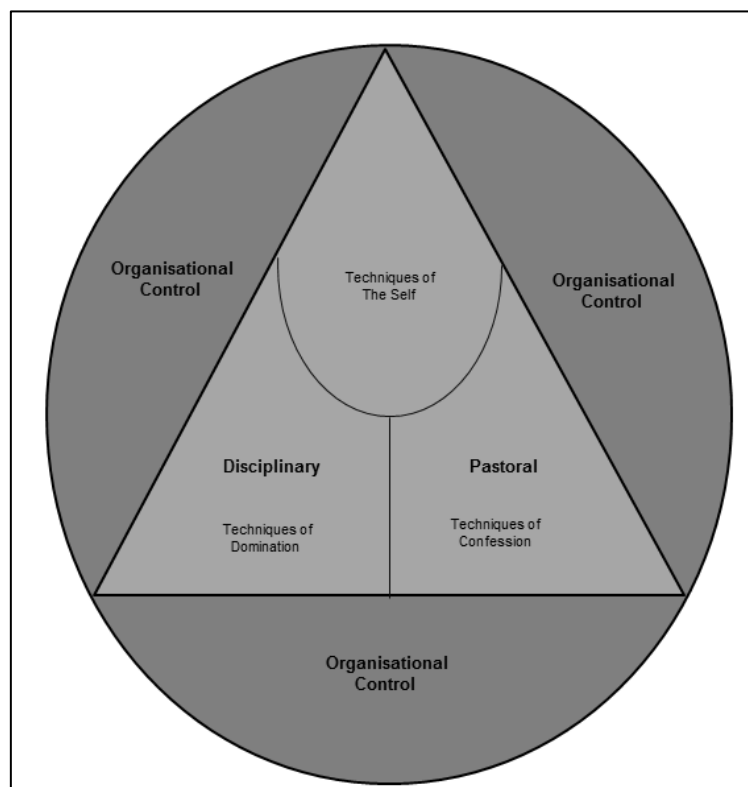
As previously mentioned, all types of power can occur within an organisation, amongst any employee, irrespective of their position in an organisation. In the research organisation, the CEO serves as a mentor to the senior managers. The senior managers are mentors to the supervisors and who in turn mentor the field teams. An experienced fieldworker mentors a new fieldworker.

3.4. My Conceptual model: Interlinking knowledge creation and organisational control

In the literature review chapter, I discussed knowledge governance as a facilitation process to knowledge creation. Michailova & Foss (2009) state that knowledge governance provides a system and methodology that affect knowledge creation and dissemination. Foss (2005) elaborates that knowledge governance encompasses various disciplines, including, knowledge management and human resources management. The literature provides a relationship between governance and knowledge creation. Literature between governance and knowledge processes need to be further research (Michailova & Foss, 2009).

However, the research focuses on exploring the relationship between knowledge creation and organisational control, particularly the types of control techniques that Foucault professes. These types of powers can be categorised as disciplinary power, pastoral power and technologies of the self (Seeck & Kantola, 2009).

Foucault emphasis that knowledge and power are interlinked, and should not be seen as two distinct entities but rather as two sides of the same coin (Heizmann & Olsson, 2015). The possessor of knowledge holds power as illustrated by the research organisation and the possessor of power can create knowledge and set up the ba for generating knowledge creation. The CEO is perceived as the most knowledgeable in the organisation and therefore, holds the power. Similarly, as the ranks of the hierarchical structure depict the level below the CEO is perceived as having more power and knowledge as the subordinates. This pattern is demonstrated for each level in the organisational hierarchical system. Knowledge and power is to be found throughout the ranks of the organisation.

Knowledge creation processes require a shared context. This shared context is what they refer to as the ba but which I propose is constructed and fashioned through the exercise of organisational control.

In addition to the SECI Model and the ba, embedded in the Knowledge Creation model is the knowledge assets. I further propose that the knowledge assets of the organisation can be used to augment organisational control as senior employees only share certain knowledge assets with certain employees. The organisation currently does not have a central directory where information is stored, which is accessible to all. The CEO and senior staff members store all proposals, research reports and other relevant information pertaining to the research process on their hard drives. When an employee is required to familiarise himself or herself with a proposal, the senior manager will email a proposal for the employee to review.

I suggest that the techniques of power as a form of organisational control, allows me to make the argument that the organisational control is the basis for establishing a conducive ba for knowledge creation.

In figure 11, I depict the various types of ba side by side with the taxonomies of power as mechanisms for organisational control and suggest that these are two sides of the same coin. Figure 11 provide a pictorial view of how the different types of ba come into existence through some form of organisational control techniques. Figure 11 is a combination of Nonaka, et al (2000a) different types of ba combined with the SECI model that forms the knowledge creation process. In addition, figure 11 includes a construction of the different types of powers ascribed by Foucault that the research organisation employees as management control techniques. Figure 11 depicts the relationship between knowledge creation based on Nonaka, et al (200a) and organisational control based on the Foucauldian notion of power. The diagram also provides a basis for the construction of my Knowledge and Power Generative model (see figure 12).

Figure 11: The Interlinking Process
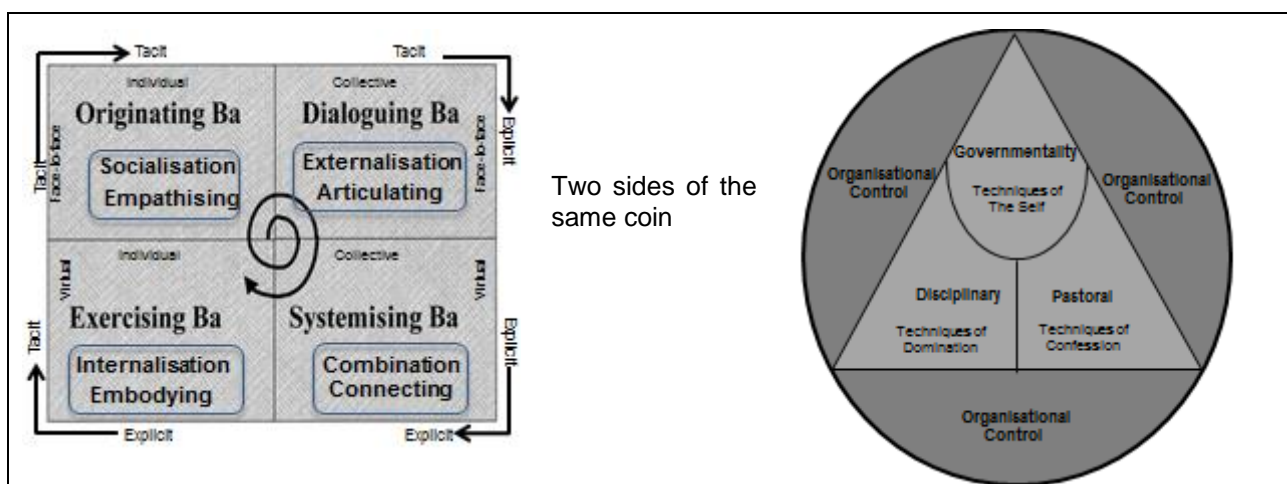
Knowledge is created through four conversion modes, the SECI process. This conversion process occurs through the ba as a platform. This entire process materialises in our research organisation. As knowledge is created, certain organisational controls serve as a framework for the flow of knowledge. This control mechanism is important as it serves as a signpost for managers and employees. The CEO stated that when a new employee starts with the organisation, he should comply with organisational policies, procedures and protocols (for example the template documents). These are all forms of control that allow for knowledge creation.

As mentioned, figure 11 depicts the interrelationship between knowledge creation and organisational control. In bridging the gap between knowledge creation and organisational control, I have created a conceptual model (see figure 12).

Figure 12, is an integration of the knowledge creation model, the four types of ba and an under layer of the four types of knowledge assets as well as the different types of organisational control.

Figure 12: Knowledge and Power Generative Model
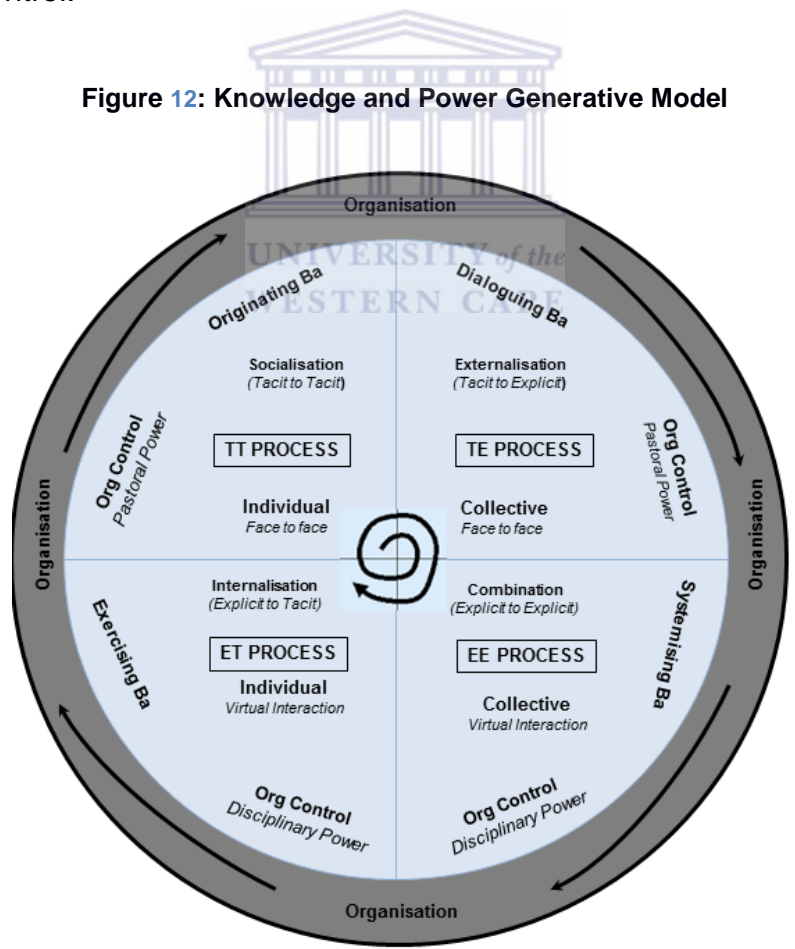
I will now provide a narrative of how the Knowledge and Power Generative Model is applied in the research organisation.

Every morning the CEO provides some form of written feedback to senior employees via email based on their Daily Management Report (DMR). The setting up of the cycle of feedback is an organisational control technique, a disciplinary technique. The weekly meeting is an instrument of control. Most times, he would request that the employee meet with him to discuss the feedback provided. The stream leader (SL) will meet the CEO in the morning to discuss feedback on the DMR. The feedback process allows the SL to gain new tacit and explicit knowledge through the experience from the CEO. The feedback is based on the knowledge assets that the CEO possesses. In his discussions, the CEO would exercise pastoral power by counselling the employee/manager of what to do and how to do it. By providing feedback to the SL, this pastoral power works on the individual to work on himself and become conscious of his/her "errors" made and to improve upon themselves. Here the CEO models ways of how the employee should be and how to reason and think and thus provides tacit knowledge to his employee. He does this by telling stories and recounting the battle stories of the organisation and shares mental models with his employee. Nonaka and associates defines this as the *Socialisation Mode*. In order for this mode to take effect, the CEO's experience of the organisation is as Nonaka, et al (2000a) describe as an experiential knowledge asset where tacit knowledge is shared through shared experience. This learning requires the pastoral relationship where the employee/manager subjects her/himself to the guiding hand of the CEO. Feedback, as a form of control, is based on the extent to which the SL subjects himself to the control of the CEO by completing the DMR. Nonaka and associates explain that trust is one of the key attributes of the Originating ba but I would suggest that in addition to trust there has to be a willingness to be led and be controlled.

In my conceptual model, the above processes occur within what I call the **TT process** of the Knowledge and Power Generative Model.

However, the **TT process** is not restrictive to pastoral power but engages the other types of power. Disciplinary power is infused through correctly completing the DMR that as mentioned is a daily regime of practice. The SL improves on the errors and attempts to ensure that those errors do not occur. For example, if the feedback was based on how she mismanaged her subordinates, she will try to improve her management skills based on the experience of the CEO. The experience of the CEO is derived from his experiential knowledge assets. If she does not implement these changes, this could result in the SL being reprimanded and as such can be described as a type of disciplinary power.

Based on the feedback provided, the SL will meet with the team and discuss what actions to undertake. The SL will mentor the subordinates in dealing with the problem at hand, thus exercising pastoral power over them. The dialogue that transpires within the group takes place face-to-face. This interaction is associated to the **TE process** in my Knowledge and Power Generative Model. In this process, tacit knowledge is converted into explicit knowledge. To accentuate on this fact is when the SL had a meeting to ascertain why fieldworkers are not completing the required number of surveys per day. The resulting discussions and explanations act as translations of tacit knowledge into explicit knowledge for the fieldworkers. The SL used her experienced tacit knowledge (experiential assets) to resolve the fieldworker's problem. After the meeting, notes are constructed based on solutions to overcome delays in field. Thus, tacit knowledge to explicit knowledge is the externalisation process of the SECI Model. Later, these notes were circulated to the group. This is explicit knowledge. When the explicit knowledge (the notes) were drawn up and later distributed to the rest of the fieldworkers, the combination process occurred, explicit knowledge to explicit knowledge. The construction (through organisational control discourses) of SL's as knowers and fieldworkers as recipients are important aspects of the pastoral relationship.

Another example of the **TE process** is the Monday morning meetings. The CEO meets the team leaders to discuss their Weekly Activity Report (WAR) as well as tasks that need to be completed for the week. Having the meeting weekly at a particular time and the meeting room constructs the shared platform (ba) within the organisation. This results in a Dialogue ba. The allocation of tasks is a form of externalisation. The systemic knowledge asset, which is tacit knowledge embedded in the culture of the organisation, assist in the externalisation process. This is further accentuated when each team leader receives feedback from the CEO on their WAR. The guidance provided by the CEO brings about self-contemplation amongst the individual. As knowledge is understood, the individual undergo a self-reflective process to articulate the knowledge. This I suggests, would be where the individual exercises techniques on her/himself. The feedback process permits individuals to atone for their mistakes, an act of pastoral power.

Because of organisational control techniques and mechanisms, knowledge dissemination and knowledge acquisition is possible. Another example that can be included in the **TE process** is when team members outline how they plan to complete their tasks for the week. The CEO further advises the best option of the task execution. A team leader from the Johannesburg branch participates in the Monday morning meeting through video

conferencing hence contributing to the **EE process**. This process is characterised when an individual obtain information with virtual media. Video conferencing is used in the case of the research organisation. The agenda for the meeting is emailed to each manager prior to the meeting. Systemic knowledge asset is when formal explicit knowledge is more easily shared (the agenda emailed to senior staff members). I mentioned earlier that the Monday morning meeting is where the CEO discusses the WAR of each manager and this includes discussing the WAR of the manager of the Johannesburg office. This would imply that both processes (**TE** and **EE processes**) could occur simultaneously within the same space. The conversion of tacit knowledge to explicit knowledge was undertaken when feedback was provided to each team leader and thereafter each team leader would document the feedback. The organisational control technique in this process is disciplinary power, as the Johannesburg team leader had to adhere to the required time to connect with the group. It also included pastoral power when the CEO provided feedback on the team leader's WAR report.

The **ET process** happens as time progress and the meeting is held week after week. Team leaders and other employee are now practicing the new knowledge and internalising what are told to them. They are learning from this practical application. In order for the internalisation of explicit knowledge in the **ET process**, there has to be consistency and continuity in the disciplinary, pastoral and in techniques of the self. There also has to be an opportunity for individuals to practice what they hear and are told to go try it out, perhaps make mistakes and then come back to report on it and get further instruction on what needs to be done.

After the meetings, each team leader would send emails to their team explaining what are required for them to complete for the day. When senior managers share their explicit knowledge with their subordinates, they are using their systemic knowledge assets and through this process, the internalisation process occurs. Eventually this becomes part of the collective culture within the organisation. This enculturation process is thus the **EE process**. Systemising ba is when a group acquire new knowledge with an organisation's network system. Lower level employees are exposed to the organisational culture and are able to access the required template documents to complete their daily tasks. This further allows that each individual converts the explicit knowledge to new explicit knowledge by following the template documents that he or she accessed from the network.

