

Is Eskom's Organisational Culture a Barrier to Knowledge Sharing? A study conducted in the Generation Division of Eskom

By

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ABSTRACT

The management of knowledge has taken on greater importance in 21st century as more companies compete in the open market. The company that is aware of what knowledge it possess and is able leverage its knowledge effectively will have a significant advantage over its competitors.

A major stumbling block to implementation of knowledge management initiatives has been organizational culture. If the culture of the organization is not conducive to knowledge sharing, no knowledge management initiative will ever succeed.

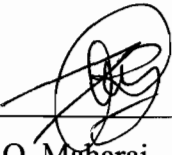
This study was focussed on examining the cultural landscape of the Generation Division of Eskom in order to understand what impact it will have on future knowledge management initiatives and to provide insight on what issues need to be addressed in order to facilitate a culture of knowledge sharing within the Division.

Hermeneutics, coupled with systems thinking, was used to identify the factors within the Generation Division's organisational culture that influenced knowledge sharing. Trust, compassion for fellow employees and mutual respect were identified as critical factors that inhibited the development of meaningful relationships amongst employees which is pivotal to sharing tacit knowledge.

This study recommends paying more attention to developing and improving employee relationships than investing in expensive IT infrastructure to transfer tacit knowledge.

DECLARATION

I, Ravendra Omarsunker Maharaj, declare that this research report is my own work. The report is submitted in partial fulfilment of the requirements of the degree, Masters of Commerce in the University of KwaZulu-Natal. This work has not been submitted for any degree or examination at any other university



R.O. Maharaj

2005 / 12 / 15

Date

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I would like to thank my wife for all her love, support and patience she has offered over the past two years. Without her by my side I would never have come so far.

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CHAPTER 1 – INTRODUCTION

1.1. Research Problem

Our primary asset is the knowledge and commitment of our people. It is knowledge and commitment that enabled Eskom to become the world's lowest cost electricity producer and that which will continue to make us competitive into the new millennium. We need to nurture, grow and manage the collective knowledge of our business in pursuit of customer satisfaction and business efficiency. – Allen Morgan, former Chief Executive of Eskom

Over the past few years Eskom has faced significant challenges in order to meet its mandate to deliver electricity at the lowest cost possible. There has been an unprecedented growth in the Southern African electricity market which has severely tested Eskom's already strained generation capacity. Present Eskom forecasts predict rapid growth in the demand for electricity which may lead to power shortages in the next few years.

To mitigate any electricity supply shortage, Eskom has embarked on a massive drive to build new power stations in the next six years to meet the increasing demand. Stations that were once decommissioned now have to be returned to service in order to accommodate the increasing demand. At the same time existing power stations have to operate under more challenging conditions which impacts negatively on the life span of components and places greater stress on an already rapidly aging fleet of power stations.

These challenges call for a highly skilled and knowledgeable workforce. In the past, Eskom had employees with the tacit knowledge to design, build, operate and maintain power stations with minimal assistance from outside contractors. Over the past decade these critical resources have left the company, due normal attrition or as a result of the transformational initiatives applied in the organisation, without the transfer of knowledge occurring.

Knowledge is seen as a key resource for attaining and maintaining a competitive edge in the 21st century (Nonaka and Nishiguchi, 2001; Gupta, Sharma and Hsu, 2004). One of the strategies an organisation can employ to leverage its critical resources, is to harness its organisational knowledge (Bloodgood and Salisbury, 2001). Eskom has now recognised the value of developing a knowledge management system to capture the tacit knowledge within

the company in order to leverage the knowledge as it prepares to confront the new challenges it faces in pursuit of its strategic objectives.

Research studies that have focused on the factors that influence knowledge management initiatives have identified organisational culture as being a significant barrier to knowledge management (De Long and Fahey, 2000; Guptara, 1999; Skyrme and Amidon, 1997; Davenport, De Long and Beers, 1998; Ribière, 2001).

If the cultural soil isn't fertile for a knowledge project, no amount of technology, knowledge content or good project management practices will make the effort successful. (Davenport *et al*, 1998)

Guptara(1999) states that a “collaborative culture must be nurtured” for a knowledge management initiative to succeed. Gupta, Iyer and Aronson (2000) assert that an “open culture with incentives built around integrating individual skills and experiences into organizational knowledge” will be more successful and they cite the example of Buckman Laboratories Inc., where an open culture and the company's entrenched commitment to their employees has aided them in establishing an effective knowledge management system.

However, Dixon (2000) challenges the perception that a collaborative culture is a pre-requisite for knowledge sharing to occur. She argues that from her own personal experience collaborative cultures have arisen from the process of people sharing ideas about issues that are important to them. On the other hand, De Long and Fahey (2000) claim that it is organizational culture that acts as a filtering mechanism in determining what knowledge is important.

For Eskom's knowledge management initiative to be a success, the cultural landscape must be explored in order to understand how the organization's culture influences knowledge sharing.

1.2. Purpose of this study

The purpose of this study is to explore and gain insight into how organisational culture influences knowledge sharing, within the context of the Generation Division. This study will help provide a better understanding of how organisational culture should be addressed when developing a knowledge management strategy for the Generation Division of Eskom.

1.3. Scope and Limitations of the Study

There is an abundance of information available on knowledge management and organisational culture, which provides the conceptual framework for the study. However, this study is focussed on exploring the how the organisational culture influences the sharing of knowledge in Eskom with a special reference to the Generation Division. Therefore this study is exploratory in nature and is not intended to be exhaustive.

1.4. The Significance of the Study

For Eskom to achieve its strategic intent, it has to restructure and put plans in place to improve or find new ways of doing business. Knowledge management is one of the key business enablers to assist Eskom to achieve its organisational goals and objectives. Tacit knowledge (experience) of experts in the organisation is an important catalyst to mitigate Eskom's escalating intellectual property risk due to events such as natural attrition, early pension and people leaving the company. It is imperative that knowledge must be transferred to Eskom staff and in particular to those operating, engineering and maintaining a plant (Eskom, 2005).

Eskom is currently in the process of evaluating a knowledge management tool to capture the tacit knowledge within the company. Due to the loss of experienced staff in critical areas of the business, Eskom has faced a severe skills shortage which has negatively impacted the business. The greatest areas for concern in terms of the loss of skills relate to the running of power stations which is the core business of the Generation Division of Eskom.

The success of any knowledge management initiative will depend on the willingness of the people within the organisation to share knowledge. The propensity to share knowledge is a characteristic of the cultural landscape of an organisation. The aim of this study was to

explore orientation of the Generation Division towards knowledge management and understand how the organisational culture would influence knowledge management. The findings and recommendations can help provide useful insights into addressing the Division's organisational culture during the implementation process of the proposed knowledge management initiative.

1.5. Chapter Layout

Chapter 2 Literature Review

This chapter focuses on the existing literature on knowledge management and organisational culture. It explores the existing theories and ideas regarding the influence of organisational culture on knowledge management. The purpose of this review is to identify what is currently known on the topic of interest.

Chapter 3 Research Methodology

This chapter explains the methods used in the study. It describes the parameters of the study. It further describes the methods and instruments of the data collection and analysis. The validity and reliability of the methods are discussed in this chapter.

Chapter 4 Data Analysis and Interpretation

This chapter reports on the interpretation of the findings.

Chapter 5 Conclusion and Recommendations

This chapter concludes the report with recommendation for future research based on the findings.

CHAPTER 2 – LITERATURE REVIEW

This chapter reviews literature on the two key concepts central to this study, namely, knowledge management and organisational culture. How culture influences knowledge management is also examined which provides the reference base for the study.

2.1. What is Knowledge Management?

2.1.1. Nature of Knowledge

Knowledge management is essentially the management of knowledge. But what is knowledge and what distinguishes knowledge from data and information? And does our understanding of the concept of knowledge influence the way we manage it?

Traditional Western epistemology defined knowledge as “justified true belief” (Nonaka, Konno and Toyama, 2001). This traditional perspective of knowledge stems from a positivist paradigm where knowledge is viewed as being a separate entity from “the people who create and use it” (Davenport, De Long and Beer, 1998; Kautz and Thaysen, 2001). In other words, knowledge is seen to exist independently of human existence. This implies that knowledge can be seen as a commodity that is easily stored in documents and databases.

Nonaka *et al* (2001) argue that this traditional perception of knowledge denies the human dimension of knowledge; it portrays knowledge as being absolute and static.

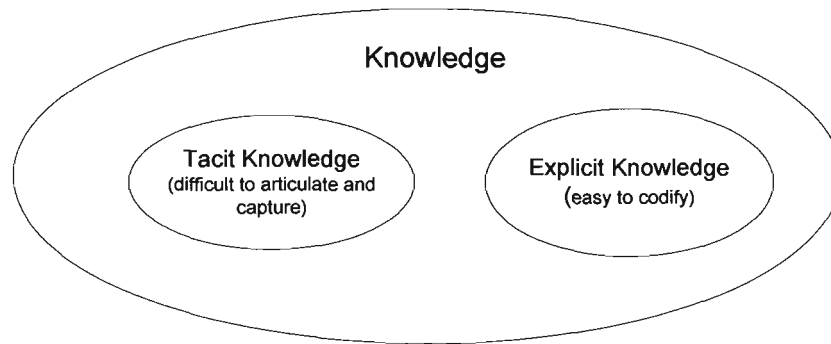
A more modern definition of knowledge is presented by Davenport and Prusak (1997):

Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.

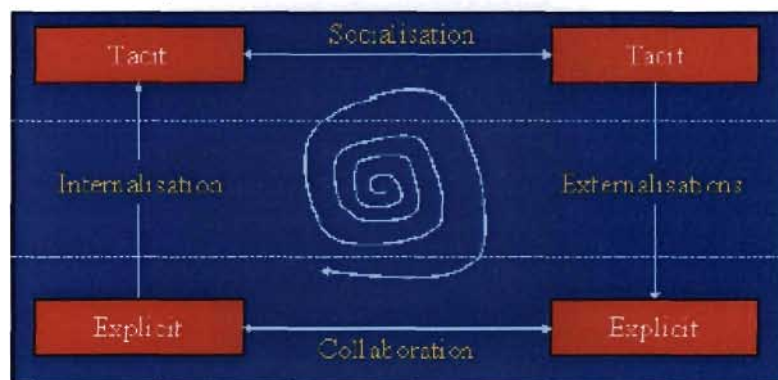
Knowledge is seen to be a product of human activity. It is dynamic, contextual and subjective. Knowledge is intrinsically linked to the people who create and use it (McDermott, 1999; Nonaka *et al* 2001; Thomas, Kellogg and Erickson, 2001).

What differentiates knowledge from data and information? Data is seen as unprocessed “facts”, “observations” or “descriptions”. Data is essentially raw information that needs to be categorised, analysed and placed into context in order to have meaning to a recipient (Clark and Rollo, 2001). Information is produced by processing data which involves identifying “patterns” that will have meaning to the end user. Information evolves into knowledge when it is applied to bring about action. For example, you decide to pack warm, winter clothes for your trip to Cape Town based on the weather reports you heard over the radio. The information about the weather conditions in Cape Town becomes knowledge because it initiated action which in this case is the adjustment to your travel attire. Another important feature that differentiates knowledge from information is relevancy. For example, if you are given a weather report of Alaska but you were travelling to Cape Town, the information received would be of no use to you as it is not relevant to your situation. Hence we can define knowledge as being “relevant, actionable information” (De Long and Fahey, 2000; Leonard and Sensiper, 1998; Hussain, Lucas and Ali, 2004).

Polanyi (1966) introduced the concepts of “explicit” and “tacit” knowledge which is the most commonly used taxonomy for knowledge categorisation. Explicit knowledge is knowledge that has been “codified” and captured using text, numbers and diagrams, e-mails, video footage, etc. The codification facilitates easy transmission of explicit knowledge (Nonaka and Takeuchi, 1995; De Long, 1997; Barquin 2001; McAdam and McCreedy, 1999). Tacit knowledge, on the other hand, is not easily codified. It is difficult to articulate and capture, which inhibits its transference (Zack, 1999; Kim, 2000; Bloodgood and Salisbury, 2001; Armistead and Meakins, 2002). It resides within the minds of the “knowers” (Gupta, Sharma *et al*, 2004, Davenport and Prusak, 1997). Tacit knowledge is “highly personal” and fundamentally rooted to action, context and experience (Nonaka, 1991; De Long, 1997; Nonaka *et al*, 2001).

Figure 1 Systems map of knowledge

Both tacit and explicit knowledge are essential for knowledge creation. Nonaka and Takeuchi (1995) proposed a “knowledge spiral” for examining the knowledge creation process that existed within Japanese companies which hinges on the “reciprocal relationship” between tacit and explicit knowledge. During the knowledge creation process both forms of knowledge interact and are transformed into each other (Nonaka *et al*, 2001). They proposed four modes of knowledge conversion: Socialisation, Externalisation, Combination and Internalisation.

Figure 2 Nonaka and Takeuchi’s SECI Model

Socialisation (Tacit to Tacit) – is the process of creating new tacit knowledge through shared experiences.

Externalisation (Tacit to Explicit) – is the process of articulating tacit knowledge so that it may be codified and converted into explicit knowledge.

Collaboration (Explicit to Explicit) – is the process of integrating different sources of explicit knowledge into a more complex and organised form of explicit knowledge.

Internalisation (Explicit to Tacit) – is the process of understanding and converting the explicit knowledge that has been shared into tacit knowledge.

The knowledge creation process is a continuous cycle involving all four modes.

Embedded in Nonaka and Takeuchi's (1995) "knowledge spiral" are the assumptions that all knowledge is either tacit or explicit and that all tacit knowledge can be converted into explicit knowledge. However, is it possible for all tacit knowledge to be converted into explicit knowledge and vice versa?

Leonard and Sensiper (1998) expanded on Polanyi's (1966) assertion that all knowledge contains tacit "dimensions" and put forward the idea that knowledge actually exists on a continuum, with "extremely explicit knowledge" and "extremely tacit knowledge" occupying either end of the spectrum. They claim that most knowledge exists between these two extremes.

Figure 3 Knowledge continuum



There is also an acknowledgement by scholars that not all the tacit knowledge of an individual can be converted into explicit knowledge. For example, the negotiation skills used to free people in a hostage situation are largely tacit. It would be difficult for the hostage negotiator to articulate all his or her negotiation skills (Leonard and Sensiper, 1998). As Polanyi (1966) famously stated "We can know more than we can tell."

Referring back to the "knowledge spiral", it now becomes clear that the transformation from tacit to explicit and explicit to tacit are not 100% conversion processes. Invariably some of the tacit "dimensions" of the knowledge cannot be converted during each of the four stages and is lost during the conversions processes.

How does our understanding of knowledge influence the way we manage it? We have seen that knowledge can be viewed as being a commodity that exists independently from the people who create and use it. From this perspective all knowledge is easy to articulate and capture in the electronic and print media, i.e., all knowledge can be made explicit. More importantly, knowledge is not owned by "knowers", but is rather the possession of the

organisation to which the “knowers” belong to. Knowledge management stemming from this paradigm would be more focused on establishing IT networks to capture and transfer knowledge from knowledge repositories. However, if one reflects on the distinguishing characteristics of knowledge mentioned earlier, the knowledge repositories are nothing more than data or information warehouses.

An opposing paradigm is to view knowledge as being intrinsically linked to the people who use and create it. Here there is an acknowledgement that knowledge resides within the minds of the “knowers” and not in the organisation that they are affiliated to. Knowledge is seen as having both tacit and explicit qualities. A knowledge management initiative derived from this paradigm would focus on creating an environment that encourages more direct interaction amongst people in order for the tacit knowledge to be shared. Less emphasis would be placed on establishing *information systems*.

Therefore problems can arise when a knowledge management initiative is based on a different knowledge perspective as compared to the knowledge perspective that resides within its organisational culture. It is also important to also realise that both tacit and explicit knowledge are necessary to generate new knowledge that will give an organisation a competitive advantage.

2.1.2. Knowledge Management

2.1.2.1. Definitions

Although there is an abundance of knowledge management definitions available I have only selected a few of the definitions below:

Knowledge Management caters to the critical issues of organizational adaptation, survival and competence in face of increasingly discontinuous environmental change. Essentially, it embodies organizational processes that seek synergistic combination of data and information processing capacity of information technologies and the creative and innovative capacity of human beings (Malhotra, 1997).

Knowledge Management is a process that helps organizations identify, select, organize, disseminate and transfer important information and expertise that are a necessary for activities such as problem solving, dynamic learning, strategic planning and decision making(Gupta *et al.*, 2002).

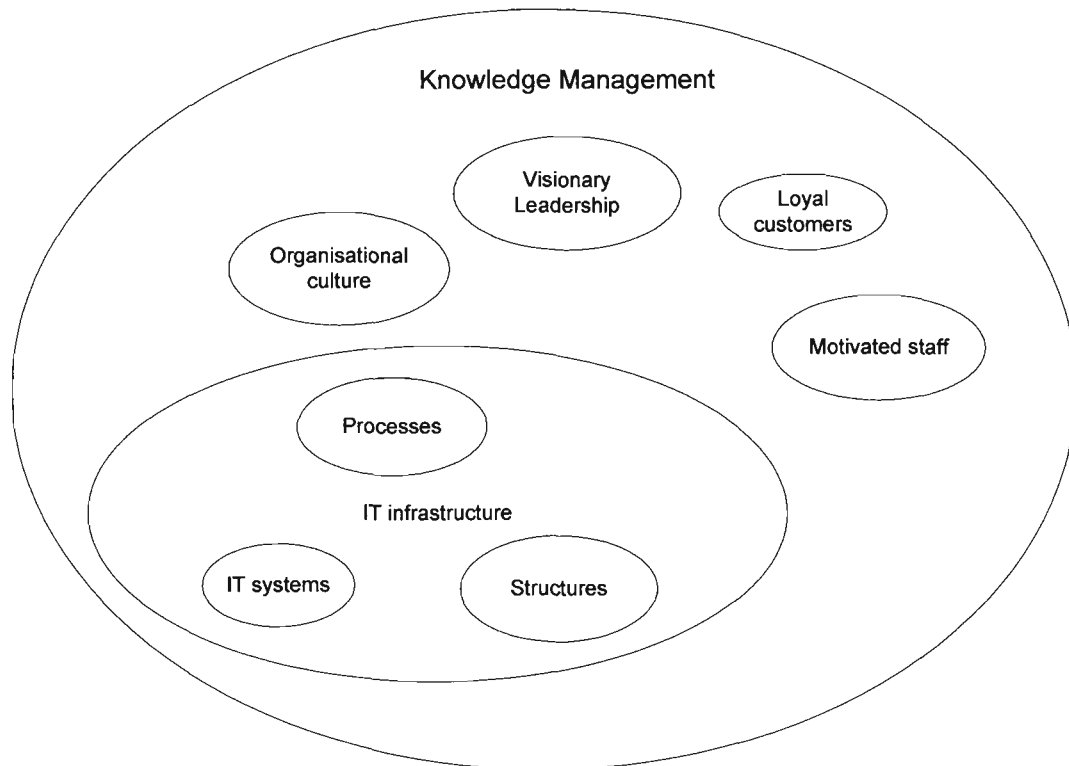
Rastogi (2000) defines of knowledge management as:

a systematic and integrative process of coordinating organization-wide activities of acquiring, creating, storing, sharing, diffusing, developing, and deploying knowledge by individuals and groups in pursuit of major organizational goals. It is the process through which organizations create and use their institutional and collective knowledge.

Skryme (2000: p.59) defines knowledge management as:

the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation, in pursuit of organizational objectives.

The above definitions focus on knowledge management as a process necessary to create, store, share and deploy knowledge to achieve critical organisational objectives. Kermally (2002:p.2) contends that a more holistic approach should used when defining knowledge management that incorporates the creation of an environment that encourages the sharing of knowledge. This includes, but is not restricted to, the roles that organisational culture, visionary leadership, motivated staff and loyal customers play in managing knowledge.

Figure 4 Systems map of a knowledge management system

Hence knowledge management is not merely about having systems, structures and processes to facilitate the leveraging of knowledge to achieve organisational objectives; it includes having the right environment to do so effectively.

Knowledge management is the acquisition and use of resources to create an environment in which information is accessible to individuals and in which individuals acquire, share and use that information to develop their own knowledge and are encouraged and enabled to apply their knowledge for the benefit of the organisation (Brelade and Harman, 2000)

2.1.1.2. Origins of knowledge management

Some sceptics believe that knowledge management is nothing more than a “fad” created by management consultants as a synonym for information or data management while others sceptics believe that knowledge management was born out of an attempt to recover money lost from the fading re-engineering movement (Prusak, 2001; Wilson, 2002).

However, knowledge management has existed since the appearance of our species on this planet. The label used to catalogue our species, “Homo sapiens”, means “knowing man.” Our very existence depended on humans being able to observe and understand how the environment around them operated in order to adapt and survive in response to changing environmental conditions. These insights and knowledge were shared to ensure the survival of our species (Barquin, 2001). Ancient civilisations were acutely aware of the value of knowledge and knowledge management in business. The Phoenicians, for example, passed the secret of creating a “highly coveted” clothing dye down from generation to generation. Divulging this trade secret was punishable by death. In ancient Rome, Publican firms were able to operate effectively in foreign markets by leveraging the wealth of knowledge available within their network of contacts with businessmen and tradesmen (Moore, 2000).

However, it was only in the 1990’s when the concept of knowledge management re-emerged in the business world as world economies were moving away from “natural resources to intellectual assets.” Executives were forced to identify the knowledge underpinning their businesses and to scrutinise how that knowledge was being utilised. The rapid advancement in the computer industry helped to facilitate the codification and dissemination of knowledge better, and cheaper, than ever before. (Hansen, Nohria and Tierney, 1999)

With the onset of globalization, knowledge is an even more critical asset in acquiring and sustaining a competitive advantage which places even greater importance on knowledge management. Companies are not only expected to remember and learn from their past history i.e., organisational memory, they also need to create and share new knowledge. Companies need to be able to reduce their costs, shorten their product development times, improve their customer service, be innovative, flexible and deliver top grade products. This can only be achieved by having an unwavering focus on creating, sharing, storing, updating and utilising knowledge by all organisational members (Nonaka and Nishiguchi, 2001; Gupta, Sharma and Hsu, 2004; Bontis, 2001; Zack, 1999, Skryme, 2000).

2.1.2.3. Knowledge management strategies

The true benefits of knowledge management initiatives can only be realised once a company’s knowledge management strategy is aligned to its competitive strategy (Hansen *et al*, 1999; Zack, 1999). It seems self-evident that a company who knows more about its customers,

products, technology and the market will be more successful. However, company executives have experienced difficulty in harnessing knowledge management to gain a competitive advantage (Zack, 1999). Zack (1999) argues that the problem lies in aligning the knowledge management strategy with the company's business strategy. How is this accomplished?

Zack (1999) advocates using the traditional SWOT analysis to determine a company's strengths, weaknesses, opportunities and threats. Once the SWOT analysis has been conducted, it forms the basis for mapping a company's "knowledge resources and capabilities against their strategic opportunities and threats to better understand their points of advantage and weakness (Zack, 1999)."

Knowledge mapping involves creating an inventory of the company's knowledge resources. Once the knowledge inventory has been established, it is compared to the knowledge that a company needs to fulfil its strategic intent in order to identify the "strategic knowledge" gaps (Zack, 1999).