At any given time, all of the processes of the Knowledge and Power Generative Model can occur simultaneously. Furthermore, organisational control mechanisms form the backbone during each process as illustrated in the above examples. Although pastoral power is the most dominant control in the **TT** and **TE processes**, disciplinary power remains visible as it is characterised as being present everywhere. Techniques of the self also play a prominent role in the **ET** and **EE processes**. The above figure illustrates how the entire process is always moving within the organisation.

3.4.   Conclusion

Upon scrutinising the literature review, I found that conceptual linkages between knowledge creation and organisational control were not sufficiently explored. Therefore, I constructed a conceptual model to suggest connections between the two concepts.

Included in the conceptual framework was examples taken from the empirical research study to elucidate the relationship between knowledge creation and organisational control. A model was constructed which I refer to as The Knowledge and Power Generative Model. This model enables me to demonstrate how I view the relationship between knowledge and power. To conclude this chapter, I will quote Foucault, "that power and knowledge directly imply one another; that there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations" (Foucault, 1977: 27).

In explaining the Knowledge and Power Generative Model, I used examples of the organisation that was used for my research. The next chapter, I outline my research design and methodology, which I used in obtaining information about the organisation and its staff that, aided me in addressing my research question.

4. Research Methodology Chapter

4.1. Introduction

In this chapter, I discuss the research paradigm, research design, research methodology and methods used for gathering the data. In addition, in this section I explore reasons why I chose a qualitative approach by comparing it to the quantitative and mixed methods approaches. Furthermore, I discuss the types of qualitative research designs, more specifically, exploring the case study approach. The study is based on an interpretivist paradigm as a practical approach and is further discussed in this chapter.

I adopted as my research design, the single case study design. An overview of the data collection processes is provided and an overview of how I went about doing my data analysis.

4.2. Research Paradigm

Research paradigm is how individuals see the world (ontology) and how knowledge can be acquired (epistemology) about it. One definition of a research paradigm is that it is the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed (Kuhn, 1962). According to Guba (1990), research paradigms can be characterised through their:

- **Ontology** – **What is reality?**
- **Epistemology** – **How do you know something?**
- **Methodology** – **How do you go about finding it out?**

Ontology or existence, in other words, it is the essential characteristics of the world and what establish reality (Gray, 2014). There are three major paradigms in the social science research: positivism, post positivism or interpretivist and critical theory that I considered in my research study before choosing one. Gray (2014) further indicates that positivists alludes that the world is free of our knowledge – it exists 'out there'. As for interpretivists, there are more than one way of constructing reality and many ways of retrieving these realities.

Where ontology represents being and existence i.e. what is real, epistemology tries to make sense of this existence to get to an understanding. Epistemology provides a

theoretical background for determining what categories of knowledge are genuine and sufficient. Every person, whether a researcher or not has an epistemological perspective. This is significant for numerous reasons. It guides the researcher to a complementary research design to his epistemological perspective. This affects more than just the design but also choice of research techniques. An individual's epistemological perspective affects the type of evidence that is collected, from where and how it is going to be interpreted. The researcher is thus able to identify which designs will work (for a given set of objectives) and which will not (Gray, 2014). Based on the above discussion, I have highlighted three different types of paradigms in research:

1. Positivism –. People in this paradigm live their daily lives without little influence on society, as Sobh & Perry (2006) state that they see the world through a one-way mirror. I will not use this approach as it mostly focuses on proving hypotheses and is mainly used in quantitative research.

2. Interpretivist: The ontological perspective is that people construct and interpret their own reality. According to Burrell and Morgan (1979), interpretivist is not a single paradigm; it is in fact a large family of diverse paradigms. The research methods commonly used in this paradigm is in-depth interviews, observing participants and research based on grounded theory.

3. Critical theory – Individuals are sceptical of the previous two paradigms. They understand the world in their own interpretation. I will not adopt this paradigm as action research is mainly used. My research is not focused on how to improve the conditions of the knowledge workers.

An interpretivist paradigm may be regarded as the most suitable for this research study. This is because knowledge is a collection from that which individuals conceptualise (Fascia, 2012). Jonassen (1991 cited in Fascia 2012) clarifies that interpretivist elucidates the way knowledge is developed. Using this paradigm allows me to engage with the theories and concepts around knowledge definitions and justification to be developed on an inter-subjective manner by knowledge workers as oppose to be done objectively.

Consequently, the core purpose for selecting the paradigm was to address the research questions in the most suitable manner. I chose an interpretivist paradigm because my aim was to understand the processes of knowledge creation and managerial controls as well how people interpret their own activities.

4.3. Basic Approaches to Research

As discussed previously, each paradigm has its own appropriate type of research approach. For example, a qualitative approach is a suitable approach in interpretivist research and in-depth interviews are most often used in qualitative research.

The basic approaches to research can either be quantitative, qualitative or consist of mixed method research, namely combining quantitative and qualitative approaches (Creswell, 2003). In quantitative research, hypotheses are usually tested and the research objectives are explained or predicted by drawing on statistical data analysis. Information is commonly acquired in a structured manner by drawing on close-ended questions using measurable and variable scales. The findings are usually generalised and the results are presented using graphs and tables that are represented with correlations and other statistical data analytical tools. In adopting a qualitative research approach, the researcher would generate grounded theory and new hypotheses from the collected data. The research objectives are to explore and discover, as no hypothesis has been determined. Data is collected in an unstructured or semi- structured manner through in-depth interviews, observations and open-ended questions. Results are presented in terms of themes, images or words and the report typically includes direct quotations extracted from the participants. Mixed method research includes both quantitative and qualitative research approaches and data can be collected in multiple ways (Blumberg, Cooper; Schindler, 2012).

The approach that I adopted for my research study will be a qualitative research approach. However, I will discuss quantitative research methods with the aim of highlighting reasons for not choosing this approach to my research study.

4.4. Quantitative Research

Quantitative research is about defining an event through the collection of data that are dissected using statistical methods (Aliaga & Gunderson, 2002). Hancock (2002) states that in fields of natural sciences such as ecology, geology chemistry, nuclear physics, etc. quantitative research was first introduced. The structure allows exploring aspects that are noticeable and gaugeable in some way. Research practitioners apply the process of observing and measuring as it is not subjective. This type of research methodology is known as quantitative research. Burns and Grove (2005), reports that quantitative

research is a non-subjective, formally structured, methodological flow that entails analysing numerical data to derive knowledge of the world. This methodology is used to delineate variables, scrutinise the inter-relationship between and to ascertain causal relationships amongst variables (Burns & Grove, 2005). In addition, the focus of qualitative research focuses more on questions relating to how much, how often, how many and to what extend? (Collis & Hussey, 2003) The process of quantitative is highly a structured procedure that encompasses:

- Sample technique
- Data collection techniques
- Research instrument – questionnaire structure
- Data analysis
- Reporting (Birn, 2000)

Quantitative research is deductive, objective and uses a structured method of collecting data that is usually statistically analysed and reported on (Blumberg, et al., 2011). The basis of quantitative research is deduction whereas in my qualitative research study, in which I explored how organisational control affects knowledge creation, was inductive. I did not formulate any hypothesis as is the norm in quantitative research but I formulated a research question.
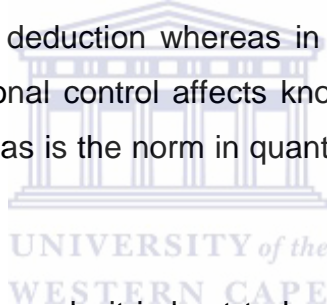
When conducting quantitative research, it is best to have a large sample size in order to report on significant findings based on statistical analysis. However, since I employed a qualitative approach I investigated a smaller sample: a single research company. Quantitative research attempts to be objective and requires a structured questionnaire in order to collect participant's responses. However, qualitative research is focussed on meaning through "the systematic collection, organisation, and interpretation of textual material derived from talk or observation" (Malterud, 2001: 483)

In making my choice for a qualitative research approach, I took into consideration what would be the most logical approach to address my research problem. I also took into account that my research does not consist of investigating a hypothesis and as such, it did not require any statistical analysis to prove a theory.

4.5. Qualitative Research

Qualitative research is the collection of words, phrases, concepts and is not interested in numerical data (Bryman; Bell; Hirschsohn; Dos Santos; Du Toit; Masenge; Van Aardt; Wagner, 2014).

Qualitative research is frequently portrayed as a research approach whose importance on a reasonably open-ended method to the research procedure commonly creates surprises, deviations, off course and fresh visions (Bryman, 2006). Additionally, the qualitative model contains an extensive collection of theoretical and procedural selections, and should comprise of distinct explanations as to how they were directed (Lingard, Levinson, Kuper, 2008). Blumberg et al (2011) emphasise that in qualitative research, data is collected through in-depth interviews, observation and focus groups. The most common approaches are descriptive, explorative and discovery. Marzanah (2009) expresses that qualitative research is an investigative approach to comprehend a cultural or human difficulty. This is derived from an intricate scenario that has been articulated in a common environment. Qualitative researchers focuses on how individuals interpret their surroundings, make sense of their circumstances through their experience and how they cope with their circumstances (Kohlbacher, 2005).

Qualitative research is a scientific research approach. Generally, scientific research consists of an investigation that:

- Finds answers to *why* and *how* questions
- Methodically uses a predefined set of techniques to answer the question
- Gathers proof
- Creates results that were not determined in advance
- Creates results that are appropriate outside the immediate boundaries of the research (Family Health International, n.d.)

As mentioned previously, not many authors were able to provide literature on the topic and therefore the qualitative design is most applicable, as it would provide a pathway for exploring answers to the research question. Secondly, the purpose of the study is to ascertain how knowledge workers react in a controlled structured organisation in acquiring knowledge. Furthermore, experiences from participants are difficult to explore in their context by applying a quantitative method and consequently, the type of study supports the qualitative design.

Bryman, et al., (2014) state that one of the most important and valuable sources of collecting research data in qualitative research are qualitative interviews. The core

purpose for choosing this methodology is to get detailed answers to address the primary research question.

In addition, this empirical research is of the perspective that reality is discursive, power loaded and developed socially (Foucault, 1977). It is for this reason that social developments need to be examined in their intricacies and in the entire context (Huhtala, 2014). Qualitative research recognises that the intricacies of a phenomenon are subjective. This is because the circumstances of knowledge specialists may be unique, discourse specific to the individual and associated to the realities in which they and transfer of knowledge exist unitarily (Fascia, 2012). This research aims at extrapolating data from the perspective of knowledge workers in relation to knowledge and organisational control that cannot be satisfactorily achieved through quantitative methods. Questionnaires and surveys are unlikely to achieve the desired outcome (Fascia, 2012).

4.6. Research Design

The research design is a blueprint in describing the procedures of doing a research project (De Vos & Fouche, 1998). It incorporates data collection techniques, sample design, unbiased data interpretation and recommendation (Blumberg, et al., 2011). The qualitative research design that I chose for my research study is a case study design. The section below outlines as to why I have chosen a case study research design.

Case Study Research Design

A case is usually an object such as an individual, organisation, occasion or some sort of social activity. The case functions as the primary unit of analysis in a case study (Yin, 2012). A qualitative case study offers researchers the opportunity to study activities in depth. When applied correctly it allows researchers to construct theories, assess platforms and construct treatments (Baxter & Jack, 2008). Case study focuses on in-depth analysis over a short period of time (deMarrais & Lapan, 2004).

Since this study will apply a case study research design, it will be based on actual events involving people and circumstances. A case study research design encompasses a thorough breakdown of how research practitioners plan to study in detail (Bryman, et al., 2014). They further emphasise that what differentiates case study design from other research designs is that through it a researcher can concentrate on a single situation.

Purpose of research

When discussing the purposes of the research study, theorists usually suggest that the purpose can be descriptive, exploratory or explanatory (Saunders, Lewis, Thornhill, 2007).

What is the purpose of my research study? It is to investigate how knowledge and control are entangled in an organisation. In this study, I adopted an exploratory research purpose. This is based on the premise that the primary research question is a "how" question and the objective is to establish "how" is knowledge production influenced by managerial control practices. Baxter & Jack (2008) define exploratory case studies as exploring conditions where no clear outcomes are easily predicted.

Huhtala (2014) states that case study research appears to be the most appropriate approach as it considers the contextual circumstances that affect the individual. In addition, case study explores an empirical subject by specifying detailed processes. Yin (2012) further states that case study becomes relevant when the researcher addresses "how" or "why" questions. This will provide perceptive explanations and valuable descriptions as it favours collection of information within a natural environment.
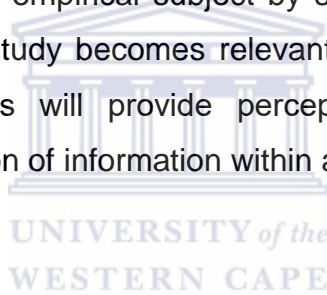
4.7. Sampling Techniques

A sample is a sub set of a population. A population can consist of a country, region, city or suburb. The method of sampling can be based on either probability sampling or non-probability sampling. Probability sample is when each individual within the sample has an equal opportunity of being selected. In other words, it is completely random. This method generally assumes that a representative sample will be selected from the designated population. The main purpose of probability sampling is to ensure that sampling error is minimised. Sampling error is when the sample differs from the population. An example of this is when the population consist of 40% males and 60% females, a sample error occurs when the selected sample consist of 45% males and 55% females. Probability sampling is most commonly used in quantitative research, as this type of research is dependent on statistical analysis.

Non-probability sample is when a sample has been selected without applying a random selection process. This indicates that some unit within the population are more likely to be chosen than others (Bryman, 2012).

Cases may form a purposive but non- probability sample. Merriam (1998) indicates that a non-probability sample is effective when, as in this study, the research is exploring what is occurring. Patton (1990: 169) suggests that such a purposive sample "has a logic and power - and provides rich information". This collection of cases is selected so that it provides a structural representation that matches the purpose of the study (Stake, 1994). It is therefore evident that the quality of the case selection process has a significant influence on the effectiveness of the study. Sequential approaches to case studies may enable the researcher to determine when theoretical saturation has been achieved, but this is incompatible with the longitudinal approach of this study.

Theoretical sampling is a form of purposive sampling that includes the process of collecting data in order to generate a theory. This is done by coding and analysing the data and then deciding what data needs to be collected and where to find the correct participants in order to develop a theory (Bryman, 2012).

I used purposive sampling for selecting the case for my research. Purposive sampling is undertaken when a researcher chooses specific individuals, aspects, issues, companies, etc. In addition, purposive research is a non-probability sampling technique. As mentioned above, it involves choosing specific issues based on a particular purpose as oppose to random cases (Teddlie & Yu, 2007).

Qualitative research allows researchers who are interested in deriving the opinions of certain individuals on a specific situation or their role in an organisation to gather that information. Furthermore, participants are not all equal, and one participant can provide more insight to a research study than a sample that exceeds 50 participants (Palys, 2008).

It is for this reason that I have chosen to investigate one company but interviews were conducted with participants that are involved in the different stages of the research process.

For the purpose of confidentiality, the name of the company shall not be divulged.

4.8. Data Collection Techniques

This section will cover the data collection techniques used in this study.

Qualitative data gathers informative and assorted data to answer questions that are meaningful to human life (Yin, 2003). As mentioned earlier, I employed a case study research that encompasses in-depth interviews. In addition, I used participative learning activities (PLA) as an icebreaker when employees were a bit withdrawn from participating in the discussion. PLA is used as a research tool to learn and collaboratively research within communities in order to understand the ideas and issues that affect communities, individuals as well as to find realistic solutions (Thomas, 2004). Although PLA was initially employed in ascertaining the perceptions of locals within rural communities or farmers, it is now being used in different research settings. I have opted to use this approach as a way to enrich the data.

Hancock (2002) elaborates that there are three main methods of collecting data in qualitative research. The first are individual type interviews that can either be, structured, semi-structured or unstructured interviews. Fascia (2012) emphasise that semi-structured interviews permit participants to express themselves more freely to questions and narrate experiences without feeling restrictive to answer in a particular manner. The second method of data collection is focused groups. This is when information is gathered in a group of people consisting usually of eight to ten people. A moderator controls the discussion. Lastly, observational research applies when data is composed through other means such as observing a person's facial expressions and body language.