Zack (1999) provides the following taxonomy appropriate for cataloguing "strategic knowledge":

- Core knowledge – is the basic knowledge a company requires to enter a particular market.
- Advanced knowledge – it is the fundamental knowledge a company needs to be competitive in a particular market.
- Innovative knowledge – it is the essential knowledge that a company requires to be a market leader and to "significantly differentiate itself from its competitors."

Zack (1999) also issues a warning when mapping knowledge; what is "innovative knowledge" today will be "core knowledge" tomorrow. This emphasizes the fact that knowledge is dynamic and not static.

Hansen *et al* (1999) conducted a survey on the knowledge management strategies employed by consulting companies and they found that these strategies can be placed into two broad categories namely, the "codification" strategy and the "personalization" strategy. The codification strategy focuses on using IT technology to create "knowledge repositories" where explicit knowledge is stored and made easily accessible to anyone in the company. The

personalization strategy views human beings as the “knowledge repositories” so the focus is on improving communication between people to facilitate the sharing of tacit knowledge (Hansen *et al*, 1999; Davenport, De Long and Beers, 1998; Choi and Lee, 2002). These knowledge strategies tie in with the two different perspectives of knowledge discussed earlier.

Hansen *et al* (1999) state that the knowledge management strategy employed by a company should reflect how a company adds value to its customers, how the value adds to the chosen economic model and how the people deliver on the value and chosen economic model.

For example, Ernst and Young have adopted a codification strategy where knowledge is codified using a “people-to-documents” approach. This entails gathering the knowledge from its originator, converting the tacit knowledge into explicit knowledge and making it available for reuse at a later stage. This is appropriate for their environment as they repeatedly deal with similar problems. Their customers benefit as Ernst and Young have been able to develop a database of reliable solutions which have proven to be successful and have been tweaked over time. The reuse of solutions saves work, reduces communication and allows Ernst and Young to take on more customers thus allowing the company to grow quite substantially. Their staffing policy is to hire top university graduates who are then trained and developed to reuse past solutions. The employees are provided with incentives for utilising and contributing to the knowledge repositories (Hansen *et al*, 1999).

Graduates from university are accustomed to an environment where they had to apply the knowledge of others, contained in text books, academic journals and the internet, to complete their academic studies. Academic institutions do not require their undergraduate students to contribute to the body of knowledge but rather expect their students to be able to harness the existing body of knowledge to their advantage. Therefore it is sensible to employ graduates when persevering with a codification strategy as the graduates are accustomed to reusing knowledge to complete work, which contributes significantly to shortening their acclimatisation period and enables them to become productive within a relatively short period of time. New graduates also offer employers the opportunity to indoctrinate them about beliefs and values that are critical to maintaining a high performance culture. The disadvantage of primarily hiring graduates straight out of university is that they lack business experience which can stifle innovation in providing business solutions to customers. Hence the graduates are hired to be “implementers” and not “innovators” (Hansen *et al*, 1999).

McKinsey and Bain, on the other hand, have adopted the personalization strategy where emphasis is placed on communication between people to share tacit knowledge. Face-to-face communication is not the only method employed to connect people together. These companies have also invested in communication networks to link people via e-mail, telephone and video conferencing. These companies tackle complex problems where no obvious solutions seem apparent. Their employees network with their co-workers to better understand the complexities of the problems of their clients in order to provide highly customised solutions which they can charge at a premium price. However, the process of providing such highly customised solutions does have its drawbacks as it is time consuming, slow and expensive. This limits the number of consultants that can be assigned to a project and makes it difficult to hire new employees quickly as they need a substantial amount of time receiving one-on-one training. This inhibits rapid expansion of such companies. Providing solutions to extremely complicated business problems requires people who have business experience coupled with strong analytical skills. A comfort with ambiguity is also an important prerequisite to understand the complexity of the problem in order provide a meaningful solution. Therefore the staffing policies are to hire top MBA graduates who enjoy problem solving and who can work with ambiguity. Their employees are encouraged to share tacit knowledge via incentives (Hansen *et al*, 1999).

Hansen *et al* (1999) discovered that those companies that were successful in harnessing knowledge management for the competitive advantage employed both a codification and a personalization strategy. However, these companies choose one strategy to be the dominant strategy for the company with the second strategy providing a supportive role. From their research Hansen *et al* (1999) observed that those companies that pursued both forms of knowledge management strategies with equal fervour met with failure.

Eskom is embarking on creating knowledge repositories containing documents, presentations, audio and video files. The company has invested heavily in providing the IT infrastructure to support the knowledge management initiative. It is assumed that within the Eskom working environment we deal with similar problems on a regular basis. Within the Generation Division, this assumption would seem to be valid as we are engaged with the maintenance and operations of power stations which involve tasks that are repetitive in a nature. Being able to access a database that houses insights, lessons learnt and good solutions to common problems

will be of enormous benefit to the Division. However, many good solutions to common problems and the wealth of operational experience reside within the heads of Generation personnel. Not enough thought has been given to tapping into the tacit knowledge of our seasoned employees in order to make their knowledge accessible to others. The knowledge management initiative is only focussing on capturing knowledge from an operational level. No attention has been given to capturing the reasoning and thought processes behind the strategic decisions being made by our senior executive management. This aspect is vital to our business especially when we are embarking on projects to expand our generating capacity and have to confront past executive decisions. Without understanding the context and the thinking behind the decisions, it is very difficult to support or challenge past decisions. Establishing social networks amongst our employees that fosters face-to-face communication may deliver greater rewards than just focusing on IT systems.

2.2. What is Organisational Culture?

Organisational culture is seen as the “glue” that binds a company together. Organisational culture plays a pivotal role in helping a company establish values, purpose and direction (Goffee and Jones, 1996). But what is organisational culture? In order to understand how organisational culture influences knowledge management, we need to understand the concept of organisational culture and its role within a company. And, more importantly, is there a “right” organisational culture (Robbins, 1986; Goffee and Jones, 1996)

2.2.1. Definition

Although the concept of organisational culture is commonly used and has featured as a topic of interest in numerous research papers, there is no universally accepted definition of organisational culture amongst social scientists (Robbins, 1986; Harris and Ogbonna, 1998; Denison, 1996, Hatch, 1993; Martin, 1992; Schein, 1992; Bercovici, Grandy and Mills, 2001).

Research on organisational culture has its origins in anthropology where no consensus on the concept of culture exists. The differences in approach to organisational culture research can be traced back to the differences in interpretations and understanding of what “organisation” and “culture” means (Smircich, 1983). There are two schools of thought with regards to

organisational culture research. The first school of thought (the “functionalist” paradigm) views culture as being a trait of an organisation i.e., “something an organisation has” and see organisations as “purposeful instruments”. Researchers who subscribe to the functionalist paradigm believe that managers can change culture and that culture is a “potential predictor” of organisational effectiveness. In the second school of thought (the “interpretive” paradigm) culture is viewed as a “root metaphor” i.e., “something an organisation is” and organisations are seen as a “form of human expression” (Smircich, 1983; Cameron, 2004).

Martin (1992) suggests that the reason for the divergence of opinion in defining organisational culture is related to the perceptions that have been applied to understand organisational culture. She posits three perspectives that have been applied in organisational culture research, namely:

1. The integration perspective

Organisational research that emanates from this perspective has three defining characteristics. Firstly, there is a “set of content themes”, which are usually a set of “values or basic assumptions” that are shared by all organisational members in an “organisation-wide consensus”. Secondly, “cultural manifestations” are interpreted as consistently emphasising this set of content themes. Thirdly, every organisational member has clarity regarding what is expected from them and understands the rationale behind them performing their function (Martin, 1992). This perspective promotes the belief that an ideal organisational culture is one where consensus, harmony and homogeneity prevail and where ambiguity does not exist (Martin, 1992; Wilson, 2001). Martin (1992) claims that most organisational research conducted using the integration perspective portray leaders as “culture creators” who have the capacity to transform the culture of an organisation into any form they desire, hence the popularity of this perspective amongst organisational researchers who target a managerial audience.

2. The differentiation perspective

In contrast to the integration perspective, the differentiation perspective challenges the notion of “organisation-wide consensus” and consistency. Research findings are focused on highlighting the inconsistency of cultural manifestations. It acknowledges the existence of conflict and discord within an organisation. If consensus exists, it is confined to lie within the

“boundaries of subcultures” while ambiguity is relegated to exist on the periphery of “subcultures” (Martin, 1992).

3. The fragmentation perspective

The primary focus of the fragmentation perspective is on ambiguity. The search for consistency or inconsistency of cultural manifestations is abandoned in favour of exploring the “complexity of relationships” that exists amongst cultural manifestations. This allows for a multitude of interpretations to emerge that seldom “coalesce into a stable consensus” (Martin, 1992). Organisational research grounded in the fragmentation perspective “seek to understand the complexity and interaction between sometimes conflicting sub-cultures” (Harris and Ogbonna, 1998).

Martin (1992) argues that organisations display cultural manifestations that support all three perspectives. This implies that organisation-wide consensus, consensus restricted to specific subcultures and ambiguity may co-exist within an organisation simultaneously (Wilson, 2001). Rather than focussing on one perspective to explore organisational culture, it is prudent to utilize all three perspectives to gain a better understanding of the organisation’s cultural landscape (Martin, 1992).

Bolon and Bolon (1994) support Martin’s (1992) view of using more than one perspective to study organisational culture. They argue that the obsession with viewing organisational culture as being a uniform, “monolithic” entity has robbed researchers of fully understanding the complex cultural dynamics that exist with an organisation. They assert that while a unitary organisational culture can be observed, it only represents a fraction of the cultural landscape of an organisation. They claim that a better understanding of organisational culture can be achieved by studying group behaviours and interactions.

Though organisations may have “inconsistencies, ambiguities, conflicts, disruption and dissolution”, there has to be some common “ideological guidelines” that everyone agrees to otherwise organisations would not be able to function (Wilson, 2001).

Rather than leaving organisational culture as a nebulous concept, we can define organisational culture by using both the formal and informal definitions offered by Martin (1992).

The manifestation of cultures in an organisation includes formal practices (e.g. organisational structure and job descriptions) and informal practices (e.g. unwritten norms and communication patterns), cultural forms (such as rituals, stories, jargon, humour, and physical arrangements), and content themes (values and basic assumptions). Interpretations of these cultural manifestations vary. It is these patterns of interpretations and the ways cultural manifestations are enacted that constitute culture.

2.2.2. Function of Organisational Culture

Organisational culture has the following functions (Robbins, 1986; Kreitner and Kinicki, 1998, Schein, 1992; Hofstede and Hofstede, 2005):

- It has a boundary defining role as it creates distinctions between one organisation and another.
- It creates a sense of identity for organisation members.
- It facilitates the generation of collective commitment to something larger than one's own self-interest.
- Culture provides the social glue that helps hold the organisation together by providing appropriate standards for what employees should say and do.
- Culture serves as a sense-making and control mechanism that guides and shapes the attitudes and behaviour of employees.

Organisational culture is therefore responsible for providing the framework for the development and maintenance of behaviours and values that can either support or destroy any knowledge management initiative.

2.2.3. Factors that influence Organisational Culture

Wilson (2001) categorises the factors he claims are the most commonly cited for influencing culture into four groupings. They are:

1. The business environment

The business environment in which an organisation operates helps to determine the culture. Society influences views about work, money, status and different types of jobs. Social scientists have highlighted the differences in cultural attitudes that exist between people from different geographical locations and different social classes. These differences can have an impact on staff commitment, respect for managers, attitudes towards service and the customer. The traditions of a particular industry can also influence the organisational culture of a company (Wilson, 2001; Hofstede and Hofstede, 2005).

2. Leadership

Wilson (2001) argues that though academic writers have claimed that leadership has a significant influence over organizational culture, he contends that there is not sufficient empirical evidence to support this claim. However, leadership does play a significant role in moulding the organizational culture of a new organization. The entrepreneur or the founding member influences organizational culture through his or her own ambitions and / or expectations (Wilson, 2001, Pettigrew, 1979; Schein, 1992). The initial organisational culture that has been established by the original leader can prove a challenge to change for successive leaders (Wilson, 2001).

3. Management practices and the formal socialisation process

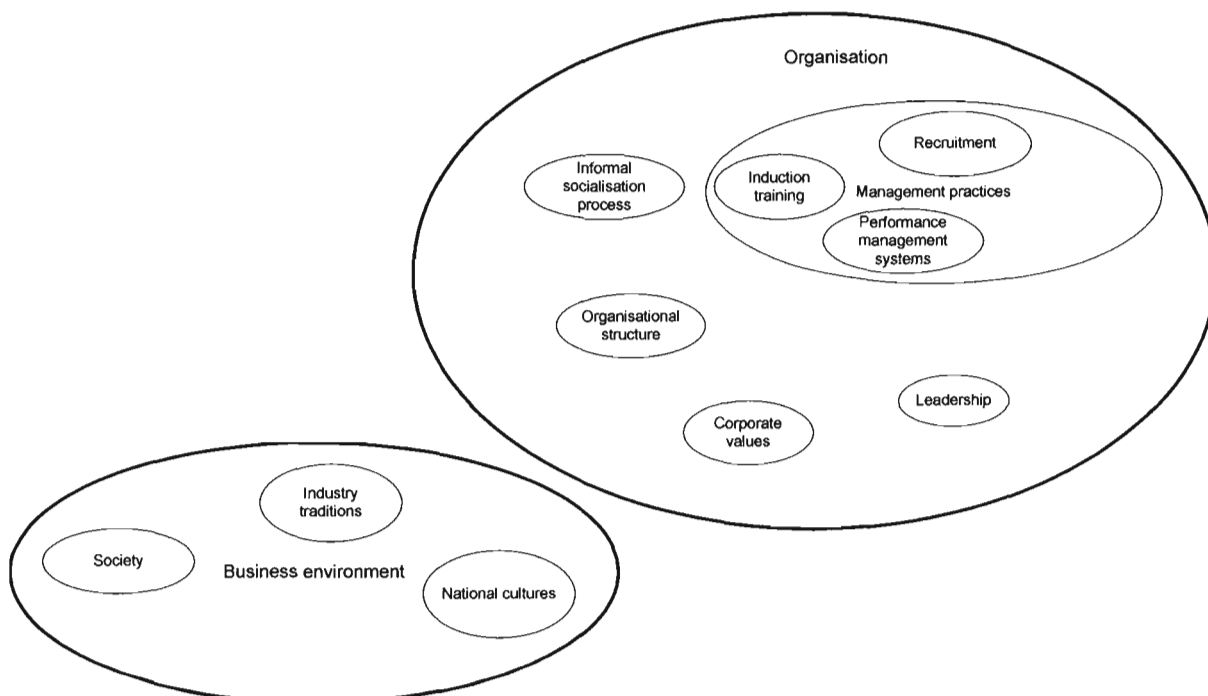
How a company is managed has an influence on organisational culture. The three key areas where this is apparent, is in the recruitment process, the formal socialisation process and the turnover of staff. Recruiters can, consciously or unconsciously, reinforce a particular organisational culture by selecting individuals that best mimic the present assumptions, values and beliefs of organisational members. Induction training programmes form part of the formal socialisation process of a new employee where the company's values and the expected employee behaviour are clearly spelt out. Employees also learn of the organisational values through their own experiences. Performance management systems also reinforce cultural norms by rewarding behaviour that contributes to the success of the company (Wilson, 2001).

4. The informal socialisation process

An individual who joins a group needs to feel as if he or she is a part of the group. This involves being recognised as a group member by the rest of the group and being allowed to make meaningful contribution to the group's function. A group member also needs to be able to voice his or her opinion, to feel "powerful", to feel influential while at the same time recognising the rights of other members to do the same. There is also a need for acceptance from the group members which provides a certain level of security and engenders a rapport between the individual and the other group members. In order to accommodate the different personalities of the members of the groups, norms and standards develop that are eventually accepted and enforced by the group members. The rendition of corporate myths, legends and stories contributes towards entrenching what is perceived as being acceptable employee behaviour. However, the story telling can also be used as a vehicle to promote a "counter-culture" or revealing the irregularities that exist within the ruling culture (Wilson, 2001).

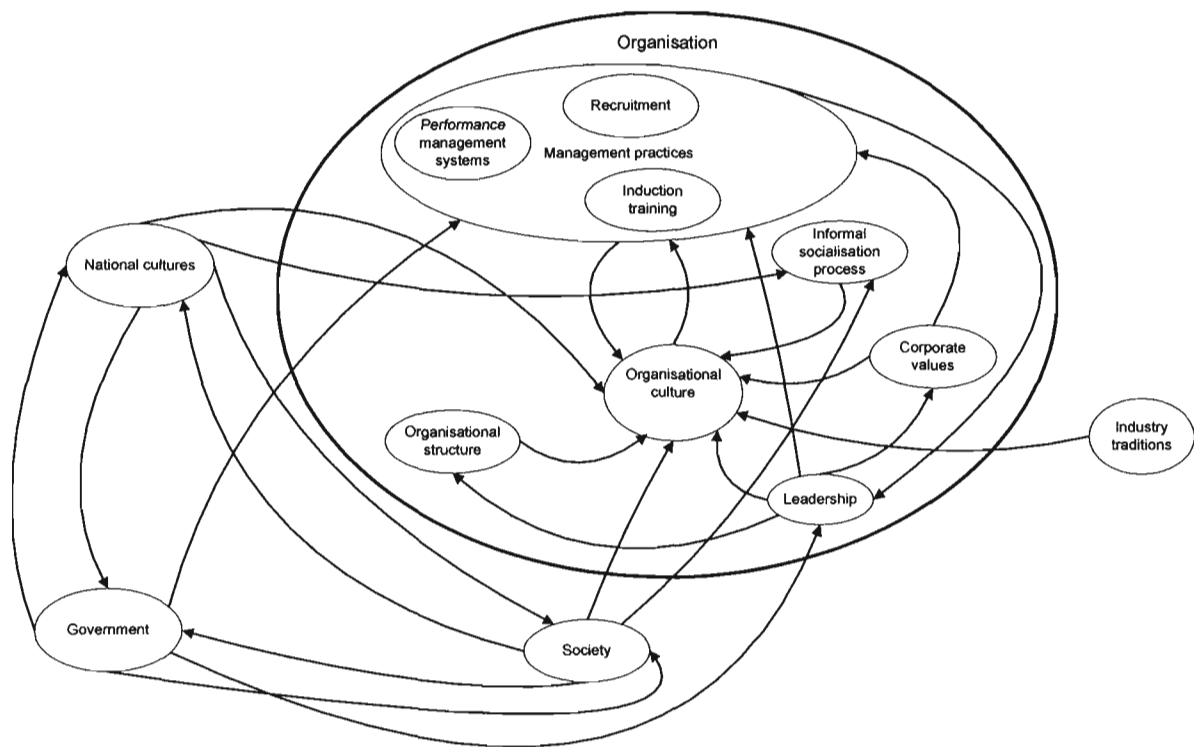
Below is a systems map of the factors, identified above, that influence the culture within an organisation.

Figure 5 Systems map of factors that influence organisational culture



The factors featured above can be investigated further to examine the influence they have on each other, let alone organisational culture. Other factors can also be brought into play that influence organisational culture, indirectly, by influencing the primary factors that affect organisational culture. Below is an influence diagram of the factors that influence organisational culture.

Figure 6 Influence diagram of factors affecting organisational culture



I have split the elements of the business environment and introduced Government as a factor outside the internal organisational environment that influences organisational culture. Government sets policies and regulations that can influence society and national cultures. Apartheid is an example of a government policy that had a significant influence on society and the national culture of South Africa, which in turn would have influenced the organisational culture within companies based in South Africa. Government can also have a direct influence on a company's recruitment process. For example, the South African government has legislated that companies must ensure that their staff complement is representative of the demographics of the country. To achieve the required demographic representation, companies must adopt gender equity and affirmative action drives.

Government can also be influential in the appointment of leaders within an organisation. For example, in a parastatal like Eskom, the South African government plays a significant role in the appointment of the board of directors as well as the Chief Executive.

Besides directly influencing organisational culture, leadership is also responsible for setting and enforcing the corporate values, establishing the management practices as well as setting up the organisational structure, all of which directly influence the culture of an organisation (Wilson, 2001).

Though leadership is responsible for establishing the management practices and culture of the organisation, future leaders that come from within the organisation are influenced by the present culture in that they learn about the corporate values and expected employee behaviours through induction programmes and their own experiences within the organisational culture.

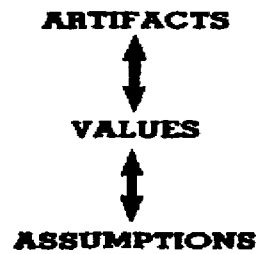
As stated earlier, recruiters can, consciously or unconsciously, reinforce a particular organisational culture by hiring people that emulate the existing organisational culture and corporate values. In this instance, the organisational culture is contributing to its own strengthening by influencing the recruitment process.

2.2.4. Studying Organisational Culture

Though conceptual models of organisational culture cannot capture all the complexity of organisational culture as expressed by Martin (1992), they do provide us with a guide to empirical research and theory generation (Hatch, 1993). Below are a few models that can be used to analyse the culture of an organisation in order to determine whether an organisation provides a conducive environment for knowledge management.

Schein (1992) proposes that culture can be analysed from three different levels.

Figure 7 Schein's model of the Levels of culture



The first level Artifacts includes “all the phenomena that one sees, hears and feels when one encounters a new group with an unfamiliar culture” (Schein 1992). Examples of Artifacts includes the office design and layout, the employees’ attire, the technology employed, the products or services provided, the stories about the organisation as well as the observable ceremonies and rituals. “Artifacts” are the easiest of the tree levels to observe but they are the most difficult to interpret. (Schein 1992, pp. 17 – 18)

Espoused values are “nondiscussable assumptions supported by articulated sets of beliefs, norms and operational rules of behavior” shared by members of the organisation (Schein, 1992). The espoused values are “explicitly articulated” in order to provide guidance to employees on how to respond to various situations as well as to educate new employees on the behaviour that is expected from them. Examples of espoused values are “Be smart, work safe” or “The customer comes first.” Espoused values may adequately reflect how employees propose they would respond to certain key situations but it is not necessarily in line with how they will actually respond to the situations. To acquire a more profound understanding of an organisation’s culture we need to unearth the basic assumptions (Schein, 1992).

Basic assumptions are those assumptions that are heavily embedded in an organisation. They are responsible for directing behaviour. i.e., defining what the members of an organisation should be paying attention to, what things mean, how they should be reacting emotionally to what is going on as well as providing guidance on what actions should be taken in various situations. The basic assumptions provide a mental model to understand how the organisation operates (Schein, 1992).

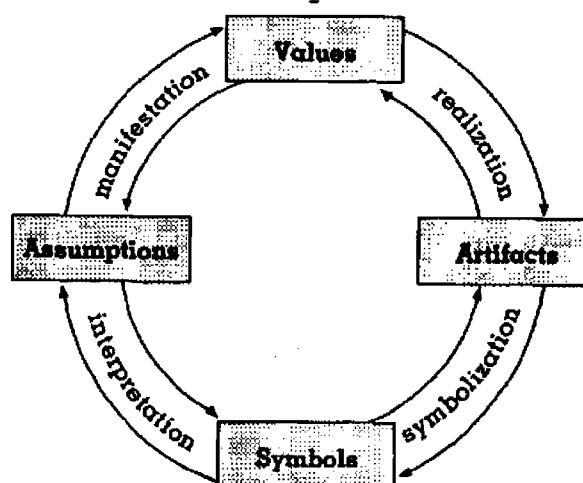
When work experiences challenge the basic assumptions, it creates feelings of anxiety and discomfort. The deeper the basic assumption is embedded in the organisation, the greater the

level of anxiety will be when the assumption is challenged. Rather than acknowledging the fact that the mental model we are using does not enable us to correctly understand the world around us, it is easier to deny or reject events and experiences that contradict our basic assumptions. In many ways the basic assumptions can be considered to be a “cognitive defence mechanism” that allows members of an organisation to continue with work rather than dwell on issues. If the problem or issue contradicts their basic assumptions, they ignore the problem (Schein, 1992).