A semi-structured interview format was used as a data collection technique for this research study. Morse & Fields (1995) argue that semi-structure interviews provide more depth and fullness in data as opposed to structured interviews. This is because through semi-structured interviews participants are able to articulate themselves more freely (Fascia, 2012). Consequently, it seems practical to apply interviews to collect data and subsequently to interpret the data in terms of themes. The aim is to obtain the experiences and perspectives of each individual knowledge worker, hence individual interviews.

The interviews were formulated according to general topics (such as job title, number of years with the organisation, working hours and current qualifications) and related questions based on a discussion guide to prevent deviation from the discussion. This enabled participants to probe and express themselves without being restrictive to time (Huhtala, 2014). Therefore, the discussion guide consists of open-ended questions.

Before any interviews were undertaken, I emailed the Chief Executive Officer (CEO) requesting permission to conduct research in the organisation. Attached to the email was a letter highlighting the objectives of the research as well as a list of participants that I wished to interview. In addition, I contacted all participants telephonically requesting permission to conduct an interview with them as well as briefly providing them with the main objective of the study. I sent a follow-up email to participants highlighting the objectives of the research study as well a date and time schedule for the interviews to be conducted. All interviews were recorded with the permission of the participants.

Prior to commencement of the research study, a pilot interview was conducted with one of the senior staff members. The purpose of the pilot was to address any ambiguity that the study could present. Janghorban, Latifnejad & Taghipour (2014) state that a pilot study can be summarised in four categories. The first is to ascertain problems and barriers experienced during participants' recruiting. Second, is to interact in the research as a qualitative researcher and thirdly to determine the acceptability of the interview's code of conduct. Lastly, the pilot assists in determining the research paradigm and methodology. In addition, the pilot study assisted in the refinement of the discussion guide and provided insight in the working mechanics of the organisation.

4.8.1. Data collection

The data collection process required thorough in-depth probing into how knowledge workers were applying their knowledge dissemination skills in the organisation's environment. Moreover, it required flexibility to allow openness from knowledge workers in expressing themselves. I was personally responsible for the data collection process and ensured that the same level of quality was kept for all in-depth interviews.

All full-time employees were interviewed with the exception of the office cleaner. Due to the small size of the organisation, ten employees were available to partake in an in-depth interview. The average time of the interviews was 45 minutes. Interviews were conducted over a period of one month as it was depended on the participants' availability.

4.9. Data Analysis and Interpretation

The processing and data analysis encompasses a number of procedures that are related to obtaining answers to the research questions (Dawson, 2002) by working through the data collected. Hancock (2002) mentions that qualitative research data analysis techniques that are usually used include:

- Transcribing requires an individual to document everything that was discussed while the interview was recorded
- Analysing the contents is a procedure of making sense of the data
- Tape analysis. This is when the recorded interview is played back numerous times in order to analyse the data

I followed the above suggestions. The recordings from the in-depth interviews were transcribed in a verbatim format. Thereafter I trawled through the qualitative raw data that was thematically analysed. Each transcript did not exceed ten pages.

The categorizing strategy I employed to sift through the data collected was coding. Flick (2013: 24) says: "In coding, the data segments are labelled and grouped by category; they are then examined and compared, both within and between categories." All transcriptions were tagged and coded according to pre-identified themes that had come out of the literature review. In addition, I also looked out for new themes. Thereafter, themes were categorically grouped according to the research objectives. By using a process of continual comparison, the themes were refined and similar concepts were clustered together.

For the purpose of validity, transcripts of the interviews were sent to some of the participants. Additional comments were recorded and included in the analysis.
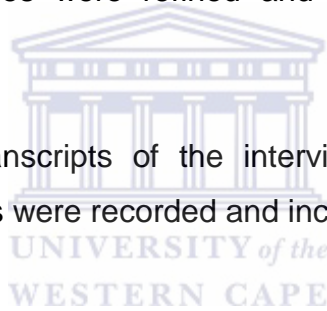
4.10. Conclusion

In this chapter, I explained that in my research study I chose the interpretivist research paradigm. Thus, ontologically, I employed a constructivist/interpretivist stance to social reality. My epistemological view is that the subjective reality of humans in society is in socially constructed and based on human interpretation. I chose to take a qualitative approach. My chosen research design was a case study that allowed me to explore how knowledge creation unfolds via organisational control mechanisms and techniques.

I outlined in detail the data collection methods employed. My data analysis methods were clearly articulated to answer the research question. This chapter concludes by confirming that all ethical considerations were taken into account.

4.11. Ethical Consideration

Appended are the relevant documents relating to ethical considerations. These include:

- Ethical Clearance form from the University of Western Cape
- Information Sheet relating to the research study
- Consent Form for participants to complete prior to conducting in-depth interviews

I endeavoured to adhere to the UWC ethical policy guidelines. The University of Western Cape clearly states in its ethical policy document that:

"Research should be conducted in agreement with universally agreed standards of good practice, such as those laid down in the Declaration of Helsinki", as follows:

- Beneficence - 'do positive good' (I would praise the participant for partaking in the interview and assure him/her that the information that they will provide would be of significant importance.)
- Non-Maleficence - 'do no harm' (I would ascertain if the employee to be interviewed is comfortable in having the discussion behind closed doors in the boardroom or if the participant would prefer to partake in the interview at another location.)
- Informed consent (All participants completed an informed consent form prior to partaking in the interview.)
- Confidentiality/Anonymity (The results or interviews were not discussed with any member of the organisation.)
- Veracity- 'truth telling' (No fabrication of the data was undertaken and all information recorded in the report was taken from the transcripts.)

Through adherence of the UWC research code of conduct, this study was conducted free of deception. Brace (2004) further emphasises that no parties are deceived if they adhere to the research code of conduct.

The following two issues were specifically addressed, namely; informed consent and confidentiality.

Informed Consent

Ethically, informed consent is part of the principle of respect for autonomy. Rights of self-determination and "not to be harmed" are implicit in the South African Constitution (University of Western Cape, 2015).

The participant agreed to partake in the interview without being forced or bribed to do so. The researcher has not deceived the participant by trying to secure a successful interview. Nothing was hidden from the participant and they had the right to withdraw at any time during the interview.

Confidentiality

All participants was assured that information provided shall be treated with the strictest of confidence and that no information will be handed to a third party. Furthermore, the information provided is solely used for this study. Appended to this dissertation is a discussion guide that was used during the in-depth interviews.

Upon completion of the research study, this research will be shared with the University of Western Cape and may be loaded onto their database. It will be kept in a safe and secure place. In addition, the results will be presented to those interested parties.

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5. Research Results, Analysis and Discussions Chapter

5.1. Introduction

In this chapter, I present the analysis of the data collected. The chapter provides the basis for discussion and analysis by which I answer my research question. As a way to bring focus to this chapter, I restate my research question: How is the production of knowledge within a research organisation influenced by managerial control practices? The data is analysed taking all of the research objectives into consideration.

In order to shed more light on the data analysis, I provide some insight of the organisation and the management processes that the organisation implements. Through providing an understanding of the organisation and its context, I hope it will lead to a greater appreciation to the data analysis process.

The organisation that constituted the case of my case study was a research organisation with two branches and their head office in Cape Town. Due to the size of the organisation, I will not mention any particular job title in the analysis to prevent the identification of the employee. Participants are identified as Respondent 1, 2 and so on. The only exception is the CEO where his comments that are used in the analysis are acknowledged.

5.2. The Research Organisation

The research organisation has two branches, one in Cape Town and the other in Johannesburg. The head office is in Cape Town. The research organisation consists of 10 permanent employees excluding fieldworkers and can therefore be consider as a small enterprise organisation. The fieldworkers are employed on a project-to-project and are call upon when require to conduct fieldwork. According to the CEO, the research team are professionals with excellent research skills. According to the South African government, any organisation that has fewer than 100 employees and has a fix premises is consider as a small enterprise. The organisation regards itself as a small enterprise operating in the market research industry and has a B-BBEE[1] status that is a Level 1, AAA+. According to the CEO, the organisation focuses on:

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[1] B-BBEE stands for Broad Based Black Economic Empowerment. A program the South African Government initiated to encourage black owned business as well as to provide equal opportunities for the previous disadvantage.
Level 1 AAA Status refers to meeting all requirements in complying with the regulations set by the South African government

- Customer Satisfaction Research

- Supplier Satisfaction Research

- Employee Engagement Research

- Brand Research

- Stakeholder Research

- Audience Research

- Communication Research

To address clients' demands the organisation offers the following services:

1. Quantitative research including face-to-face interviews, mystery shopping, telephonic interviews and online surveys

2. Qualitative research including focus group meeting, key informant interviews, pre-testing and observation

3. Other services include: Computer-Assisted Telephone Interview (CATI), Computer-Assisted Personal Interview (CAPI), Desktop Research, Omnibus Surveys, Polling, Data Capturing, Data Analysis and Report writing

Competitors are research organisation competing in the small to medium market. In terms of its client base, the research organisation focuses mostly on attaining government contracts and institutions are that affiliated to government.

Hierarchical Structure of the Organisation

The hierarchy of the organisation is depicted in figure 13. It also serves as a reporting system indicating the senior person each individual reports too.

Figure 13: Organisation Hierarchy
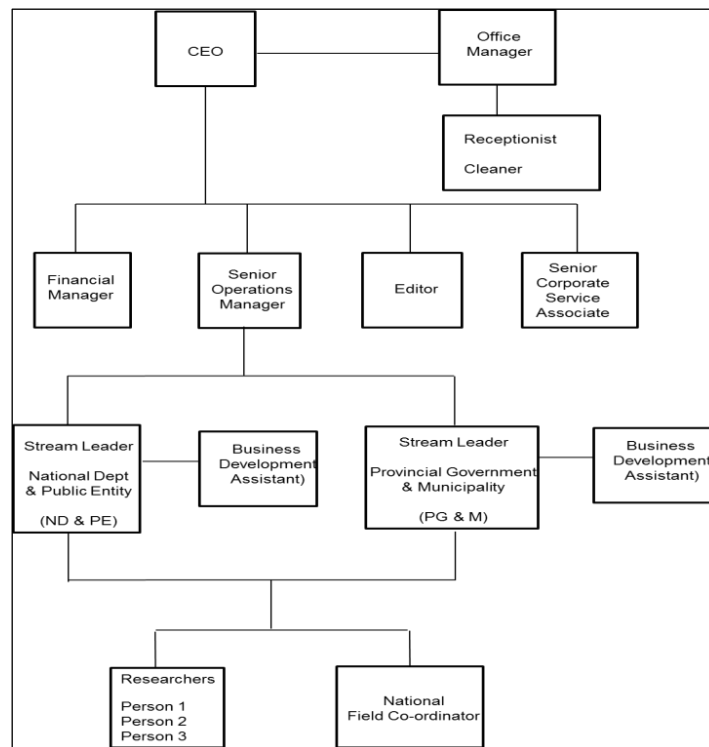
From the above hierarchical graph, the CEO has the highest level of control in the organisation. Instructions are filtered from top level to the lower levels.

The Organisational Processes

During my time observing the organisation I saw that all employees signed in when entering the office. They had to sign out for lunch and when departing from the office at the end of the day. This type of surveillance enables the CEO to monitor the working hours of each employee. Employees, processes and organisations are considered as knowledge enablers in fostering knowledge and therefore knowledge management strategies are needed to manage their knowledge resources efficaciously (Choi & Lee, 2002). Once employees have signed in, they follow certain regiment. Most employees will check their emails to see what their immediate line manager have instructed them to do.

The organisation has an intranet for sending and receiving email internally and externally as well as print sharing options. However, the organisation does not have a shared directory where employees can access template documents. Respondent 1 states, "*The past documents of the company can be obtained from particular people. Knowledge is stored in form of written reports and saved on a hard drive which the CEO is in possession of and some are saved on key individual's computer*". When a new employee needs to acquire knowledge on how to complete a research inception report, the supervisor will

provide that person with the required information. The supervisor will email a research inception report that was previously used for another study but contain general information on the organisation. The new employee will insert information about the new study without altering the format. Once the inception report is complete, the new employee will send it to the supervisor for further perusal before sending it to the CEO. Currently, if a new employee requires new knowledge of certain procedures within the research process, he/she should ask the manager for the information, which the manager will email to the new employee. The CEO is in the process of looking to obtain a better knowledge management system. "*The company acknowledges that it's better to have the information on a particular place which is accessible to all, rather than at the disposal of certain individuals. This is the reason why the company is looking into developing a company database*", as stated by respondent 1.

The organisation implements certain practices. As discussed earlier, all employees must sign a register indicating that they have arrived in the organisation. To understand more of the organisation, I have outlined the procedures staff follows from the time of searching for a potential project to the report stage. Each of these stages is outlined in this section starting with the Business Development Process.

Stage 1: Business Development Process

This stage happens before any project has been commissioned. In this stage, certain members of the organisation are tasked with finding research projects from Trade World[2], a tender website. A link to the website is sent to the Senior Operations Manager (SOM), Stream Leader (SL) and those involved in business development. The SL forwards the link to the researchers and all parties are required to see what business opportunities are available.

The process is as follows:
1. In the morning, the team of the Stream Leaders will send all opportunities they found on Trade World.
2. The SL who also looked on Trade World will consolidate the findings and send it to the CEO
3. The SOM also submit a report of his findings to the CEO.

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[2] Government tender base consisting of government tenders

4. The reason why so many parties look for opportunities and submit it to the CEO is that he wants to make sure that nothing important was missed as well as why some parties did not mention a viable opportunity that was mentioned by others.

5. Once the CEO has examined the submitted opportunities, he will notify the SOM of which opportunities to process.

6. The SOM in turn would send it to the SL who will send the tender opportunity to the researcher.

7. The researcher will be required to get the tender documents if available, or download it from the website. The researcher completes a POAW (Preliminary Opportunity Assessment Worksheet) which is a template of questions relating to the tender. Questions such as, do you think we should bid for this tender. What is your motivation to your answer? (See Appendices).

8. The researcher completes the POAW and indicates whether it is viable to pursue this opportunity any further. All information is sent to the SL.

9. The SL gathers the information and indicates whether she agrees with the researcher's findings.

10. All this information together with the SL comments is sent to the SOM.

11. The SOM reviews the information, adds his comments and send it to the CEO.

12. The CEO makes the final decision as to whether the process should be discontinued or whether the team should continue drafting up a proposal.

However, if there is a briefing that needs to be attended one of the researchers will attend the briefing, collect all the information and proceed with completing the POAW.

Stage 2: Proposal Stage

Once the CEO agrees that the tender is a potential study, he informs the SOM who in turn informs the SL.

1. The SL informs the researcher who completed the POAW to work on the proposal from a proposal template. There are different template proposals. Some proposals are designed for monitoring and evaluation studies while others are designed for brand awareness. Depending on the type of study, the researcher will use the template best suited for the particular study.

2. While one researcher completes the proposal, another researcher gathers information about the company to be researched.

3. The completed information related to the client's organisation is sent to the SL who sends it to the graphic designer.

4. After the other researcher completes the proposal, all information is sent to the SL.

5. The SL compiles a project plan and sends it to SOM for approval.

6. The SOM will send the approved project plan back to the SL who then sends it to the Financial Manager to do a costing.

7. The Financial Manager sends the completed costing to the SL.

8. The SL includes the costing, the graphic information of the Client's organisation as well as the approved project plan in the proposal.

9. The completed proposal is sent to the SOM who checks it and sends it to the editor (proof-reader).

10. The editor sends the proposal to the SOM and he checks the changes and then submits the proposal to the CEO.

11. The CEO checks it, add the cover page and send the proposal off to the Client.

After acceptance of the proposal

The CEO will announce to everyone that Client has accepted the proposal. The announcement is followed with a meeting between the CEO and the SOM. The CEO will explain what needs to be done relating to the project or he will ask the SOM to think about the way forward. This will include how the project plan will be implemented.

Once a proposal has been accepted the next step is a "kick-off" meeting between the CEO and the Client. The context of the meeting is to ascertain exactly what the Client expects and signing of the Service Level Agreement (SLA). During this time the SL, allocate the task as highlighted in the Project Plan Payment Deliverables (PPPD) schedule.

Project Inception Report (PIR)

The PIR is a report that is provided to the Client based on the information acquired from the "kick-off" meeting. Some information in the PIR is standard while other information is changed to the Client's needs.