Basic assumptions within an organisation are difficult to challenge as it is not just held by one person but is rather shared assumptions held by many. The fact that the assumptions are shared and held by many helps to reinforce the assumptions. These assumptions are not openly discussed by organisational members who may not even be aware of the existence of the assumptions and the impact these assumptions have on the operations of the business (Schein, 1992).

Hatch (1993) puts forward another model, the cultural dynamic model, for analysing culture. She argues that Schein’s model of organisational culture is flawed as it does not consider the influence of symbols and symbolic behaviour in organisations. She advocates including symbols to Schein’s model to accommodate symbolic-interpretative perspectives and proposes decentralising the cultural elements, namely, assumptions, values, artefacts and symbols, in order to focus on the relationships between them which she has named as manifestation, realisation, symbolisation and interpretation processes. (see Figure 8).

Figure 8 Hatch's cultural dynamic model



Manifestation process – This process permits cultural assumptions to reveal themselves in the perceptions, cognitions and emotions of organisational members and is responsible for converting the “intangible” assumptions into “recognisable” values. The cultural dynamics model suggests that manifestation can occur in two ways. The first way is through the processes that proactively influence values, i.e., from assumptions to values. For example, if we assume human beings are lazy, according the culture dynamics model we would have expectations of laziness which would therefore lead to perceptions of laziness. This can lead to a value concerned about preventing laziness. The second way manifestation can occur is through processes that influence assumptions retroactively through value recognition. For example, the emergence of a value concerned about preventing laziness would reaffirm the basic assumption that human beings are lazy (Hatch, 1993).

Realisation process – This process makes values tangible by converting them into artefacts. These artefacts can be either a true reflection of organisational values or they can make organisational values appear quite different from what they actually are. For example, if a value of an organisation is to prevent laziness, clocks may be installed to help monitor the time employees spend during their breaks. In this case the clocks symbolise the organisation’s value of preventing laziness. An example of where the reverse situation occurs, i.e., an artefact can change a value, can be seen in an avant-garde piece of art work that challenges accepted values and norms. Initially there will be great resistance to accepting the art work but as times passes by, the art work will be seen in a different light which will allow for its acceptance (Hatch, 1993).

Symbolisation process – This is where Hatch’s model deviates significantly from the Schein’s model. Hatch (1993) distinguishes between symbols and artefacts based on how symbols are produced and used by organisational members. Symbolisation is the process that expands the meaning of artefacts to organisational members that goes beyond the literal meaning of the artefact. For example, working in a closed office in the Eskom environment is corporate symbol of status. The closed office is more than just a place to complete your work, it symbolises your level of importance within the organisation.

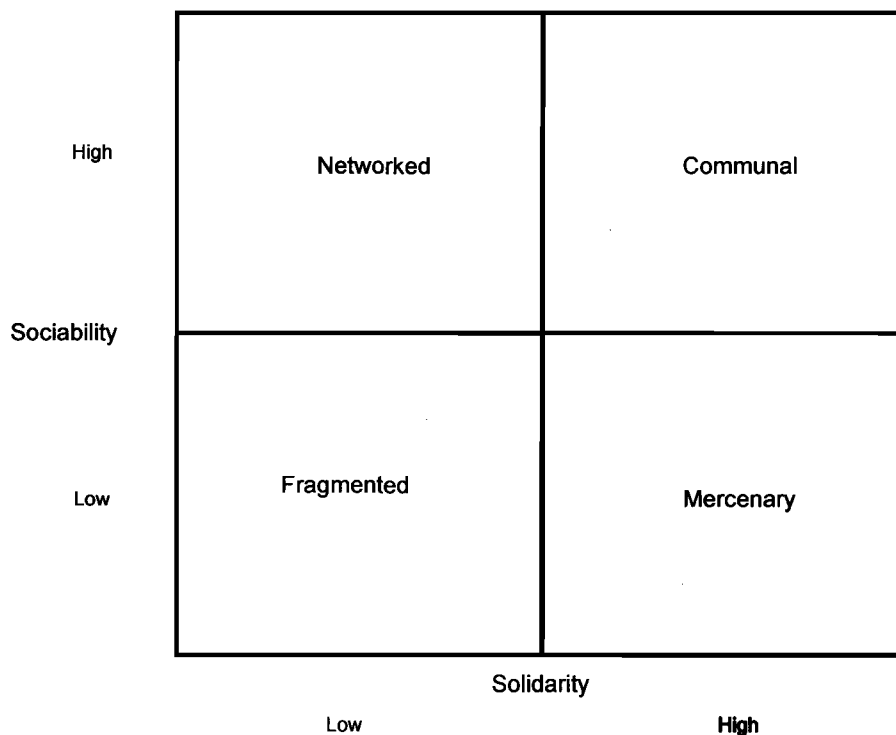
Interpretation process – This process allows for basic assumptions to be reinforced, challenged or expanded upon through the interpretation of organisational symbols.

Interpretation is a hermeneutic approach that allows one to move back and forth between the basic assumptions inherent in the organisation and the possibility of new understanding present within the symbols of the organisation. Interpretation reconstructs symbols and revises basic assumptions in terms of both current experience and the pre-established cultural assumptions (Hatch, 1993).

The interpretation process would be of particular importance in this study as it provides guidance on how corporate symbols should be reviewed with regards to their impact on basic assumptions that would influence the success of a knowledge management initiative.

Goffee and Jones (1996) classify four types of organisational culture based on the levels of sociability and solidarity that exists within them. Goffee and Jones (1996) define sociability as “the measure of sincere friendliness amongst members of the same community” and solidarity as “a measure of a community’s ability to pursue shared objectives quickly and effectively, regardless of personal ties.” Below is the framework used by Goffee and Jones (1996) that classifies organisational culture in a matrix of four quadrants (Ribiere, 2000).

Figure 9 Goffee and Jone's organisational culture matrix



Networked Organisation (High Sociability, Low Solidarity) – some of the characteristics of this type organisation is the strong social interactions which mimic that of a family, e.g. the celebration of birthdays, employees going out together for lunch and socialising after business hours. Networked organisations work around a company's hierarchical structure. Discussions are held amongst friends to make decisions about issues before formal meetings are held to discuss the issues. Due to the low levels of solidarity, managers have a hard time getting business units to cooperate. Networked organisations are also very political. Individuals and cliques spend most of their time pursuing their own agendas. The lack of general commitment to shared objectives also leads to organisational members contesting rules, procedures and performance measures (Goffee and Jones, 1996).

Mercenary Organisation (Low Sociability, High Solidarity) – is characterised by a strong sense of individual commitment to the corporate objectives. These organisations respond quickly and cohesively to opportunities and threats in the market. There is a distinct separation between work and one's social life. There is intolerance for poor performance. Due to the low levels of sociability that exist in these types of organisations, loyalty is not engendered. Employees stay with these types of companies for as long as their personal needs are met (Goffee and Jones, 1996).

Fragmented Organisation (Low Sociability, Low Solidarity) – employees of such organisations do not project a strong association with the companies they work for. They believe that they work for themselves. They usually work behind closed doors where information is only given when requested directly. There is often disagreement about organisational objectives (Goffee and Jones, 1996).

Communal Organisation (High Sociability, High Solidarity) – employees of such an organisation strongly link their personal identities with that of the organisation e.g. in the early days of Apple computers, employees identified themselves as "Apple people." Risks and rewards are shared equally by all and great emphasis is placed on fairness and justice. Employees are aware of who their competition in the market is and what they need to do to overcome the competition (Goffee and Jones, 1996).

Goffee and Jones (1996) acknowledge that different cultures may exist within one organisation and that radical differences between the cultures can contribute to conflict.

My initial assessment of the Generation Division using the Goffee and Jones culture matrix, featured above, depicts the Division as a mercenary organisation. When there is an emergency, Generation staff work together to respond to the problem as quickly as possible. Every person involved in the emergency response team is aware of what his or her responsibilities are. Failure to comply with corporate policies, procedures and government regulations are heavily frowned upon. Socialising outside the work environment is a non-event. Turnover, especially amongst the young professionals is high. These young professional ply their trade in the Generation Division until they develop skills and acquire experience that makes them marketable in the external market. A desire to stay with the company is not cultivated within the organisation. Money is the only motivator used to entice people to remain within the Generation Division, and Eskom, in general.

In order to better understand the impact of the Generation Division's organisational culture on knowledge sharing, I will need to surface the underlying basic assumptions that are embedded in the organisation and discover how they may hinder or promote knowledge management initiatives (Schein, 1992). However, first I need to determine what the basic assumptions are that I need to unearth that will be relevant to knowledge sharing.

2.2.5. Is there a 'right' culture

According to Robbins (1986) there is no "right" or "wrong" organisational culture. He also argues that that the perspective of seeking a "right" culture detracts focus from understanding what organisational culture actually is, to "prescribing" what organisational culture should be.

Robbins (1986) claims that assertions are too generic. Though I agree with his claim that there is no "right" organisational culture in general, I do believe that you have specific organisational cultures that are appropriate for certain business environments. For example, to be successful in the advertising industry, you would require people who are innovative and open to new ideas. Advertisers with a closed culture will not reap much success.

The appropriateness of an organisational culture depends on the national culture in which the organisation exists as well as the nationality of the observer passing judgement (Hofstede and Hofstede, 2005). For example, in a study conducted by Peters and Watermans (1982 cited by

Hofstede and Hofstede, 2005), both Americans, considered IBM to be a company with a desirable organisational culture. However, a leading French psychologist, Max Pagè, conducted a study on IBM France and was horrified with what he found (Hofstede and Hofstede, 2005). In a similar vein, theories on organisational culture are also culture bound, i.e., they are also influenced by the national culture of the theorist (Hofstede and Hofstede, 2005).

Is there a “right” organisational culture for knowledge management? The following sections will help to clarify what type of organisational cultural is desirable with respect to knowledge management.

2.3. Impact of organisational culture on knowledge management

Organisational culture has been identified as a significant barrier to knowledge management in companies (Gold, Malhotra, and Segars, 2001; De Long and Fahey, 2000; Gupta, 1999; Skyrme and Amidon, 1997; Davenport *et al*, 1998; Gupta and Govindarajan, 2000; Ribièrè, 2001).

De Long and Fahey (2000) conducted research on over 50 organisations that were pursuing knowledge management projects to determine how organisational culture effects knowledge management. They identified four ways in which culture influences knowledge management:

- Culture, particularly subculture, shapes the assumptions about what knowledge is and which knowledge is important. This in turn affects which knowledge a business unit focuses on.
- Culture defines the relationships between individual and organizational knowledge, determining who is expected to control specific knowledge, as well as who must share it and who can hoard it.
- Culture creates the context for social interaction which determines how knowledge will be used in particular situations.

- Culture shapes the processes by which new knowledge is created, legitimated, and distributed in organizations.

Based on the research of De Long and Fahey (2000) it is apparent that in order to understand the influence of Generation's organisational culture on knowledge management, one needs to examine the role of the subcultures within the Division. The Generation Division consists of two dominant subcultures, namely, the Head Office culture and the Power Station culture. It will be important to explore how these two diverse working environments define what knowledge is, and determine which knowledge is important to the business. The social interactions that occur within and between these two environments will provide a better understanding of how knowledge is shared, created and harnessed to achieve business objectives.

Skyrme and Amidon (1997) conducted research on the "challenges of creating a knowledge-based business and how leading companies are meeting these challenges." They identified an absence of a "knowledge-sharing culture" as a "significant barrier to effective knowledge management." Their key findings with regards to improving knowledge creation and sharing with respect to organisational culture are the following:

- Creating a culture where knowledge is valued and shared effectively is one of the most difficult challenges in practice.
- Appropriate cultures are those that engender change, learning, innovation, openness and trust. They also recognise people for their knowledge contributions.
- More flexible organisational structures are required for effective knowledge creation and knowledge sharing.
- Communities of Practice, which are groups of people who are informally bound together by a shared purpose, can improve a company's innovative capacity if nurtured.
- Physical settings, such as the office environment, play a significant role in establishing conditions conducive for informal knowledge sharing.

Skyrme and Amidon (1997) contradict Robbins (1986) earlier assertions that there is no "right" or "wrong" organisational culture. From a knowledge management perspective there are organisational traits that support knowledge sharing, like openness and trust.

Organisations devoid of these qualities find it difficult to establish and sustain a knowledge

management system. Therefore it is establishing the levels of trust and openness that exist in an organisation will help provide an indication of an organisation's willingness to share information.

Davenport *et al* (1998) studied 31 knowledge management projects at 24 companies to identify those factors that guarantee a project's success. They identified a "knowledge friendly" culture is being one of the most important factors in ensuring the success of knowledge management projects. They define a "knowledge friendly" culture as being one where learning, both on and off the job, are highly valued and where experience, expertise and rapid innovation supplant hierarchy. The company hires people who reinforce the "knowledge friendly" orientation.

Knowledge hoarding was evident in companies with unsuccessful knowledge management projects. Employees guilty of knowledge hoarding may believe that their value to the company is intrinsically linked to the knowledge they possess therefore they are reluctant to share it. Another reason may be due to company incentive schemes that only reward individual creativity and achievement which counteracts the desire to share knowledge (Davenport *et al*, 1998).

The concept of a "knowledge friendly" organisational culture is further supported by Brelade and Harman (2000) who assert that effective knowledge management will be successful in organisations who value:

- Networking and broad contacts internally and externally
- Respect of individuals
- Creativity and innovation
- Trust
- Sharing of ideas and information
- Sound underlying systems and procedures
- Continuous learning and development

Trust and sharing are seen as fundamental organisational values necessary in promoting knowledge sharing behaviours as opposed to knowledge hoarding behaviours (Brelade and Harman, 2000). Brelade and Harman (2000) advocate building on current organisational

cultures through a process of changing systems and procedures that indoctrinate the values of trust and sharing amongst new employees and reinforce these values in the rest of the organisation.

Davenport *et al* (1998) assert that knowledge projects need be aligned with the existing organisational culture to be successful. In their study of the Power Construction Company's attempt to leverage knowledge to gain a competitive advantage, Schreiber and Muchisky (1999) reiterate the importance of aligning your knowledge management project to the culture of your organisation. The Power Construction Company has an anti-corporate; people centred culture so the company had to ensure that their knowledge management initiative was not seen as another "corporate directive". Therefore the company decided to keep the initiative simple and allow the "day-to-day" knowledge practices to evolve naturally (Schreiber and Muchisky, 1999).

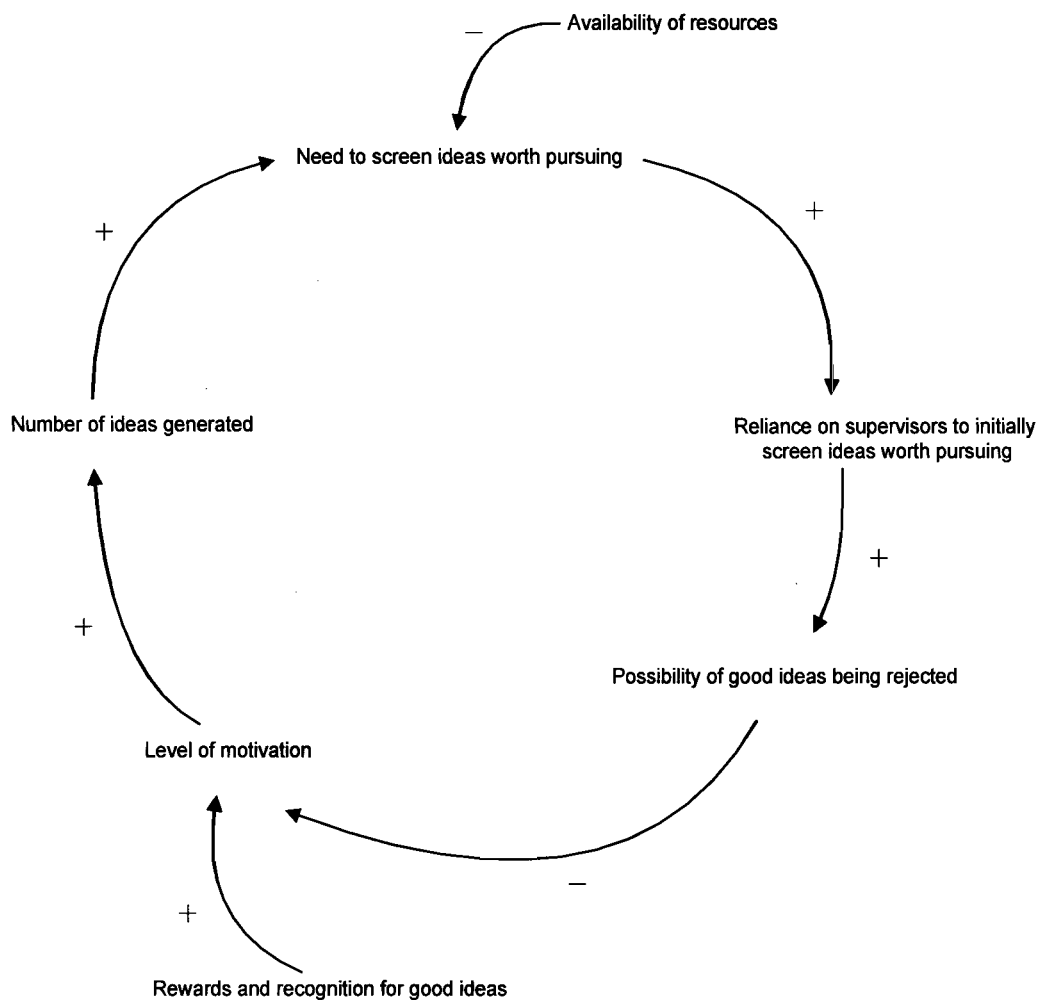
Gupta and Govindarajan (2000) claim that there is a gap between the rhetoric of knowledge management and the way knowledge is actually managed in organisations. They argue that the "social ecology" of the organisation impacts its knowledge management initiatives. They define "social ecology" as the social system in which people operate which drives formal and informal organisation's expectations of individuals of individuals, defines the types of people who will fit in an organisation, shapes the freedom of individual's to pursue actions without prior approval and affects how people act with others inside and outside the organisation. They examined how the social ecology of Nucor Steel has helped to promote knowledge management within the organisation in order construct a framework to assist other companies in developing their own effective knowledge management programme.

Their framework focussed on knowledge creation and acquisition as well as the sharing of knowledge. They claim that in order to maximise the creation and acquisition of knowledge, companies need to provide their employees with challenging targets to stimulate them to be innovative. These "stretch goals" need to be coupled with appropriate "high-powered" incentives that motivate employees to reach those goals. Companies also need to afford their employees the time to be creative and innovative while also providing them with a controlled environment which can accommodate experimentation without exposing the rest of the organisation to the associated risks. Though companies must have filtering mechanisms in place to sort out the ideas worth pursuing, it is also important to create a culture where support

for an idea can still be lobbied despite not gaining your immediate supervisor's support and creating a perception of insubordination.

Let us explore the issue of companies filtering the ideas generated within the business using a causal loop diagram. (See figure 10).

Figure 10 Causal loop diagram of idea filtering mechanism of a company using just supervisors.

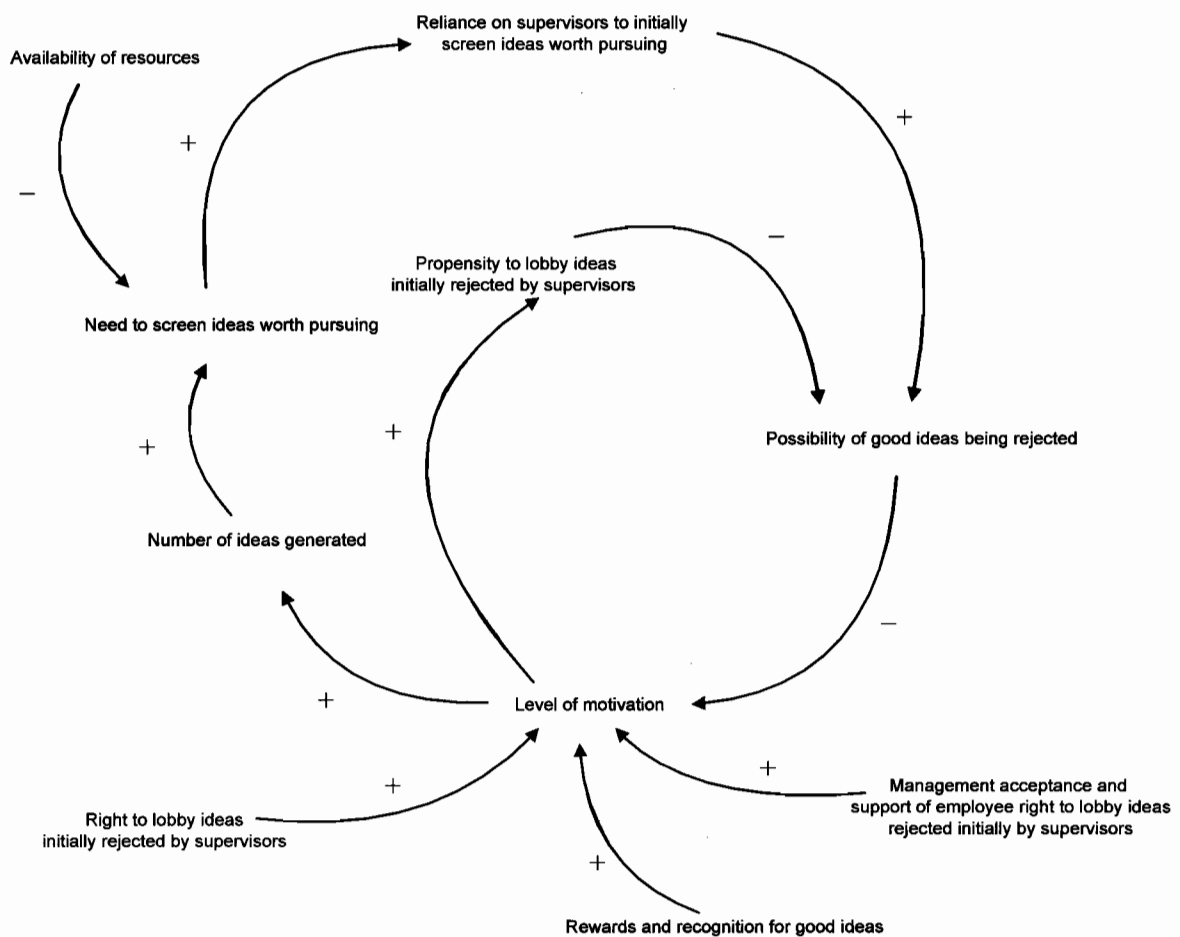


Rewards and recognition for good ideas will increase the levels of motivation of staff to contribute their ideas to the company. Increased levels of motivation will lead to more ideas being generated by staff. This will lead to an increase in the number of ideas that need to be filtered in order to identify those ideas worth pursuing. Limited resources increase the need to screen the ideas as well. Relying solely on the wisdom of the immediate supervisors to

initially screen ideas can an increase the possibility of good ideas being rejected, which in turn would lower the levels of motivation within the organisation to contribute ideas.