The project inception report consists of:
- Background information of the study
- Background information of the industry
- Stakeholders that will be involved in the research study
- Implementation Mechanics
- Methodologies, Tools and Techniques
- Project Definition Package (PDP)
- Timeframe of deliverables

- Project Plan
- Cost of project
- Payment plan
- The project team (qualifications and experience of each team member) and
- Background of the organisation

While constructing the PIR, the SL will inform the relevant team members of the project. The SL will provide daily status to the CEO who will provide feedback based on the daily status report.

The SL will send the PIR to the editor who will peruse the report and upon completion of editing the report, it will be sent to the CEO and SOM. The CEO will provide feedback on the report to the SOM, SL and editor. The CEO will present the PIR to the client and upon approval of the PIR, the project will commence as detailed in the project plan.
During this time, the SL will proceed with tasks as outlined in the PPPD.

Deliverables to Client

The project has been conceptualised to be implemented in six phases with the following deliverables:

- Project Inception Report
- Desktop Review Report
- Draft Questionnaire
- Final Questionnaire
- Field Implementation Report
- Raw Data
- Spread sheet with data
- Tables and analytical work
- Draft Report
- Final Report
- Workshop
- Presentation

See appendices for an illustration of these deliverables

The Project Plan

The project plan is an outline of how the project will be completed. An example of a project plan for a quantitative study is illustrated in the Appendices. As part of the project plan,

Weekly Progress Reports (WPRs) and Monthly Progress Reports (MPRs) will be submitted to client. (Project plan appended).

The Status Reporting System

Each employee submits a Daily Progress Report (DPR) to his or her superior. The superior will review the status of each individual and submit to the CEO for further review. The CEO will provide feedback based on the information provided and resubmit it to the SOM. The CEO provides feedback on the DPR daily. An example of a DPR is appended.

Middle management and senior managers will provide a Weekly Activity Report (WAR) to the CEO based on the progress of the project as well as action taken from the feedback provided. This report can be submitted by latest Saturday evening. The reasoning for this is that activities regarding the project could have taken place (fieldworkers completing the field quotas) and therefore need to be reported. An example of a WAR is appended.

Every Monday morning a status meeting is held with senior and middle management in the conference room. The senior manager from Johannesburg is included in the meeting via Skype. The discussion focuses on new activities planned for the week as to recommend an alternative plan for activities that were not completed during the stipulated period.

Through these status reports, constant feedback is sent to the individual with the primary purpose of encouraging knowledge creation in the organisation. Individuals acquire new knowledge from past errors and ways to improve their role in the organisation. This will enhance the individual's ability to advance within the organisation. In addition, the feedback serves as a mentoring process to those individuals who have been newly employed by the organisation as well as to those who has been recently promoted.

In terms of the organisational structures and processes, various forms of organisational controls can be identified. Foucault explains governmentality when organisations applies strategies for organisational control as well as when employees who are subjected to organisational control implement self-governance (Clegg, et al., 2014). Employees subjugate themselves through adherence to the procedural structures and in doing so allow them to be controlled. The organisation asserts disciplinary power through structures and procedures as well as through surveillance. Pastoral power is applied when employees open themselves to receiving feedback from their senior staff members and technology of the self is portrayed through the willingness of the employee who seeks self-improvements.

Muller, Pemsel, Shao, (2014) posit that a strict form of governmentality is when organisations control their employees behaviour through imposing conformity. A less stringent classification of governmentality is where organisations control the outcomes of employees' tasks. The organisation does not overtly enforce domination over employees neither do they oppress their employees or rely on external controls but use governmentality as controlling mechanisms. Governmentality is structured on active submission and voluntary consent by employees (Clegg, et al., 2014) as it is prevalent in the organisation.

5.3. The Analysis

This section will test the explanatory strength of my conceptual model through examining the themes and insights derived from the analysis of the semi-structured in-depth interviews. I thematically arranged the interview questions to address the primary and secondary research questions. Analysing the responses to the in-depth interviews allowed me to comment on the relationship between organisational control and knowledge creation.

As mentioned in the literature review chapter, there is a gap in which scholars have theorised the relationship between knowledge creation and organisational control. I aim to make the argument by using my conceptual model to analyse my data on how organisational control provides the basis for knowledge creation processes. I employ my knowledge and power generative model as a lens through which I analyse the data collected. My model should be seen as the way in which I conceptualise the relations between organisational control practices and their relationship to knowledge creation. I suggest that the techniques of power as a form of organisational control, allows me to make the argument that the organisational control is the basis for establishing a shared context for knowledge creation. Knowledge creation processes require a shared context and this shared context are referring to as the ba. I propose the ba is constructed and fashioned through the exercise of organisational control techniques. It shapes the contours of organisational space. I further investigate how organisational control techniques are intertwined with the elements of the knowledge conversion process.

Figure 14: The Knowledge and Power Generative Model
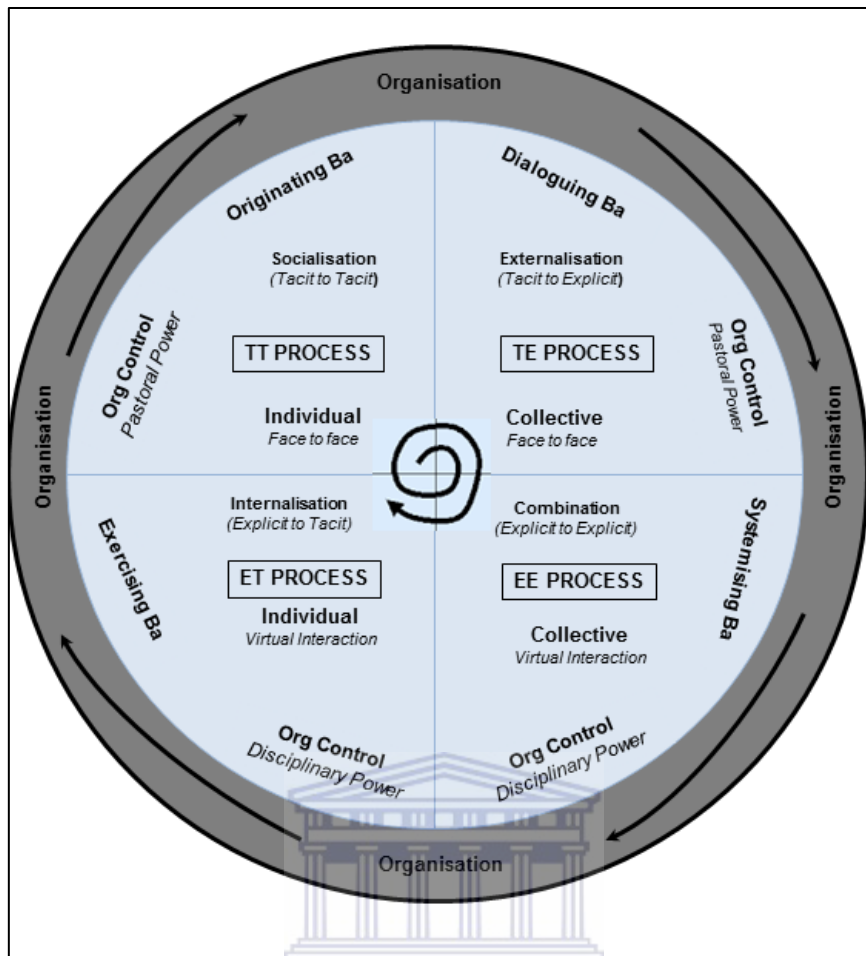
I provide a quick overview of my conceptual model that I developed in chapter 3. Knowledge creation within organisations involves ongoing iterative processes where individuals and groups acquire new knowledge. This resulted in seeing aspects of their social world differently and their capacity to act creatively.

Based on the Knowledge and Power Generative Model, I conceptualise organisational control as consisting of disciplinary power techniques, pastoral power and "technologies of the self". In my analysis, I aim to explore how organisational control enables or even constrains the relationships between people in the ba and facilitates the SECI knowledge creation processes.

In the next section I present my the analysis of my data through which I evaluate whether the claims that I made in my conceptual model is supported by the empirical evidence or whether I have to change some of parts of my model.

5.3.1. Tacit to Tacit (TT) Process – socialisation mode via organisational control

From my conceptual model, I make the following claim: pastoral power is the most dominant form of power in facilitating the originating ba and constructing the relationships that allow the conversion of tacit knowledge to tacit knowledge.

Pastoral power as a type of organisational control is when an organisation encourages it members to submit to an authority that will act as a guide. In other words, how to be and act is acquired through the guidance of someone set up as a mentor or a senior. In the research organisation, that person is the CEO who deliberately mentors the SOE and SL. This pastoral orientation is encouraged throughout the firm. The SOE and SL guide middle managers and they in turn supervise and mentors junior staff.

An example of the pastoral relationship is when respondent 2 remarked,

> "*When I started with the organisation there was a group of ladies who knew a lot [about] research so I would listen to their experiences, whether they speak about monitoring or evaluation, I would listen and learn*".

From this example, the employee sought knowledge from a group of employees who were knowledgeable on a particular topic Respondent 2 stated that he would willingly take a report that he completed to them to seek feedback, "*I once wrote a report on monitoring and evaluation*". The feedback that the group of employees provided was as claimed by respondent 2, "*they told me my research was too academic*".

Based on the analysis drawn from the data, I deduce that the group of employees acted as mentors and instructed the employee on how to write research reports. He went to them seeking guidance and through their mentoring; they steered him to the standard of quality document that the organisation expects. When the employee sought guidance, he had to submit himself to a pastoral relationship. This action of the individual and his eagerness to acquire tacit knowledge facilitates the socialisation process. The originating ba that is brought about involves power and control. The office location of the group of mentors serves as the originating ba and the knowledge assets that becomes prevalent is the experiential knowledge asset as the mentors shared their experiences tacitly with the junior employee. Thus, by implementing pastoral power–mentorship the socialisation process could occur that formulates the **TT Process**.

The CEO utilises pastoral power in the research organisation. On a daily basis the CEO meets with each of his senior managers and provide feedback on how they should

improve on the way they allocate tasks to their subordinates. The feedback also entails how managers should manage their subordinates. Mentoring is defined as a type of pastoral power as the subjects try to improve themselves based on the feedback from the mentor. The CEO develops a Community of Practice where he mentors senior people. Through this Community of Practice, the CEO controls the sharing of knowledge as the knowledge he shares with senior staff, and they in turn are encouraged and directed to share knowledge with their subordinates. Therefore, the sharing of knowledge becomes mandatory within the organisation.

In the research organisation, when new members join they undergo a learning process. This process takes place where individuals are instructed, coached and coaxed to act in accordance to the organisation's culture. This process is facilitated through senior staff members in the organisation enacting a pastoral relationship with new staff. The senior staff thus enacts an "originating ba" atmosphere. It is in this ba where new and old organisational members interact in the creation of new tacit knowledge from learnt tacit knowledge described by Nonaka (2000a) as the socialisation process.

I will analyse from the data recorded below how pastoral power is used as a means of acquiring tacit knowledge.
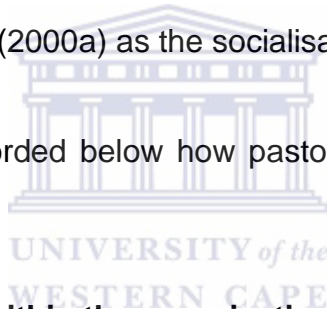
How do you improve yourself within the organisation?

Respondent 3: "*I think through continuous training and development*"

Respondent 4: "*Through continuous professional development*"

Respondent 5: "*I go to my manager as I am very much interested in field because I'm very interested in the research field. Things that I come across as we work on projects*"

Respondent 6: "*I am continually learning, and the CEO is a person that I can learn from*"

"*I want to learn. I always ask for information*"

From the above responses, training and development, and continuous learning are important factors that aid employees to improve themselves. In order for the employees to improve themselves, they require the help of someone who has more knowledge than they do. Respondent 6 stated that the person from whom knowledge is obtain, "*the CEO is a person that I can learn from*". In this particular case, the CEO is the one who guides the employee in acquiring new knowledge. The guidance from the CEO is a pastoral power and through this guidance, the employee is able to gain new knowledge. In relation to this process of the model, the information that the CEO shares is from his knowledge assets

and is dependent on the type of knowledge that he applies to guide the employee. The organisation personifies the originating ba and through pastoral power is the employee able to gain new knowledge. This synergy of organisational control (pastoral power) and acquiring of tacit knowledge forms the **TT Process**.

In further examining individual knowledge creation with pastoral power as an organisational control mechanism, employees were asked:

How did you get the know how to do your current activities?

Respondent 2: "*When I started I worked with a senior person who would meet with me on a Monday and discuss what I must do*"

"Respondent 4: *A senior person took me through the company culture, what we do here and what we don't do.*"

Respondent 7: "*They were teaching me step by step. My superiors trained me. It took me three days to complete a proposal.*"
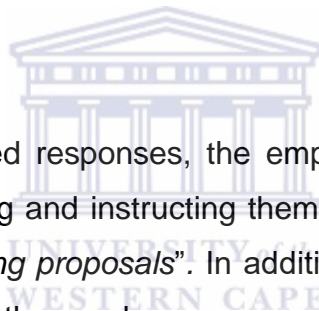
In analysing the above-mentioned responses, the employees stated that someone in a more senior position was showing and instructing them in how to complete certain tasks, "*My superiors trained me in writing proposals*". In addition, from the data collected, "*They were teaching me step by step*", the employee was constantly receiving new knowledge. Respondent 2 stated, "*When I started I worked with a senior person who would meet with me on a Monday*". In this instance, the employee met with a senior staff member in acquiring new knowledge in completing a certain task as stated, "*discuss what I must do*".

Looking at the above excerpts, the employees, in order to gain knowledge had to subject themselves to some form of organisational control. The control mechanism display pastoral power as the employees acknowledges that they were acquiring knowledge from a senior/my superior. In closely examining the last response, the Monday mornings and the meeting place enacts the originating ba The senior's ability to teach the employee based on his/her current tacit knowledge forms part of the experiential knowledge assets. The employee's submission to the manager (pastoral power) to acquire new tacit knowledge causes the **TT Process** to occur.

In addition, when the employees acknowledged someone more senior to them, this somehow demonstrates that a hierarchical system exists, as power can only be effective when someone gives power to someone else. In the organisation, the junior employees

will follow the instructions given to them from their supervisors. Hierarchical systems usually applied some degree of organisational control practices (Huhtala, 2014).

However, the **TT Process** in relation to the socialisation process is not restrictive to pastoral power but also included all other types of control. There are various methods to acquire tacit and explicit knowledge and one of those methods is through the disciplinary and pastoral aspects of organisational culture (Hislop, 2005).

An organisation comprises of a socially structured group of people in order to achieve collective goals. This group of people are required to adhere to the authority of management that aims to control relationships between different employees through authoritarian positions and responsibilities and tasks are assigned to fulfil various activities (Montana & Charnov, 1993). Disciplinary power plays this role. The organisational culture, as a form of disciplinary power, consist of the manner in which the activities are executed in order to achieve the goals of the organisation as well as shared belief, customs and how power and knowledge flow through its hierarchy (Martins & Terblanche, 2003).

New employees can and do obtain tacit knowledge through learning from other staff members in understanding the organisation's culture. The organisation's culture serves as a disciplinary tool, usually initiated by a senior person, in directing employees to imbibe the organisation's culture.

To illustrate disciplinary power techniques in action, through the adoption of the organisation's culture in the organisation, the CEO's personal assistant instructs new employees of what is required from them. This includes professional dress code, maintaining a tidy office environment, filing documents accordingly and many other similar requirements. When employees adhere to the request of the personal assistance on the instructions of the CEO, they forego the privilege of acting on their own desires or culture by consenting to adopt some or all of the organisation's culture. In doing so, they have submitted themselves to some form of organisational control - disciplinary power. The organisational control relates to employees submitting themselves to the demands of the CEO as the personal assistance acted on the CEO's behalf. Respondent 1 commented that, "*when we leave the office do go home, we have to close our office door and when we come to work in the morning, we leave the office door open until we leave to go home*". This is an example of how the CEO has instilled a surveillance culture in the organisation. Surveillance is also a form of disciplinary control (Seeck & Kantola, 2009). New employees

that fail to comply with the rules of the organisation will result in a disciplinary action as stated by the personal assistance. This organisational control technique is a disciplinary power technique. Employees are therefore compelled to adhere to the rules to avoid disciplinary measures. These rules are embedded in the organisation's culture. The originating ba enacts the organisation and its culture as a shared place. Routine knowledge asset is the rules of the organisation that the personal assistance possesses and shares with new employees. Routine knowledge assets is when tacit knowledge embedded in the organisation's culture is shared (Nonaka, et al., 2000a). Through sharing her tacit knowledge relating to the rules of the organisation, the new employee have obtained new tacit knowledge resulting in the socialisation process occurring. In order for the new employee to acquire the newly tacit knowledge, he/she had to submit to disciplinary form of organisational control.

To illustrate how disciplinary power can have a positive impact on the individual, I extrapolate the following scenario from the data. Respondent 5 mentioned that when the personal assistance informed her of what the CEO expects in terms of professionalism. Respondent 5 further stated that, "*when I started with the company, everything was professional and I liked it……I was never a person that was organised and the company was very organised.*" Respondent 5 described how when she started with the organisation, she saw the professional culture of the organisation and decided that she saw the value in this and adopted the formal dress code, conducting herself in more prudish manner and becoming more systemised in her life. In terms of the above situation, the organisation serves as the originating ba and the personal assistant's ability to communicate the organisation's culture to the new employee form part of the routine knowledge assets. When the employee obtained new tacit knowledge the socialisation process occurred and it only came in effect when she subjected herself to the disciplinary rules of the organisation.

While interviewing respondent 5, I observed her acting in a very professional manner. Although it was disciplinary power within the organisation that initiated the professional dress code, the implementation of it outside the office environment was a result of the influence of the CEO, "*I liked the professionalism in the organisation and decided to adopt it outside my work environment*". Respondent 5 further stated, "*since working here, my friends have noticed my professional outlook*". The CEO's ability to influence the employee's decision to embrace the organisation's culture resulted in the employee acquiring new tacit knowledge through submission to the CEO. In particular, the influence

of the CEO caused the employee to become an object of herself. She objectified herself and fashioned herself to the culture of the organisation through obtaining new tacit knowledge. The strong influence averted her from her old habits and resulted in adopting a re-fashioned self". This "new" sense and practice of self is the result of the CEO's disciplinary power, causing her to constitute herself and act in a similar manner as the rest of the employees. The impact of this is hoping to achieve that when clients enter the office of the organisation, they would immediately notice the level of professionalism. The organisational control through disciplinary power caused employees to gain new knowledge without feeling coerced thus enabling a positive environment as noted by respondent 5, "*everything was professional and I liked it*".

From the above two example, I deduce that the relationship between the knowledge creation process (SECI model, ba and Knowledge Assets) and disciplinary power as a technique of organisational control resulted in the construction of the **TT Process**.

The CEO provides an example of what I would consider using templates as a disciplinary technique in employees acquiring knowledge. He states that implementing templates, as a disciplinary technique, are,

"*More about having people trained, make it easier for them to do stuff with minimum supervision. The templates are there, and when you are being taught to do it once, it's more likely you won't forget how to do it*."

He then further states that "*one thing we try to do here is whatever you want to do or achieve easily you turn it into a habit…..it's a training tool*".

From the above quote, I suggest that template documents are used as tools for knowledge creation, "*templates are more about having people trained*". Employees gain new knowledge through training and earlier analysis concludes that training is a possible form of pastoral power. When these templates are used as a training mechanism, it becomes a disciplinary tool. One of the reasons for designing templates is to reduce the level of constant interaction between new employees and senior staff as stated by the CEO, "*makes it easier for them to do stuff with minimum supervision*". This could also imply that supervision occurs with templates and through continuous use of it; employees will improve in executing their work activities. The CEO said, "*Whatever you want to do or achieve easily you turn it into a habit*. The use of template documents enforces this action. Incorporating template documents can be encompassing organisational control in a form of disciplinary power. It serves as a control mechanisms in reducing the micro

management processes. Templates are normative practices that the organisation has instituted which influence the creation of knowledge but restrict employees' creativity.

However, some employees criticise the organisation's management system. Criticism is a form of resistance to control. Respondent 3 stated that, "*the management system can be very restrictive sometimes because of the delay in the decision making process*". When I was discussing the management system in relation to the employee acquiring knowledge, the employee said, "There should be some sort of flexibility, the organisation's structure need to be more rigid". This model does not make allowances to deal with employees' disagreements to the management control systems of the organisation. The focus is more on how the organisation's control technologies allow the converting tacit knowledge to new tacit knowledge and enabling the socialisation process.

However, there are employees who are opposing the structure of the organisation as some employees mentioned:

Respondent 3: "*The structure needs to be more flexible. Knowledge needs to be shared and as long as people are willing to share the knowledge, they don't seem to have the time to do it. We need to look at that.....especially in a small organisation like this*".

Respondent 8: "*It is very strict.....my manager can't say yes, he has to ask the CEO*"

Respondent 9: "*The structure is always changing. The structure needs to be looked at*"

The data shows that the employee is eager to attain knowledge but as I respondent 3 mentioned, the transferring of knowledge is hampered when key individuals are unavailable to share their knowledge. The transfer of knowledge between employees is a problem that was highlighted in the literature review. This suggests that the disciplinary techniques were not sufficiently attuned to 'control' knowledge sharing and therefore there is a need for it to be transformed so that senior staff making themselves available for meetings with junior staff. It could infer that senior managers are not willing to share their knowledge, as they might be afraid of losing their power. Hislop (2005) suggests that people's unwillingness to share their knowledge could be because of the following:

- Personal conflict
- Level of status could be negatively affected

- When senior managers share their knowledge are they acquiring new knowledge that will provide a type of fairness
- Trust – issues relating to trust
- Levels of commitment to the organisation
- Organisational culture – Is knowledge sharing part of the organisations culture
- Type of reward or recognition

To illustrate how technologies of the self-operated within an organisational context (originating ba), I used the example of an employee (respondent 2) who stated that he approached the group of employees with the aim to improve himself as he states, "*I would listen and learn.*" Respondent 2 was not forced by any senior staff member but demonstrated what Foucault would term, technologies of the self. Foucault (1982) states that technologies of the self are when the individual takes his subjectivity or self as an object who acquires knowledge to bring change upon himself. The office where the respondent 2 went to seek guidance contextualised the originating ba and through the ba was he able to acquire new knowledge.

Pastoral and disciplinary power can occur simultaneously when the organisation enacts the originating ba. I demonstrated this from the data. Respondent 3 claimed that, "*I supervise people and I supervise projects*". From this expression, the employee shared knowledge through supervising people, thus creating a pastoral relationship. Through this form of organisational control technique, knowledge is shared and co-constructed. When the employee mentioned that he/she supervises others, the person is aware that some sort of management system exists. From this comment of respondent 3, I could deduce that both disciplinary power and pastoral power was the mechanism through which the socialisation process unfolded. Disciplinary control is seen through the management structures that comprises of the organisation. Managers model and explain to employees how certain regime of practices needs to be enacted in the organisation. Foucault (1982) defines disciplinary power as present within daily interactions. On the other hand, senior staff took the lead to share their experiences as well as their emotions. They disbursed pastoral practices and in doing so guided new members. By individuals, sharing their experiences they are relying on the information stored in their memory (such as mental models). This stored knowledge is referred to the experiential knowledge asset and comprises of tacit knowledge in the form of the individual's emotions, such as trust, caring, empathy and different forms of expressions (Nonaka, et al., 2000a). When employees

conceded to the organisational control techniques, they were able to acquire new tacit knowledge and this is how the **TT Process** occurs.

In this process of the Knowledge and Power Generative Model, the data revealed that pastoral power as well as other organisational power and control techniques interacted simultaneously. Interestingly, this is not what I had modelled when I claimed that pastoral power is the dominant organisational control technique for this process. A twin existence of pastoral power and disciplinary power enable the knowledge creation process to be successfully implemented in the organisation through the originating ba.

5.3.2. Tacit to Explicit (TE) Process – externalisation mode via organisational control

In terms of my conceptual model, I posited that pastoral power is the most influential control mechanism in the **TE Process**. The organisation's hierarchical structure segments employees into different groups setting up the dialogue ba and the externalisation process.

Dialogue ba occurs mostly when groups of people interact on a face-to-face basis sharing their tacit knowledge (Nonaka, et al., 2000a). The hierarchical structures identify senior managers from the subordinates and permit the formation of groups.

The dialogue ba is the dominant ba and is the platform for the conversion of tacit knowledge to explicit knowledge with the conceptual knowledge asset comprising of explicit knowledge expressed through symbols, language and images. This entire process is known as the externalisation process.

To illustrate the pastoral power as a primary organisational control technique, I analysed the comments made by respondent 2:

"*At times I come up with a different view and then someone has to correct me and say you have to look at it this way. Mostly it's about grasping and looking for literature which I provide, I write and I put it there so that my superior will look at it and channel me the way they want it to be done…*"

From the above example, the employee submited to seeking advice from someone more senior to him/her, "*at times I come up with a different view and then someone has to correct me*". This enabled the pastoral power to come into effect. When this happened the

employee was able to obtain new knowledge, "*mostly it's about grasping and looking for literature which I provide*". This process of gaining knowledge is a continuous one where the senior person explains to the employee how to undertake the task. The employee acquired this tacit knowledge and converted it to explicit knowledge, "*I write and I put it there so that my superior will look at it*". From this component of the data, "*I put it there so that my superior will look at it*" indicated that the externalisation process was contextualised through the dialogue ba that took place in the supervisor's workspace. The employee accepted the supervisor's guidance causing a pastoral relationship, "*it's about grasping*" and in doing so acquire new knowledge, "*my superior will look at it and channel me*". When the employee acceded to the supervisor, a pastoral relationship developed resulting in the **TE Process**.

In another instance, while observing employees executing their tasks, I became aware of a senior manager meeting with a group of fieldworkers. The manager later explained that she was providing them with guidelines as to how to secure a successful interview with participants. In this case, the dialogue ba was her office where the group of fieldworkers assembled in order to acquire new knowledge. The manager exercised a pastoral relationship with the fieldworkers when they submitted to the manager's guidelines in how to secure participants to partake in a field survey. As the manager was communicating the guidelines, the fieldworkers documented it resulting in them obtaining new explicit knowledge. Therefore, the **TE Process** was made possible through the implementation of pastoral power.

To demonstrate pastoral power through the dialogue ba in acquiring knowledge, I asked employees:

How do you improve yourself within the organisation?
Some of the responses are recorded below.
Respondent 2: "*I am always learning from other people. We work as a team*"
Respondent 7: "*I always ask for information. I ask the SOE. I ask the Financial Manager. They know and explain it*"
Respondent 9: "*I'm always learning. The other day I was sitting in a briefing*"

From these responses, the organisation universally served as a dialogue ba as employees are acquiring knowledge collectively. The conversion of tacit knowledge to explicit knowledge is evident as stated by respondent 7, "*I always ask for information. I ask the*

SOE. I ask the Financial Manager. They know and explain it". The data suggested that the employee was seeking knowledge from different people who were in a more senior position, brought about the dialogue ba, "*I ask the SOE. I ask the Financial Manager*". In doing so, the employee allowed himself or herself to a pastoral relationship with the SOE and the Financial Manager. This facilitated in the employee acquiring new knowledge, "*They know and explain it*". In this scenario, the externalisation process occurred when the employee was in search of knowledge. The organisation embodied the dialogue ba and the managers provided new knowledge to the employee based on their routine knowledge assets. Conclusively, when the employee acceded to pastoral power as an organisational tool this aided, the knowledge creation process resulting in the **TE Process**.

To demonstrate knowledge and organisational control relating to the dialogue ba, I refer to a process undertaken by the research organisation. In this example from the data, I provide proof of a co-existence between pastoral power and disciplinary power through the dialogue ba.

Every Monday morning managers convene to discuss the projects and completion of tasks for the week. Responded 6 mentioned that, "*We meet every Monday morning and the CEO will provide feedback on our weekly performance based on the WAR that we completed".* Based on the above scenario, the boardroom represents the dialogue ba as it is the place where a group of employees with particular skills set would meet (Nonaka, et al., 2000a). In terms of the time, the meetings took place every Monday morning, thus linking time to place in completing the dialogue ba (Nonaka, et al., 2000a).

From an organisational control perspective, when managers attended the Monday morning meetings, that are conceding the right of choice by adhering to the rules of the organisation thus submitting to a disciplinary technique. Seek and Kantola (2009) mentions that the premise of disciplinary power is subjectivity. When the managers conceded to the rules of the organisation, they subjected themselves to disciplinary power. Despite the presence of disciplinary power, employees welcomed the opportunity to attend these meetings, "*the Monday morning meetings help us understand what we need to do".* From the response, employees prepared themselves to acquire new knowledge through submitting to pastoral power by accepting the feedback of the CEO ("*help us understand what we need to do")*. When employees submitted to the disciplinary power through attending the Monday morning meeting, they were able to acquire new knowledge through pastoral power by subjecting themselves to the CEO.

In addition, pastoral power is further visible as the CEO reviews the WAR of each manager and suggests ways of improvement. The manager gained new tacit knowledge from the tutelage of the CEO that occurs daily and during the Monday morning meetings. The time and day where the CEO met with the manager to disseminate knowledge, serves as the platform for the dialogue ba, usually Monday mornings in the boardroom. When the CEO explained the operational procedures, he wanted the employees to be aware what he planned for the week. He was in fact tapping into his experiential knowledge asset as he shared his tacit knowledge. When employees allowed the CEO to mentor them, they submitted to pastoral power. Through their submission were managers able to obtain knowledge resulting in the occurrence of the **TE Process**.

Therefore, both disciplinary power and pastoral power can occur simultaneously. I deduced that organisational control facilitated the acquisition of tacit knowledge to new explicit knowledge resulting in the **TE Process**.

Nonetheless, management systems are considered as a type of disciplinary power (Seeck & Kantola, 2009). Although disciplinary power was visibly active, employees did not perceive it negatively but rather positively, as they were aware that they would achieve some form of new knowledge through submitting to the feedback from the CEO or other senior employees. The disciplinary power would at times sets up the pastoral power to operate optimally, expediting the externalisation process in formulating the **TE Process**. This process occurred when the CEO outlined tacitly new operational tasks for each manager and they in turn documented their individual tasks. In essence, discussions and documenting procedures in the meeting aided managers in generating new knowledge.

While interviewing the CEO of the research organisation he indicated that,
> "*Based on my experience within the research industry and the mistakes I observed from other organisation, I decided to ensure that the organisation's documents should maintain a quality that would set a precedent within the organisation*".

When the CEO converted his tacit knowledge to explicit knowledge this procedural is known as the externalisation process. When he shared the documents with his employees, he enacted the dialogue ba. Through the conversion process and sharing the newly explicit knowledge, he instructs that all employees use the template documents. When the group of employees started to incorporate the CEO's documents to complete their work

tasks they succumbed to an organisational control technique. This activated the **TE Process**.

In terms of technologies of the self, where no direct form of coercion is easily discerned, but constituted an element of organisational control. An employee (respondent 2) who seeks to transcend his inner boundaries accentuated the following. "*In the organisation you learn from people senior to you, you learn from those junior to you as they also bring new ideas, so in a way you are also improving yourself*".

In the above case, the organisation serves as a dialogue ba as knowledge is shared in the organisation, "*in the organisation you learn from people*". This also suggests that knowledge creation is undertaken through a pastoral relationship. The employee further stated that, "*you learn from those junior to you,*" indicating that no pastoral relationship existed but when the employee acquired knowledge without any coercion, then he or she is seeking self-development "*you are also improving yourself*". However, as knowledge is created in the organisation, the employees must at all times adhere to the rules of the organisation subjecting themselves to some form of organisational control and this brings the **TE Process** into effect.

However, from earlier discussions, the disapproval of some employees to the rigidity of using templates also applies to this process of the model. In addition, there are employees who disapprove of their exclusion from the Monday morning meetings. Respondent 5 expressed that, "*The seniors have a morning meeting on a Monday but we are not included. That makes me feel sad*". Another employee stated (respondent 8), "*If I am included in the Monday morning then maybe I can contribute to help with problems*". The disapproval expressed by these employees signifies their displeasure in the management systems, thus displaying some defiance in the disciplinary power of the organisation. Respondent 2 explained that, "*As an individual you have these ideas but you instil fear in yourself and you undermine yourself and you just work and that structural, it becomes mechanical, you just do that, you don't have that freedom to express what you want or do what you think is best*". The employee felt fearful in expressing his/her ideas in the organisation. This could imply that the employee is afraid to resist the management system. In addition, the staff member perceive the work tasks as mechanical, and sees no opportunity of improving or suggesting alternatives to current activities in the organisation. At this stage, the model does not address resistance to an organisational system but merely focuses on intertwining organisational control to knowledge creation.