However, by creating an organisational culture where the employees have the right to lobby ideas initially rejected by their immediate supervisors and where the right is accepted and supported by management, employees will have the added motivation to lobby their ideas when rejected which will help reduce the possibility of good ideas being overlooked by the organisation. (See Figure 11)

Figure 11 Causal loop diagram of idea filtering mechanism with option to lobby rejected ideas.



Gupta and Govindarajan (2000) argue that the hoarding of knowledge can be combated by treating knowledge as a “corporate resource” which cannot be hoarded by any business unit and by giving recognition to employees who create new knowledge and those who help with the transfer of knowledge to other business units. They endorse codifying tacit knowledge as

they believe it helps in the standardisation of the quality of goods or services offered as well as increasing the level of knowledge sharing and facilitating new knowledge creation. Gupta and Govindarajan (2000) assert that the appropriate transmission mechanism should be used for the different types of knowledge, for example, face-to-face communication is more appropriate to transfer tacit knowledge than a document or database.

Holowetzki (2002) conducted a study, based on a content analysis of current knowledge management literature, to identify the significant factors within organisational culture that support knowledge management. The outcome of the study was to provide a checklist to help the chief executive officers of small and non-profit organisations, who have limited resources for expensive knowledge management initiatives, to be able to diagnose their organisations in order to promote effective knowledge management. She used Gupta and Govindarajan (2000) case study of Nucor Steel to identify seven key areas that impact on knowledge management, namely information systems, organisational structure, reward systems, processes, people and leadership. She also applied the definition of social ecology from Gupta and Govindarajan (2000) as her working definition of organisational culture. The table below summarises her findings in the seven key areas:

Table 1 Table of Critical factors of Organisational culture and their impact on Knowledge Management

<i>Factors of Organizational Culture</i>	<i>Impact on Knowledge Management Initiatives</i>
Information Systems <ul style="list-style-type: none"> • Combine people, processes, and technology • Must be flexible and tailored to the type of knowledge being captured, shared, or created • Include formal and informal approaches 	Build networks that foster conversation, relationships, and trust among employees. Generate a collaborative environment in which employees know who knows what, know what was done before, and use this knowledge to resolve problems quickly and effectively
Organizational Structure <ul style="list-style-type: none"> • Must be permeable and minimize the focus on organizational silos • Must support learning and sharing of knowledge • Encourages the formation of teams, work groups, and communities of practice 	Allows the flow of knowledge regardless of employee role, job function, or other traditional boundaries. Facilitates sharing of knowledge and learning to create even more knowledge. Allows employees to bond socially and technically to share information, build on each others knowledge, and to solve problems.
Reward Systems <ul style="list-style-type: none"> • Consist of a balance between intrinsic and extrinsic motivators • Encourage knowledge sharing across role and functional boundaries; Must not trivialize 	Encourage knowledge sharing through formal systems, such as financial incentives and compensation structures; and through informal systems such as peer-to-peer recognition. Acknowledge the value of sharing knowledge, the

<p>knowledge sharing efforts</p> <ul style="list-style-type: none"> • Include a formal assessment of achievements against knowledge management objectives make, and the importance of not hoarding information or knowledge. • Motivate employees to develop innovations that would help them do things right the first time. 	<p>contributions people make, and the importance of not hoarding information or knowledge. Motivate employees to develop innovations that would help them do things right the first time.</p>
<p>Processes</p> <ul style="list-style-type: none"> • Connect people with other knowledge people • Connect people with information • Enable conversation of information to knowledge • Encapsulate knowledge • Disseminate knowledge throughout organization 	<p>Promote collaborative problem solving, streamlined workload, consolidated information, and enhanced performance. Enable learning, sharing of cross-functional expertise, and sharing of worker-to-worker knowledge. Develop information systems that enable information to seamlessly cross traditional silos.</p>
<p>People</p> <ul style="list-style-type: none"> • Most significant element of a knowledge management system • Employees need reassurances that they are still valued after they give up their knowledge • Level of trust greatly influences the amount of knowledge that is shared 	<p>Fosters an environment where employees trust that their knowledge is valued and ensures that the culture grows at the right pace, with the right people, and in the right mix. Allows employees to do a better job of aggregating useful information, and make it available to others who need it when they need it.</p>
<p>Leadership</p> <ul style="list-style-type: none"> • Provides strong and dedicated commitment to knowledge management initiatives • Leads by example • Fosters open knowledge sharing by creating an environment built on trust • Fosters a belief that organizational learning and knowledge management are critical • Develops a customer-centred business orientation 	<p>Creates the vision, mission, objectives, and ethics code for the organization as it develops its knowledge management system. Endorses and sustains knowledge management initiatives by taking on the role of coach and mentor. Removes barriers to progress. Reinforces and rewards positive behaviors and promotes the right people. Moves the entire organization toward knowledge management.</p>

Guptara (1999) alleges that the organisational culture present in most contemporary companies “vitiates” the success of knowledge management initiatives in these companies. He claims that the hierarchical structures present within most modern companies also display similar layers within their organisational cultures which inhibit communication and the establishment of a genuine rapport between employees. Without communication, especially with employees on the lower rungs of the hierarchical structure, knowledge management initiatives will fail. Guptara (1999) states that it is an organisation’s frontline workers who are the people who will know why knowledge management initiatives are failing and how they

can be improved. He claims that a collaborative culture must be established for knowledge management to be a success in an organisation.

Gupta *et al* (2000) assert that an “open culture with incentives built around integrating individual skills and experiences into organizational knowledge” will be more successful and they cite the example of Buckman Laboratories Inc., where an open culture and the company’s entrenched commitment to their employees has aided them in establishing an effective knowledge management system. Buckman Laboratories also introduced a policy of withholding opportunities for development and growth of employees who did not participate in its knowledge management drive (De Long and Fahey, 2000).

Havens and Haas (1998) claim that having a collaborative environment is a prerequisite for establishing an effective knowledge management system. In order for a collaborative environment to flourish, the organisational culture must value and reward knowledge sharing rather than knowledge hoarding. Although a “trusting, sharing culture” provides the basis for collaboration, it does not imply “uniformity.” Havens and Haas (1998) assert that conflict plays an important role in collaboration. Within the context of a trusting environment, challenges to ideas need not be perceived as being divisive or effrontery. Contention allows collaborators to explore other ideas rather than accept the first idea that is conceived. Rewards and recognition must be used as a vehicle to encourage employees to contribute “what they know about and what they need to do” to the organisational memory. However, organisations should not only reward people for original ideas that contribute to the organisational memory, it also needs to reward people for innovatively and creatively using other people’s ideas to achieve corporate objectives. This form of acknowledgement will encourage people to tap into the organisational memory rather than just contributing to it (Havens and Haas, 1998).

Gold *et al* (2001) state that communication between individuals and groups are essential for knowledge creation. They advocate encouraging employee interaction, both formally and informally, so that relationships, ideas and perceptions can be shared by people not working together. They claim that this form of interaction coupled with collaboration is vital for communicating tacit knowledge or transforming tacit knowledge into explicit knowledge. They also encourage the establishment of communities of practice where employees can create and share knowledge. They contend that a corporate vision that “permeates” the

organisation can provide employees with a sense of direction and purpose that “transcends everyday activities.” They also claim that a set of corporate values can also determine what knowledge is “desired” and which types of knowledge activities should be encouraged. “Trust” and “openness” are two key organisational values that promote knowledge management. However, for the vision and corporate values to be effective it must be communicated effectively to all organisational members (Gold *et al*, 2001).

The sentiments of Gold *et al* (2001) are echoed by Cross and Baird (2000) who claim that the tacit and explicit knowledge held by employees is vital to an organisation’s “ability to solve problems and create new knowledge.” They state that employee relationships play a big role organisational memory. Employees are more likely to turn to a knowledgeable colleague for advice or information rather than consult a database. It is the rapport that they have with each other, which is built on mutual trust that is the deciding factor on whether the required knowledge is passed on (Cross and Baird, 2000).

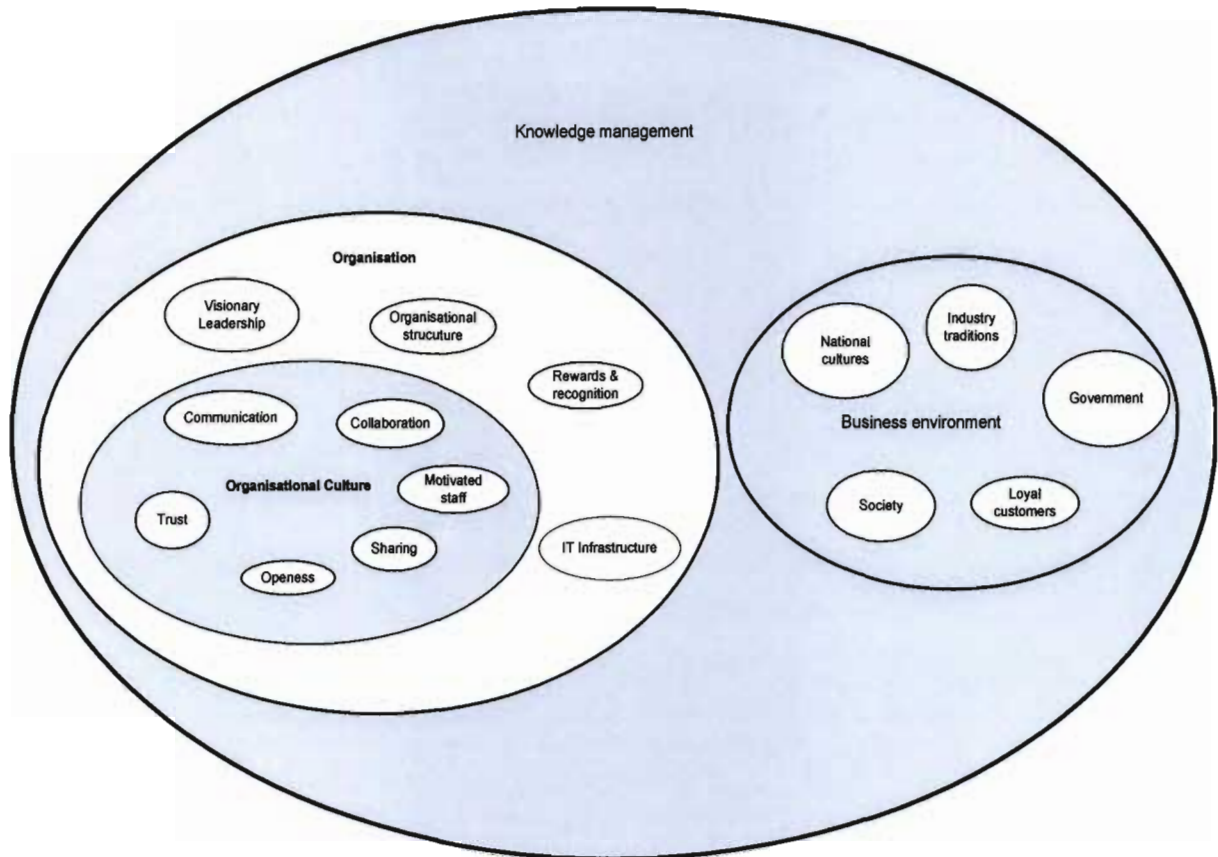
Holland (1999) puts forward ten methods for entrenching knowledge management in an organisation. They are:

- Reward knowledge-sharing behaviours.
- Define and communicate knowledge performance for your firm.
- Consider formal agreements on knowledge performance for key positions.
- Have managers systematically enforce and reinforce knowledge performance.
- Identify key knowledge performance positions.
- Provide incentives for key knowledge management actions.
- Explicitly manage knowledge performance for each and every employee.
- Publicly recognize good knowledge performance.
- Take action on poor knowledge performance.