Based on the evidence of the data presented in this section, analysis concludes that the externalisation process is dependent on some type of organisational control, mainly pastoral power. Disciplinary power in some cases serves as an enabler to the dialogue ba. Remarkably, in this process, the data provide evidence that more than one type of organisational control technique can interact in a single scenario within the dialogue ba.

5.3.3. Explicit to Explicit (EE) Process – combination mode via organisational control

In this process, I propose that disciplinary power is the most prevalent organisational control in aiding with the conversion of explicit knowledge to explicit knowledge. The organisational control serves as a platform for the systemising ba to become active.

The systemising ba occurs when groups share knowledge mostly through virtual interaction such as e-mails and share documents within a network. The systemising ba serves as a platform for knowledge creation in this process. In the research organisation, sending electronic information from the branch office in Johannesburg to the Cape Town office transpires frequently. Included in this correspondence is the WAR that I discuss later in this sub-section. Transforming explicit knowledge into more complicated and orderly set of explicit knowledge (Nonaka, et al., 2000) together with the systemic knowledge asset where formal explicit knowledge is shared forms the *combination* process.

Explicit knowledge in the form of documents, manuals, etc is information that can be easily transferreable from one individual to the next or through group interaction. This can be done either face to face or through virtual interaction. In the **EE Process**, the combination process happens through the integration of organisational control as a framework and the transferring of explicit knowledge to new explicit knowledge.

When new employees are tasked with working on a proposal, they are presented with a template proposal, "*We have a template for a proposal*", as stated by respondent 2. This will assist the new employees in gathering the necessary information as highlighted in the template proposal. A response of respondent 7 was "*they were teaching me step by step and gave me the template proposals to read*". When the employees have completed their task, they would submit their part of the proposal to the SL for perusal.

The procedures of the organisation subject employees to obtain explicit knowledge from template documents that are stored on the organisation's network system. In order for new employees to acquire explicit knowledge, they had to concede to the senior manager's request to familiarise them with the template proposal. When the employees conceded to obtaining knowledge through template documents, "*we just follow a template and cannot bring up new*", they subjected themselves to some form of organisational control.

When employees submitted to organisational control, the employees were able to gain knowledge. This type of organisational control is referred to as disciplinary power. Most employees contend in becoming objects of an organisational structure for achieving new knowledge through template documents despite a few who opposes it. In attaining new knowledge and by submitting to the organisational control techniques were they able to improve their proposal writing skills. This constitutes the **EE Process**. Furthermore, these new employees resided in an office within an organisation where assortments of organisational controls were enforced. More specifically, the offices of the new employees mimic the systemising ba. Through employing the model, it presents the fusion of organisational control and knowledge creation.

As previously mentioned, in this process of the Knowledge and Power Generative Model, disciplinary power stands out as the primary organisational control system. The CEO mentioned that developing templates assisted new employees in establishing clearer understanding of their task within the organisation. When employees utilised templates to complete a proposal or report, they were in essence being micro managed and as Foucault (1977) states, management techniques can be refer to as hierarchical observation, a type of disciplinary power. Thus, templates not only aided employees in obtaining new knowledge via the systemising ba but it also enabled managers to manage them and through this exercise, the **EE Process** took place.

Another branch of disciplinary power is normalising judgement, which incorporates the usage of the standardised reporting systems. The CEO has subjected all employees to adhere strictly to completing status reports in order for them to generate new knowledge. Yet, the use of these status reports enabled the micro management of employees. These reporting systems took form in what the organisation described as Daily Project Report (DPR) and Weekly Activities Report (WAR). See Appendices for these reports.
Respondent 6 stated that, "…..*this is a small organisation and the only way to get quick results is to communicate through the DPR or the WAR or through ad hoc meetings*".

From this data, the workstation or office that includes a computer for employees to complete their status reports is the systemising ba that becomes the platform for explicit knowledge. Disciplinary power enables the functionality of the combination process where employees generate new explicit knowledge through feedback from the CEO. When employees completed these status reports, they had willing accepted the type of disciplinary power as an enabler to improve their current skills. However, the feedback that the CEO or senior managers provided envisages pastoral power. This implies that several forms of organisational control are acting in producing a premise for the systemising ba resulting in the **EE Process** taking effect.

To accentuate more on the application of the DPR and WAR as tools used in knowledge creation, the CEO mentioned that designing these status reports was to facilitate in managing staff more productively. Through completing these reports, less daily intervention occurred with employees and top management. In addition, the construction of these reports followed a standardised format as characterised as a tool for disciplinary power. Furthermore, all managers were required to complete a DPR and had to send it to the CEO by end of business each day. This report consisted of management techniques and daily tasks that managers implemented in ensuring subordinates completed their daily activities. The completion of the DPR had to align with the Project Plan (see appendices) as well as feedback received from the CEO.

Although this section deals with how organisational control acts an agent in developing the **EE Process**, the overlap of these reports allow analysis from tacit knowledge deduced from the structure. However, this section focuses on the analysis of the feedback section of the DPR and WAR. In further emphasising the purport of feedback from the DPR, I refer to the data where respondent 1 outlined the following.

> "*The DPR is only for projects. I don't report on things not related to the project. Therefore, the DPR are specific to those projects. So whatever comments I get, it would be based on that specific project*".

All employees are required to complete the DPR and had to e-mail it to their direct superior. The senior person would peruse it and provided appropriate feedback. Feedback relates to pastoral power and enables the creation of explicit knowledge – the combination process. In addition, the DPR was only applicable to projects that employees worked on and did not include general operational tasks executed by senior managers. This does not imply that the usage of the DPR is not an organisational control tool. Contrarily, the DPR

provides senior staff with an overview of the progress of the project allowing surveillance as a form of organisational control to be active. Through surveillance as a disciplinary power characteristic, senior managers were able to guide employees in completing tasks that included completion of research reports. The guidance provided assisted the acquisition of explicit knowledge – combination process through documenting the feedback and together with disciplinary power, the **EE Process** occurs.

Nonetheless, each morning managers would receive feedback (pastoral relationship between the CEO and the managers) based on their previous day DPR and if necessary, the CEO would request a manager to come to his office to discuss the lucidity of their report. Respondent 1 stated that,

> "*So, the moment I come in and put on my computer I check if I got any feedback because every morning there will be feedback. So for example it would state the follow up of a client or discuss something with the CEO or the SOE, and it also tells you what you should incorporate in your day*".

From the comments of respondent 1, the DPR incorporated feedback provided from the SOE and the CEO as part of a new day's activities. Respondent 4 who mentioned that further supported this, "*Put on my laptop to check my emails. Go through the feedback of DMR. Prioritise my work according to my daily report*". Respondent 1 further added that, "*well obviously when you get your feedbacks on whatever work you gave in, that is how you'll learn*". This implies that the feedback process is a means of acquiring new knowledge.

On the other hand, the model does not facilitate a lack of correctly executing organisational control as in the situation when employees claim.

> Respondent 2: "*Feedback and communication. Especially feedback in terms of performance. As an individual you need to know if you are growing*".
> Respondent 3: "*Feedback is very important in helping you improve*"
> Respondent 7: "*I will expect that the person who I report to should give me feedback. I don't think it is the CEO's job. Not giving feedback is preventing me from doing my job better*"

From this data, one employee was aware that the CEO provided feedback to those directly below him in the hierarchical structure. Feedback is a necessity that employees expect. Emphasis to this is a response of respondent 7, "*I will expect that the person who I report to should give me feedback".* However, when managers fail to provide feedback, this creates disappointment among employees as stated by respondent 2, "*As an individual you need to know if you are growing*". When employees do not receive feedback, they feel that they are not improving themselves thus not generating new knowledge. A deficiency in the model exists as it fails to address a lack of executing organisational control techniques.

As previously mentioned, the DPR does not outline all the tasks that a manager completes but is only specific to projects and does not include other operational functions. Respondent 1 mentioned that:

> "*The DPR is just on a project report, not if you are interviewing someone or to go out on a meeting, that is information that you do, that you keep for your WAR at the end of the week, so that's not project base*".

At the end of each week, all employees were required to complete a WAR. The WAR dictated that employees record their daily work activities for the week and submit it to their superior.

However, respondent 2 conveyed that the problem with the WAR is that managers used it to report on their activities,

> "*There are this WAR reports and there are times that I really want to lay out exactly what I do but then I realise that this WAR is not for the general worker but actually for the management because they have us reporting to them. So when we report to them they say this is what they been doing*".

The dissatisfaction of this employee was that he perceived that managers were not truthful when they completed their WAR, "*So when we report to them they say this is what they been doing*".

The construct of the model assumes employees are truthful and does not take into consideration when employees are not honest in complying with the requirements of the organisation.

The managers submitted their WAR that incorporated the activities of their subordinates to the CEO. All employees with the exception of the managers would submit their WAR on a Friday before they departed from the office. Managers incorporated their juniors' WAR into their WAR prior to submission to the CEO. Managers were allowed to submit their WAR on Saturday no later than 15h00. The reason for this was as a manager stated, "*We might get an update of a project where fieldworkers were working Saturday morning and we then insert that activity into our WAR*". Senior staff members would receive feedback on their WAR in the organisation's Monday morning meetings. Feedback from these reports yields new knowledge through disciplinary power adherence. When employees e-mailed the CEO, they could have been outside the organisation but disciplinary power transcends boundaries. The place, time and space from where the individual e-mailed the CEO are the systemising ba. Adherence to the rules of the CEO in sending the status reports before the deadline expires sets up the **EE Process** to function. If the manager decided not to send the status reports on the Saturday as expressed by the CEO in defiance to his control, then the combination process would not occur. Further consequences of this action could result in the non-establishment of the systemising ba. In addition to providing feedback, these forms also permits the CEO to survey the progress of employees in the form of the DPR and WAR as an appraisal method.

The WAR serves as a performance appraisal but can only be effective if the managers provide the proper feedback. Respondent 5 claimed that the manager stated, "*…if there's no reply then you shouldn't worry about it*". On the hand, it would be more favourable if managers provided regular feedback to employees as this leads to negativity among employees. Respondent 2 emphasised, "*I don't know how my performance has been for some time but I just wish that I can get that so that's how I can evaluate my performance*".

Moreover, a similar occurrence prevails where the model fails to address the deficiencies within organisational control techniques prevail. Most employees would like to have immediate feedback from their WAR, despite what the CEO has stated, "*The managers provide feedback to their subordinates and they then learn from these feedbacks*". However, whenever employees desired feedback, they would approach their manager and ask for feedback on the activities they completed. As mentioned by respondent 5,

> "*If I want to know how I'm doing, I will ask the SOE after I submitted then I will ask him what the CEO says. The SOE will say that if there's no reply then I shouldn't worry about it*".

This practice of where the employee approaches a superior to acquire feedback is not the common practice of the organisation. The model is not design to address situations where organisational control is not enforced.

Disciplinary power as discussed previously comprises of hierarchical observation and normalising judgement. In addition to the previous two instruments, a third instrument that is part of disciplinary power is *examination*. Examination is the fusion of hierarchical observation and normalising standards that results in the demonstration of how knowledge and power are connected (Vicencio, 2012).

This section draws from the analysis in demonstrating the use of templates as an organisational control tool as well as a means of creating new explicit knowledge. Thus, this section takes into account the hierarchical structures as well as the normalising standards through the scrutiny of standardised documentation implemented by the empirical research organisation. The use of template documents assists new employees in acquiring explicit knowledge. The CEO institutes the application of template documents as another form of disciplinary power. The construction of template documents ensures that the employees do not transcend the working boundaries of the organisation. Some of these documents include status reports in the form of a DPR and WAR as discussed in the previous two segments of this sub-section. Every stage in the project life cycle from the time of responding to a tender to receiving the final payment for the project incorporates a template document. Some managers submit a bid template document together with their DPR and WAR on a weekly basis. Respondent 3 provided the following insight,

"*At the end of the week I also submit a bid tracking schedule. That is whatever bid we have tended we have applied to it gets into this template on an excel spread sheet and it's done every month*".

The analysis does not explore the usage of each of the template documents but rather attempt to explore the templates as a means of organisational control. Nonetheless, respondent 3 further stated that the purpose for template documents was, "….*for instance you take leave and somebody phones and someone will exactly know the bid*". Deducing from this quotation, templates assisted managers to better review the operational functions within the organisation. From a knowledge creation perspective, templates support employees in obtaining new knowledge through building on existing knowledge. The examination method is a mutual association that is determined through standard practices

and adherence to the management system. In view of this, disciplinary power is positively perceive as it enables knowledge creation among individuals. Through constant reviews of template documents in which combination process occurs, the organisation is able to streamline its management process resulting in dedicating more time to customer satisfaction and improving the organisation's strategic plans.

When the research organisation employees a new researcher, they have to adhere to the template documents used by the organisation. The CEO testified that,

> "*new employees do things robotically ie. you just repeat what you do, but then instances occur within the organisation when we refer to certain documents or certain reports, and so you will say, oh so that is why we doing that so they are able to think. The reports we use today are not the same report we used a year ago, we continue to develop it*"

The above quote implies that when employees conform to the CEO's request to integrate templates when completing a certain document, the employees are in fact subjecting themsleves to disciplinary control. This control initiates the knowledge creation process to progress resultant in new knowledge creation. Furthermore, the CEO claimed that templates are always changing as the organisation develop their skills. This implies that new knowledge is constantly occuring within an organisation where controls are prevalent. Applying templates is also a form of pastoral power as the CEO offers feedback. Amplifying the above example, Nonaka (2000) states that managers examine operational structures and apply better structures through the acquistion of new knowledge.

Templates also serve as a means of providing training to new employees or subordinates with minimal intervention from senior members. A senior manager further underlines this, "*the templates are there to provide guidance*". Foucault further states that the application of pastoral power is where the individuals are connected under one circumstance, where that individual would be moulded to a new order and be coerced to a particular regime of practice (Foucault, 1982). Emphasis to this fact is when the CEO states.

> "*Templates make your job infinitely easy, you don't have to sit and think anymore, you just know there's a template, you just have to put in the figures or text or whatever you have to put in there, so really that is what informed training is and making sure that there's minimum as possible supervision.*"

However, the **EE Process** in the model does not address resistance from employees, as an employee states "*you cannot bring up new ideas*". The employee favours the notion of seeking new knowledge through other means and not through template documents.

In conclusion, although I initially claimed that disciplinary power was the primary organisational control technique in the **EE Process**, the data reveals that pastoral power is equally visible and a contributing factor to this process.

5.3.4. Explicit to Tacit (ET) Process – internalisation mode via organisational control

In this section of the model, I claim that disciplinary power is the strongest form of organisational control in expediting the exercising ba that permits the conversion of explicit knowledge to tacit knowledge.

In the organisation, researchers are required at times to seek background information on previous studies to discuss with colleagues. Respondent 6 claimed that, "*If I need to know something, I go on the internet and read about the topic*". Respondent 6 further stated, "*Before we start we would brainstorm as to how we will approach the project". ......"The only way to solve issues is through interaction*". The exercising ba is the office space of the employee where he/she sits to search for information on the internet. The pressure of finding information based on the CEO's request and the feeling of embarrassment when the employee had to discuss his/her findings, infers that some form of organisational control prevails in the employee acquiring tacit knowledge through virtual media. The commonality of this practice, accentuate the routine knowledge asset. The entire process inclusive of organisational control helps to initiate the internalisation process. The **ET Process** necessitates that the conversion of explicit knowledge to tacit knowledge requires some form of organisational control technique.

The CEO explains:

> "*When new people start with the organisation, we say there's a daily report, just go and read and see the kind of things we talk about. Look at the weekly report and they will say, oh so I can have all this information at my fingertips even if I come in the middle of the project. We don't always have the time to verbally communicate but when you are looking for information you will know that there is a record*

somewhere that you can go and check for yourself and so we don't have to bring two or three people together to give you that information, you yourself can just go and sit and look in the records and you will find the information that you need".

If new employees want to acquire knowledge in the organisation, they had to act on the CEO suggestions thus submitting themselves to the tutelage of the CEO. Respondent 8 remarked, "*I had to adapt to work under the manager and the CEO but now it's fine".* When listening and taking the advice of the CEO, employees opened themselves to pastoral power. From the above quotation ("*When new people start with the organisation, we say there's a daily report, just go and read and see the kind of things we talk about."*) pastoral power enabled new employees to acquire tacit knowledge from explicit knowledge. In addition, the template documents were readily available from the database of the organisation. As mentioned previously, templates represented a disciplinary organisational control technique and in the given circumstances, it was used to micromanage employees, "*we don't always have the time to verbally communicate*". When employees wanted to obtain some form of knowledge, they subconsciously submitted to pastoral power by following the instructions of the CEO ("*look in the records and you will find the information that you need"*). Employees work activities are made easy through assenting to the guidance of the CEO – pastoral power. This submission further attributed to employees acquiring new knowledge. The workstation where the employee extrapolated information provided through emails or some other virtual program served as the exercising ba, ("*you yourself can just go and sit"*). The internalisation process (explicit knowledge to explicit knowledge) happened through this context of the exercising ba. From the above example, the ba was the place for acquiring knowledge) and the knowledge asset was the type of knowledge acquired ("*look in the records and you will find the information that you need"*). The records that the CEO referred to were; training manuals, reports and other important template documents and these documentations form part of the systemic knowledge assets Nonaka, et al (2000a). The internalisation process through pastoral power forms the **ET Process**.

An example of the internalisation process was illustrated when respondent 6 reported,

"*we work a lot with external clients and when we go to present something to them they say, no they don't think that's the way we should go about doing things, so you have to take it under the chin and try to find better ways of doing it because we are dealing with people who are want to improve their processes*".

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From the above data, after the client reviewed the explicit knowledge, they suggested tacitly how the employees of the organisation should have improved the presentation through incorporating their shared tacit knowledge. The ba represents the client's meeting room as the employee indicated, "*we go to present something to them they say"*. The routine knowledge asset (tacit knowledge embedded in the organisational culture) takes shape when the client stipulated, "*they don't think that's the way we should go about doing things*". Finally, the conversion from explicit knowledge to tacit knowledge completes the **ET Process** as the employee listened to the client's suggestions. Thus, although the employees were not expose to the organisational control techniques they felt coerce in accepting the recommendations of their client ("*so you have to take it under the chin and try to find better ways of doing it*"). From this example, I deduce that for the internalisation process to occur, some form of control should prevail.

Nonetheless, within the realm of the organisation, technologies of self, which is not pastoral or disciplinary power but a subtle form of control, can also attribute to the knowledge creation process. This was illustrated by respondent 5 who mentioned,

"*The research industry is an ever evolving field, there's always new things coming up. So as a researcher, it is important to always find out more about what's done, how it's done, for what reason it gets done*".

The employee decided to increase her knowledge base without being coerced in doing so. However, she identified herself as a researcher and therefore saw the need to conduct research to improve herself as a researcher. Although not forced through some organisational control system, the employee emphasised the importance of self-improvement when she stated, "*it is important to always find out more*" thus making it a point to seek new knowledge. However, the organisation's hierarchical structure constitutes each employee with job titles. One could argue that the job title is a means of inspiring the particular employee to seek self-improvement – techniques of the self. In the organisation, the management systems define the structure and positions that each employee occupies.

5.4. Themes emerging from the data

Vaismoradi, Jones, Turunen & Snelgrove (2016) state that themes are a classification of qualitative methodology and that the interpretation of the interviewees' perception are a

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classification of qualitative approach. Themes are derived from various techniques and systems. It can be constructed through word count using a computer program or through line-by-line analysis that is more labour intensive (Ryan & Bernard, 2003). Themes are associated to a more inherent and comprehensive level that requires analysis. The objective of theme is to abstract the essence of the participant's perspectives (Vaismoradi, et al., 2016).

Three most common themes emerged from the data. These common themes were present in more than 50% of the interviewers. These common themes were identified through examining the quotations of the interviewees in relation to the research questions. All three themes were instrumental in addressing the core research question, how is the production of knowledge within a research organisation influenced by managerial control systems.

The three most emerging themes were:

    a) Standardised management tools

The use of template documents serves as a management tool through coercing employees to comply with the standardisation of the organisation. The main type of power instituted in this management control is pastoral power. Using template documents, participants were able to achieve new knowledge. The template documents as indicated by the majority of participants served as an enabler to the creation of knowledge. Based on the responses of the participants, the application of template documents enhanced their knowledge creation and it served as an organisational control technique requiring less micro management. Therefore, the focus of this theme was to determine the way in which organisational and management controls enhanced knowledge creation.

    b) Surveillance

The study analysed the various status reports as a means of disciplinary power. Employees completing their status reports enabled managers to monitor the subordinates daily work activities. This theme addressed the understanding of the usage of organisational control techniques by managers to enable knowledge management. Each time an employee submitted a status report the manager would provide new documentation that would generate new knowledge for the employee.

    c) Feedback

The study revealed that feedback is an important component to participants in generating new knowledge. Feedback assisted employees in self-examination and self-improvements. The feedback process provided a positive influence on employees to produce new knowledge with limiting organisational control techniques.

5.5.   Concluding Remarks

The Knowledge and Power Generative Model display that knowledge creation depends on power techniques (organisational control) to function optimally.

The employees are dependent on the CEO in disbursing knowledge, as he is the one who makes the final decisions (top of the hierarchical structure). In following the processes of selecting potential clients from a tender database, the ultimate decision lies with the CEO, who makes an informed decision from the information gathered by his subordinates. He is seen as the bearer of power in the organisation. The CEO uses pastoral power to influence the employees by relating his experiences and sharing his knowledge. Through the culture of the organisation, the CEO is able to assert disciplinary power upon the employees to comply with the standards of the organisation. The organisational control techniques enabled the creation of knowledge in the organisation.

5.6.   Revisiting the Knowledge and Power Generative Model

During my analysis, I saw a few gaps with the Knowledge and Power Generative Model. From the data, I was able to determine that one of the gaps is when employees resist to certain organisational control techniques. The model needs further development through additional application in the field.

Another gap in the model that I found through my analysis is the politics around knowledge sharing. As respondent 3 cited an example, "*key people are willing to share the information; they just don't have enough time to share it*". The example illustrated that employees were willing to attain knowledge through those whom they perceived are more knowledgeable than them. However, the dilemma is that the people were unavailable or unwilling. Besides having an adverse effect on the organisation in terms of customer satisfaction, this hampered the knowledge creation process. These challenges should not be avoided and the CEO needs to explore various options and find alternative organisational control solutions.

Similarly, the problem of where employees are in disagreement with management systems or techniques needs to be carefully considered. This resistance can be destructive. Although the organisation has a human resource manager, employees are reluctant to

seek guidance due to some form of reprisal as respondent 2 remarked, "*As an individual you have these ideas but you instil fear in yourself and you undermine yourself and you just work and that is structural*". The employee was afraid to express his or her opinion and instead of attempting to bring about new ideas, he /she continued with his/her daily work activities. The employee could have these emotions due to a previous altercation with someone in a more senior position or witnessed an incident where a manager ridiculed a junior employee. Unfortunately, the data does not provide more evidence. I did not follow this up further because of time constraints. However, the issue that needs to be further explored.

After careful consideration of the problems prevalent in the organisation and the effect it poses on the Knowledge and Power Generative Model, I suggest a modification (see Figure 15).

5.7. Recommendations to the company

I suggest the following possible solutions to the problems currently facing the organisation. Firstly, I recommend the organisation consider an outside source (company or individual) that is completely independent of the organisation to assist with issues relating to any form of resistance and other problems. (For better clarity, I will refer to the outsource company or individual as "Mr A"). The first step is to introduce Mr A to all employees and explain the function of the company or individual. When introducing Mr A to the organisation, he should try to ensure that when they communicate with him it would be with the strictest of confidentiality. There are many ways of communication that at this stage I shall not discuss. I further suggest that Mr A should not be located an office in the organisation as this could create questionable trust among employees and Mr A.

When employees consult with Mr A, he should provide a timeline as to when he will provide feedback. The key to solving discrepancies is that management must be willing to buy into this process and open themselves to negotiations.

Knowledge and Power Generative Model 2.0
Through my data analysis, I have adjusted the Knowledge and Power Generative Model, see diagram below.

Figure 15: Knowledge and Power Generative Model 2.0
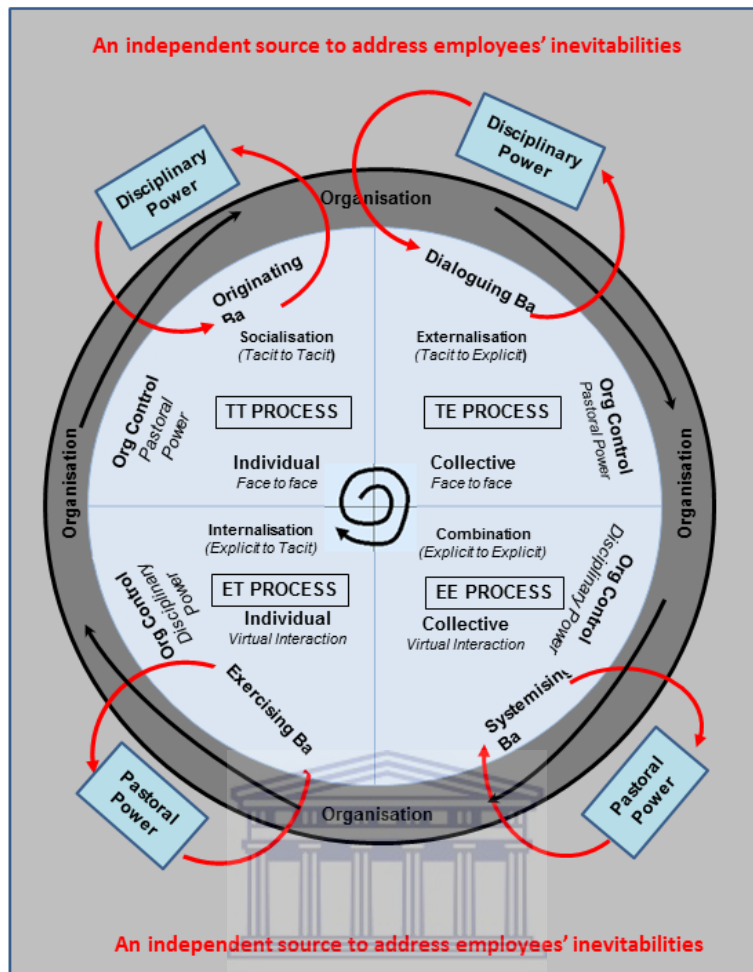
The "reworked" model depicts additional techniques of organisational control that needs to be included in each section. For example, I originally claimed that pastoral power was the primary organisational control technique in the **TT Process**. The data, however, revealed that a co-existence of pastoral power and disciplinary power operates through the originating ba as context for the socialisation to occur within the **TT Process**. The diagram illustrates how each ba in each of the quadruple is depending on the additional technology of power and not just on the aforementioned technique of power as illustrated in the original conceptual model.

Furthermore, apart from the additional primary organisational control technique, the diagram includes a bottom layer that consist of an independent consultant or someone who will address inequitable issues.

6.   Conclusion and Recommendations Chapter

The first part of the chapter provides the answers to the primary research questions and the objectives whereas in the latter part I present recommendations for future research studies. However, before embarking on the answers to the research questions, I will provide a synopsis of the previous chapters.

The first Chapter introduced the importance for organisations to obtain knowledge as a value driver and as a competitive advantage. The chapter highlighted knowledge as a resource and capability as well as introduced how organisational and management control impacts on knowledge creation. The introduction of knowledge creation and organisational control accentuated the research problem. The latter part of the first chapter identified the research question that laid the foundation for the rest of the chapters.

The second chapter provided a theoretical perspective of how scholars defined knowledge from different epistemological views. Alavi and Leidner (2001) suggest knowledge needs to exist prior to the communication of information. Hislop (2005) refers to knowledge is manipulating data and information that has been analysed to make sensible conclusions. Alvesson and Karreman (2001) emphasise that there is no collectively agreed definition for knowledge but rather it is ambiguous in nature. There are definitions of knowledge that see it as, "causally ambiguous set of routines" (Szulanski, 2000: 2). Nonetheless, from the literature review, most knowledge creation in organisations scholars agrees that there are different typologies concerning knowledge. An important theoretical resource I used was the knowledge creation model of Nonaka, Toyama and Konno (2000). This included the knowledge creation process known as the SECI model, the platform for the knowledge creation process referred to as the ba and the accumulative knowledge base, known as knowledge assets. However, this model explores knowledge creation in all of its facets but does not directly address organisational control techniques in knowledge creation. In my theoretical exploration on knowledge creation, I discovered that little attention had been given to the influence of power and control on knowledge creation.

I also reviewed the literature on organisational control and used the Foucauldian theoretical toolbox to conceptualize organisational control. The fundamental purpose for applying the Foucauldian conceptualisation of power is that it provided me with a framework for understanding the role of organisational control in knowledge creation. Foucault (1980) states that exercising power creates knowledge and equally, knowledge continuously accelerate the effects of power. "It is not possible for power to be exercised

without knowledge, it is impossible for knowledge not to engender power" (Foucault, 1980: 52). Deliberating on the theoretical perspective of organisational control, I explored three facets of power. The first was Foucault's earlier discourses and writing on disciplinary power, followed by pastoral power and lastly his discussion around technologies of the self. The analysis provided insight into the types of powers employed by the research organisation.

In chapter 3, I developed a conceptual model, which I called the Knowledge and Power Generative Model that was formulated based on the literature reviewed. I used this model as an analytical tool in an attempt to address the primary research question.

> How is the production of knowledge within a research organisation influenced by managerial control practices?

To answer this question, I employed the Knowledge and Power Generative Model that consist of the knowledge creation and the organisational control mechanisms. For my organisational control mechanisms, I used three Foucauldian power concepts. I further used this model to analyse the data collected at a research organisation.

In the research methodology chapter, I discussed reasons for choosing a qualitative research approach in addressing the research question. This chapter further provided insight into the sample techniques and data collection methods employed. Finally, the chapter concluded in emphasising the ethical clearance needed.

In terms of the research results, analysis and discussion chapter, I applied the Knowledge and Power Generative Model to facilitate in my data analysis. I was able to investigate the potential linkages between knowledge creation ba's and control techniques. From my findings within the research organisation, each component within the SECI model was visible. Each component functioned independently and simultaneously depending on the scenario of the knowledge workers interaction with each other.

From my findings, I conclude that the research organisation through techniques of power enacted the ba, with various spaces in and times. Within the various organisational settings, techniques of power provided the platforms for each of the ba. The implementation of organisational control practices (disciplinary, pastoral and technologies

of the self) brought about the ba that provided the success of the knowledge creation process.

Based on the results of the analysis, the three facets of power operated at times simultaneously. Surveillance in various forms sets up the disciplinary power along with certain regimes of practices. The hierarchical structure as a control mechanism lays the platform for pastoral power to function as the CEO is seen as the shepherd to his flock. Employees subjugated themselves in order to acquire knowledge by acting on the constant feedback of the CEO. On the other hand, technologies of the self were practiced by certain employees when they sought knowledge without any overt coercion but to become better knowledge workers. All three techniques of power are operated simultaneously to shape and fashion the knowledge worker. These techniques channelled the knowledge worker and enabled him/her to gain knowledge and to disseminate this acquired knowledge to peers as well as improve their personal lives. Interestingly, most of the knowledge workers saw themselves as one who is free to engage with the organisation and did not see these techniques as being overtly repressive. Instead, they saw it as enabling freedom.

Reflecting on the research questions:

- How do the organisation control mechanisms enhance knowledge workers knowledge creation?
- How do the organisation control mechanisms impede knowledge workers knowledge creation?

Most employees held the view that organisational control techniques enabled the organisational context (meaning the ba) as well as enhanced their and the organisation's capacity for acquiring knowledge. However, some of these employees felt that the organisational structure could be more flexible in encouraging innovative ideas.

Some employees perceived that the organisation's control mechanisms were an impediment to their knowledge creation abilities. It hampered them in that it narrowed down the ways that they could go about seeking knowledge and incorporating new ideas into the organisation. However, employees conceded that the technologies of power assisted them in acquiring knowledge. Ultimately, the mechanisms of control within the organisation created a knowledge worker. The technologies of power were simultaneously the system for identity development with the organisation and the system for the collection

of knowledge (Huhtala, 2014). Based on the research I make the claim that for knowledge creation to take effect in an organisation requires careful setting up and maintenance of organisational control techniques and practices.

In terms of addressing the sub-question:

- How do managers use organisational controls to enable knowledge management?

The Knowledge and Power Generative Model provided insight as to how organisational control mechanisms assisted managers with developing roles and routines and provided employees in acquiring, sharing and disseminating knowledge in the organisation. In particular, managers mainly applied two organisational control techniques, namely, disciplinary power and pastoral power. Disciplinary power enabled managers to set the requisite organisational structure and routines in order to capture and create knowledge. Pastoral power allowed managers to manage employees through their guidance and advices.

In conclusion, through employing organisational control techniques managers were able to manage as well as acquire and distribute knowledge in the organisation.

6.1. My Contribution

Nonaka, et al (2000a) knowledge creation model is widely used which has three core concepts: SECI Model, ba and Knowledge Assets. However, Nonaka, et al (2000a), does not explain how the ba came into existence (its ontological foundation). I have modified the model by adding the techniques of power that instantiate the ba. By illustrating that the control was needed to enable the ba, I related it to knowledge creation. More specifically, I created a model demonstrating organisational controls as a framework for how the ba comes into being which underpins the successful application of the knowledge creation process.

In the literature review, I stated that knowledge governance -knowledge creation through governance-was one of the concepts that were closely related to how control mechanisms enabled knowledge creation. Foss (2011) states that knowledge governance is a way of controlling the intellectual capacity of the organisation that assists in the creation and sharing of knowledge (Foss & Mahoey, 2010). I contributed to knowledge governance literature with the Foucauldian inspired organisational control mechanisms that allowed the

organisation to micro manage knowledge creation through structures and procedures. In terms of control, my study provides insights into the structures and procedures that enabled knowledge to be distributed and managed.

Moreover, my research show the veracity of the claim that power should not be viewed negatively (Seek & Kantola 2009; Foucault, 1990). My research provides evidence that employees considered the use of disciplinary power and pastoral power as productive means of acquiring knowledge. These led some employees on the path of self-development (technologies of the self). Thus, employees viewed organisational control mechanisms as generative. They did not perceive it as repressive but as productive in terms of providing them with new identities and the means to construct and acquire new knowledge.

6.2. Recommendation

The research study reveals that organisational control techniques are crucial, supportive and helpful to organizing in general and knowledge creation in particular. Power and knowledge are closely related and it would be interesting to explore the modified conceptual model in further research.

However, a limitation in this research study is that I cannot generalise the findings as the selected participants were all from one organisation. With regard to the Knowledge and Power Generative Model, some gaps remains which although I have addressed a few and re-worked the model, the model is still in need of further testing and development. Nevertheless, it can still be used as a theoretical lens for understanding how knowledge can be created through targeted organisational control mechanisms. In order to test the model, I would have to survey a representative sample of knowledge intensive firms with participants from diverse groups and from within different industries. Perhaps this can be the topic for a PhD study.

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8. Appendices

Appendices 1: University of Western Cape Ethical Clearance Form

APPLICATION·TO·REGISTER·A·RESEARCH·PROJECT·
&·
OBTAIN·ETHICS·CLEARANCE

SR·1·FORM (accompanied by proper proposal with research background, literature, proposed methodology and starting bibliography)	
FORMAL·ETHICS·STATEMENT (if research involves survey, individual interview and/or focus group interview, make sure you submit SEPARATE (i) information sheet, (ii) informed consent form and (iii) the proposed tools/instruments for the survey, individual interview and/or focus group interview, etc)	
HOD·RECOMMENDATION·AND·SIGNATURE	

HOW·TO·REGISTER·A·RESEARCH·PROJECT·&·OBTAIN·ETHICS·CLEARANCE:

1. Fill out the electronic form issued by the Department of Research Development (SR1 and attach the form to this document).

2. Include a formal ethics statement concerning the conduct of your research project with regard to the persons or community with whom you intend to work, and/or the treatment of animals.

3. Ensure your Departmental Chairperson writes in support, and signs, on the registration form.

4. Submit to the secretary of the EMS Research Committee (Megan Delport). The EMS Research Committee will make a recommendation to the Senate Research Committee.

Appendices 2: Information Sheet

University of the Western Cape

FACULTY OF ECONOMICS AND MANAGEMENT SCIENCE

INFORMATION SHEET FOR PARTICIPANTS PARTAKING IN RESEARCH STUDY

Dear Participant

My name is Adeel Sambo (student number: 20908092) and I am a registered masters' student at the above-mentioned university and faculty.

Firstly, I would like to thank you for your time and considering partaking in this research study. The research study encompasses interviewing people like yourself in ascertaining whether organizational control inhibit or facilitate knowledge creation in an organisation.

In agreeing to partake in this research you agree that your participation is completely voluntarily and that you will provide honest and truthful information. Please note that all information you provide will be treated with the strictest of confidence and will not be divulge to anyone. In addition, you may stop the interview process at any time but you are requested not to discuss the interview process with any of your colleagues as it could result in bias information.

Should you require additional information or wish to enquire more about this research, please feel free to contact me on 076 339 8635 or via email 20908092@myuwc.ac.za.

You may also contact my supervisor Dr A. Bayat at abbayat@uwc.ac.za

I hereby agree to participate voluntarily in this study and acknowledge that I understand my role as a participant in this study

Name of Participant:	
Signature:	
Date:	

Appendices 3: Consent Form

University of the Western Cape

FACULTY OF ECONOMICS AND MANAGEMENT SCIENCE

CONSENT FORM FOR PARTICIPANTS PARTAKING IN RESEARCH STUDY

Research Title: How is knowledge production influenced by managerial control practices

Researcher: Mogamat Adeel Sambo

		Please tick in box
1.	I confirm that I have read and understood the information sheet pertaining to the above research title	☐
2.	I am in fully aware that my participation is voluntarily and that I may stop the interview at any time	☐
3.	I have been informed that my personal information will be kept confidential and that the information provided may be used for research purposes	☐

Name of Participant:

Signature:

Date:

Appendices 4: Research Instrument - Discussion Guide

Prepared by: Mogamat Adeel Sambo

Reason for In-Depth Interview: MCom Degree

Participant profile: Employee at Research Company

Introduction and warm up

- Moderator to welcome and thank participant for agreeing to be interviewed;
- Explain the audio recorder and stress confidentiality;
- Emphasize that there are no right or wrong answers;
- Estimated length of the discussion (30 mins)
- Moderator to ask participant to introduce him/herself by outlining
    - Occupation (Position held in organisation)
        - work history including org. history/trajectory
    - Family set up
    - Hobbies/leisure activities

ICE BREAKER

present RIVER OF LIFE and explain it

- ask participant to complete a river of life and ask them to explain it to you

Main Discussion (using the river of life on the current section of their lives)

1. Job title in the organisation_____

2. How would you describe your daily activities based on your job title in the organisation?
    - *(Ask participant to provide details of actual practices)*
    - *how does it differ from your job description ?*

3. Please explain your typical day?
    - *(Participant must explain if they sign in and out, status reports submitted, etc)*

4. How did you get the know how to do your current activities

5. How do you deal with new situations?

6. How do you improve yourself within the organisation?
    - *(Participant should explain the learning process of the organisation, how their learn in the organisation)*

7. Does new insights, new understandings -that you acquire in the organisation -help you
    - In your daily activities
    - In your personal development as an individual?
        - *(participant should explain with example or if not, participant should explain what could be done to help with growth)*

8. What is the management system or practices that are followed by
    - CEO
    - managers
    - fellow managers/employees in the organisation
        - *(Participant must motivate answer. If negative/positive probe fully)*

9. How does the management practices assist you to gain new understandings and insights at work

10. Where do management practices stifle you
    - In your work
    - getting greater understanding and insight
        - *(Participant must motivate answer.)*

11. Do you feel that based on the organisation's structure and processes that it conflict or complement your individualism?
    - *(Motivate answer with illustrations)*

12. If there were processes or structures that you could change in the organisations, what would it be

13. Why would you change these processes or structures?

Conclusion

- Anything else you would like to comment on ?
- thank you for participating

Moderator, thank respondents for their participation.

Appendices 5: Preliminary Opportunity Assessment Worksheet

(P O A W)

Tender no:	Submission Date:
Issuer	
Description	
POAW prepared by	Reviewed by
Draft proposal submission date:	Applicable Preference poli

Does the tender documentation need to be collected?	Yes
Has the tender documentation been collected?	Yes
Is the tender briefing compulsory?	Yes
Has the tender briefing been attended?	No
In which sector is the tender situated:	Government Sector
Do we wish to bid for this tender?	Yes

If yes, please motivate:

If no, please motivate
NA

What services or products are/is required for this tender?

What are our objectives for this tender?

What is the required scope of work of this tender?

What is the benefit for Devnomics to do this tender/How does it further our strategic interest?

What are the critical factors that we have to be aware of and perhaps attend to immediately on this tender?

Are there any foreseeable challenges to the project that Devnomics will have to overcome?
No

Are there special conditions for the tenders?
No

What improvements/changes can we make to our service offering to better suit this tender?

What resources, man and material, do we need to prepare a winning bid?
Our usual resources, project structure should be well tailored to the scope of work.

Do we need a strategic alliance partner for this bid? If yes, who?
No

Appendices 6: Foucault's main concepts during his different intellectual phases

	Main concepts	Subjectivity	Power
Archaeological works	Discourses, knowledge/power	Subject detached (almost determined) from his/her surroundings.	Power and discourses connected to each other; power/knowledge regimes. Somewhat repressive view of power.
Genealogical works	Practices, disciplinary and pastoral power	Different practices and ways of analysing strongly affect the way(s) in which a human being perceives him/herself.	Institutions often apply disciplinary or pastoral power. Idea of positive power: power does not only repress but also produces.
Ethical/aesthetical works	Care of the self; technologies of the self; work of life as an art	Individual is viewed more as a "self" than a "subject".	Individual can resist existing power relations with the help of technologies of the self.
Governmentality	Administration, population, biopolitics.	Governed subjects are seen more as a population than individual beings.	Power relations are found everywhere in society, and various institutions & authorities exercise power over the population.

Appendices 7: Deliverables to Client

Phases	Start Time	End Time	Duration	Deliverables
Phase 1	Date	Date	Number of weeks	• Project Inception Report • Desktop Review Report • Draft Questionnaire
Phase 2	Date	Date	Number of weeks	• Final Questionnaire
Phase 3	Date	Date	Number of weeks	• Field Implementation Report
Phase 4	Date	Date	Number of weeks	• Raw Data • Spread sheet with data • Tables and analytical work
Phase 5	Date	Date	Number of weeks	• Draft Report
Phase 6	Date	Date	Number of weeks	• Final Report • Workshop • Presentation

Appendices 8: Project Plan

Task ID.	TASK DESCRIPTION	Time allocated
1	**KICK-OFF MEETING, PROJECT INITIATION AND PLANNING, DESKTOP REVIEW AND QUESTIONNAIRE DEVELOPMENT**	
1.1	Discuss and agree on contractual matters	
1.2	Review and sign SLA	
1.3	Clarify project objectives and deliverables	
1.4	Configure project team	
1.5	Interrogate existing project information	
1.6	Agree on deliverables acceptance criteria	
1.7	Agree on review and assessment methodology	
1.8	Develop research sampling framework	
1.9	Agree on research methodology	
1.10	Project planning and coordination	
1.11	Write up project inception report	
1.12	Edit project inception report	
1.13	Conduct quality reviews	
1.14	Submit Project inception report	
1.15	Seek, obtain and review relevant documents	
1.16	Interrogate universe of research instruments	
1.17	Develop assessment research questionnaires	
1.18	Pre-test review and assessment tools	
1.19	Data capturing	
1.20	Pre-test data analysis	
1.21	Pre-test data interpretation and inferences	
1.22	Pre-test report writing	
1.23	Quality reviews	
1.24	Submit questionnaires to CLIENT	
1.25	Implement feedback received from CLIENT	
1.26	Submit Desktop Review Report to CLIENT	
1.27	Submit draft questionnaires to CLIENT	
1.28	Submit first invoice for payment	
2	**FIELD WORK PROCESSES, TRAINING AND PILOT OF QUESTIONNAIRE**	
2.1	Undertake recruit and training logistical planning	
2.2	Recruit fieldworkers and team leaders	
2.3	Train fieldworkers and team leaders	
2.4	Identify training needs of CLIENT personnel	
2.5	Develop training schedule for CLIENT personnel	
2.6	Agree training schedule with CLIENT	
2.7	Pilot questionnaires	

Task ID.	TASK DESCRIPTION	Time allocated
2.8	Develop data analysis guideline	
2.9	Data capturing	
2.10	Pre-test data analysis	
2.11	Pre-test data interpretation	
2.12	Amend questionnaires	
2.13	Undertake quality reviews	
2.14	Implement quality reviews feedback	
2.15	Submit questionnaires to CLIENT	
2.16	Obtain feedback from CLIENT	
2.17	Finalise questionnaires	
2.18	Submit final questionnaires to CLIENT	
2.19	Submit second invoice for payment	
3	**DATA COLLECTION (FIELDWORK)**	
3.1	Deploy fieldworkers and team leaders	
3.2	Conduct interviews	
	Eastern Cape	
	Limpopo	
	Kwa Zulu Natal	
	Mpumalanga	
	North west	
	Gauteng	
	Northern Cape	
	Western Cape	
	Free State	
3.3	Data quality reviews	
3.4	Fieldwork report writing	
3.5	Field report editing	
3.6	Field work report quality reviews	
3.7	Submit fieldwork implementation report	
3.8	Submit third invoice for payment	
4	**DATA PROCESSING, ANALYSIS AND INTERPRETATION**	
4.1	Data collation	
4.2	Data capturing	
4.3	Data cleaning	
4.4	Data quality reviews	
4.5	Data analysis and interpretation	
4.6	Submit raw data	
4.7	Submit spreadsheet (data tables and analytical work)	
4.8	Submit fourth invoice for payment	
5	**DRAFT REPORT WRITING**	
5.1	Draft report writing	

Task ID.	TASK DESCRIPTION	Time allocated
5.2	Quality reviews	
5.3	Implement quality reviews feedback	
5.4	Edit report	
5.5	Implement editor's feedback	
5.6	Submit draft report to CLIENT	
5.7	Submit fifth invoice for payment	
6	REPORTING AND WORKSHOP	
6.1	Obtain feedback from CLIENT on draft report	
6.2	Report writing	
6.3	Report editing	
6.4	Workshop with CLIENT	
6.5	Presentation to CLIENT council	
6.6	Implement feedback from workshop	
6.7	Submit Final Report with recommendations to CLIENT	
6.8	Submit sixth and final invoice for payment	
6.9	Project close out	

Appendices 9: Daily Progress Report (DPR)

Serial No.	Planned activity for the day	Achievement	Significant event	Risk	SOE's Remark	CEO's Remark
PROJECT NAME (Monday, August 3, 2015)						
1.						
2.						
PROJECT NAME (Tuesday, August 4, 2015)						
1.						
2.						
PROJECT NAME (Wednesday, August 5, 2015)						
1.						
2.		§ .				
PROJECT NAME (Thursday, August 6, 2015)						
1.		§				
2.						
PROJECT NAME (Friday, August 7, 2015)						
1.						
2..						

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Appendices 10: Weekly Activity Report (WAR)

W E E K L Y A C T I V I T Y R E P O R T		Week ended:	2	7	0	6	2	0	1	5
NAME:										
ROLE/JOB LEVEL: N/A				**NAME:**						
UNIT:										
Reports to:										
OVERARCHING VISION OF THE ROLE										
Growing (ORGS' NAME)' presence globally, as the most preferred provider of research-based consulting services that uncover facts and provide evidence to formulate and implement uncommon actionable intelligence that improves development delivery, governance, civic relationships and commerce; by working to secure profitable project engagements and achieving masterful delivery on them in a way that realises **quality, time, cost and demonstrable client satisfaction objectives.**										

KEY PERFORMANCE INDICATORS	ACTIVITIES/DELIVERABLES ACHIEVED DURING THE WEEK	ACTIVITIES/DELIVERABLES PLANNED FOR NEXT WEEK	MANAGER'S COMMENT
1. **Business Development**			
2. **OTHERS**	.		