Dixon (2000) challenges the perception that a collaborative culture is a pre-requisite for knowledge sharing to occur. She argues that from her own personal experience collaborative cultures have arisen from the process of people sharing ideas about issues that are important to them. However, it is organizational culture that determines what knowledge is important (De Long and Fahey, 2000).

Rivière (2001) explored the relationship between successful knowledge management initiatives and organisational culture. He modified the Goffee and Jones' (1996) matrix for classifying organisational culture by replacing the dimension of sociability with trust as he claims that sociability is a subset of trust. He surveyed mainly large companies in the IT and telecommunication fields. He discovered that codification strategies are most likely to succeed in organisations that have a high level of solidarity, i.e. organisation cultures that are either mercenary or communal. However, personalisation strategies will only succeed in organisational cultures where solidarity is high and trust is high, i.e., communal organisations. During his research, he also noted a high correlation factor between the trust and solidarity variables which he believes reduces the need for using these two variables as they measure similar dimensions.

Ford (2001) examined how trust influences knowledge management. She focussed on two categories of trust with regards to knowledge management, namely, interpersonal trust and organisational trust. Interpersonal trust is the trust an individual feels for another person while organisational trust is the trust that an employee feels for a company. Organisational trust assists with the creation, codification and sharing of knowledge but effective knowledge sharing to occur it needs to be supplemented with interpersonal trust.

Figure 12 Revised systems map of knowledge management

In the systems map above, I have adapted the knowledge management systems map represented in Figure 4 by combining it with other aspects in the business environment identified in the literature review that impacted organisational culture like Government, Society, National Cultures as well as Industry Traditions. These provide the context in which a business operates and will have an influence on the success of knowledge management system adopted by an organisation.

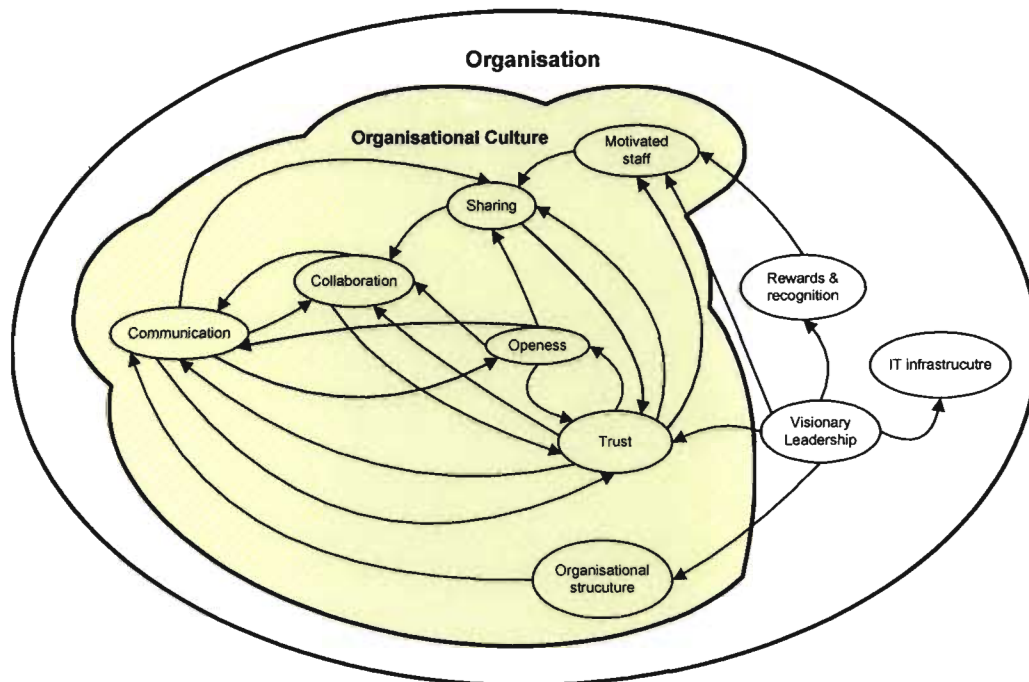
“Openness”, “trust”, “communication”, “sharing” and “collaboration” are organisational culture elements that have been identified to be critical to the successful implementation of a knowledge management initiative. I have included these elements into the revised systems map of knowledge management (Gold et al 2001, Cross and Baird, 2000; Gupta *et al*, 2000; Havens and Haas, 1998; Davenport *et al*, 1998; Brelade and Harman, 2000; Ford, 2001).

My focus for this research study is to explore and understand the organisational culture subsystem identified in Figure 12 as well the influence of the other elements identified within the organisation subsystem.

My focus for this research study is to explore and understand the organisational culture subsystem identified in Figure 12 as well the influence of the other elements identified within the organisation subsystem.

Below is an influence diagram that explores the relationship of the organisational elements critical to knowledge management.

Figure 13 Influence diagram of organisational elements critical to knowledge management



I have included organisational structure as an element of organisational culture based on the assertions of Gupta (1999) and Martin (1992). Though the IT infrastructure plays a role in communication, it provides a medium for communication rather than influencing communication. Communication, in terms of knowledge sharing, relies on trust and openness to exist within an organisation. Without openness and trust, no amount of money invested in IT infrastructure would ever enable communication that delivers knowledge sharing (Malhotra, 1997; Gold *et al*, 2001).

Firestone (2001) argues that culture has become an all too easy excuse used by organisations to explain the reason for the failures of knowledge management initiatives. He contends that organisational culture is a complex phenomenon with a multitude of definitions available that carry different connotations. This is in line with Martin's (1992) claims of there existing

different perspectives of organisational culture, i.e., integrative, differentiated and fragmented. But how would the utilisation of any one of these different perspectives, as advocated by Martin (1992), change the way the effects of organisational culture on knowledge management are viewed?

When using the integrative perspective to study the impact of organisational culture on knowledge management, emphasis would be placed on eliciting the common set of shared views, behaviours and assumptions within the organisation that promotes or hinders knowledge management. The aim would be to find consistency with respect to how the culture of an organisation effects knowledge management. Therefore, any cultural manifestations exhibited by organisational members, whether as individuals or groups, that contradicts the perceived commonly held views, behaviours and values related to knowledge management, would be dismissed. More importantly, the impact of these contradictory views, behaviours and assumptions on knowledge management would not be investigated. Recommendations that stem for the integrative perspective would be based on the assumption that organisational leaders have the ability to mould and shape the culture of an entire organisation into any form they so choose therefore organisation wide change management initiatives would be advocated (Harris and Ogbonna, 1998; Martin, 1992).

Studies from the differentiation perspective would focus on contradictions that exist within an organisational culture and how they would influence the success of knowledge management initiatives. Another important focus of a differentiated study would be the examination of the consensus that exists within various subcultures of an organisation and the role they would play in the success of knowledge management initiatives. Studies from a differentiation perspective reject the notion of "organisation-wide consensus" therefore any recommendations to improve knowledge management will be based on employing very specific change manage initiatives focussed at individuals or subgroups rather than using very generic change management initiative for the whole organisation (Martin, 1992).

Knowledge management studies stemming from the fragmentation perspective would focus on the ambiguity that is prevalent within organisational culture and the impact that has on knowledge management. The studies would also look at the interactions of the different subcultures and how that the influences knowledge management. Recommendations from

this perspective will advocate employing very specific change management initiatives to improve knowledge management.

Therefore any claims of organisational culture being a barrier to effective knowledge management need to be clarified with respect to the definition of culture being referred to (Firestone, 2001).

All the academic literature that examines the role of organisational culture in knowledge management emanates from the integrative perspective. Academics, and hence their research work, do not utilise the multiple perspectives approach to identify and analyse the effects of organisational culture on knowledge management. According to Martin's (1992) multiple perspective approach, organisational culture contains contradictions and ambiguity. The impact these organisational aspects have on knowledge management still needs to be explored. This implies that the full influence organisational culture has on knowledge management is yet to be properly examined. However, the research that has been conducted so far is still useful as it helps to inform future research.

2.4. Conclusion

The literature reviews highlights the complexities surrounding the concepts of knowledge management and organisational culture. Research on the effects of organisational culture on knowledge management is still in its infancy therefore this subject matter requires more studies to be conducted using different organisational perspectives and "mental models" to improve the understanding of how culture can support or topple knowledge management initiatives (Senge, 1990).

CHAPTER 3 – RESEARCH METHODOLOGY

3.1. Introduction

This chapter discusses the methodology used to explore or investigate the research problem at hand. This includes the population of the study, the sample size and characteristics, as well as the methods employed in collecting and analysing the data. The validity and reliability of the methods are discussed in this chapter.

3.2. The Objectives of the Study

The overall intention of this study is understand how organisational culture influences knowledge sharing in the Generation Division of Eskom. This understanding will provide insight to how organisational culture should be approached when developing a knowledge management strategy for the Division.

3.3. The Research Paradigm

This study was based on a qualitative research approach. The aim was to provide the reader with a holistic perspective of the how organisational culture influences knowledge sharing within the Generation Division of Eskom.

Qualitative research is as much a point of view as it is a set of methods. Knowledge is socially constructed and the foundation on which researchers build qualitative research. Things known are a product of the time and place in which you exist. The qualitative framework also embraces the notion that participants, both interviewer and interviewee, influence and are influenced by data collection and analysis. Credible qualitative inquiry depends on creating categories of meaning firmly based in the social realities of study participants (Bruce, 2003).

Creswell (2003) provides the following the characteristics of qualitative research:

- Qualitative research occurs in the natural setting of the participant. This allows the researcher to develop a level of detail about the individual or place and to be highly involved in actual experiences of the participants.
- Qualitative research uses multiple methods that are interactive and humanistic, for example unstructured interviews and observations.

- Qualitative researchers look for involvement of their participants in data collection and seek to build rapport and credibility with the individuals in the study.
- Qualitative research is emergent rather than tightly pre-configured. Several aspects emerge during a qualitative study. The research questions may change and be reframed as the inquirer learns what to ask and to whom it should be asked.
- Qualitative research is fundamentally interpretative. i.e., the researcher makes an interpretation based on his or her worldviews.
- Qualitative research uses complex reasoning that is multi-faceted, iterative and simultaneous. Though the reasoning is based on induction, both inductive and deductive thinking is at work. The thinking process is also iterative with cycling back from data collection and analysis to problem reformulation and back.

The interpretative paradigm was employed for this research study. According to Higgs (2001) the central goal of the interpretive paradigm is:

to seek to interpret the world, particularly the social world, (and where) knowledge ... comprises constructions arising from the minds and bodies of knowing, conscious and feeling beings ... generated through a search for meaning, beliefs, and values, and through looking for wholes and relationships with other wholes.

This research study is based on the interpretation of the relevant literature, the views of the research participants as well as my observations. The research is focused on understanding how the elements within organisational culture, like trust and openness, influence knowledge sharing. Culture and its elements are socially constructed phenomena (Schein, 1992; Hofstede and Hofstede, 2005; Paterson and Higgs, 2005). The interpretative paradigm is focused on exploring how people understand “human phenomena” as well as acknowledging that there are different ways comprehending human phenomena (Paterson and Higgs, 2005). Adopting an interpretive paradigm for this research allowed me to unearth the views, perceptions and experiences regarding the Generation’s organisational culture from the Division’s employees who are the people most affected by the culture and are therefore in the best position to discuss the merits of the culture in terms of knowledge sharing.

The qualitative methodology used for this study is based on hermeneutics.

Hermeneutics is the theory of interpretation. Hermeneutics is derived from the name of the Greek god Hermes, who was a messenger to the Greek gods and mortals (Patton,

2002; Paterson and Higgs, 2005).

Initially, hermeneutics was closely associated with the interpretation of biblical texts. In modern times, hermeneutics has transcended the interpretation of biblical scripts to include the interpretation of “human understanding” (Patton, 2002; Paterson and Higgs, 2005). Various scholars have, overtime, contributed to the expansion of hermeneutic theory and methodologies (Patton, 2002; Paterson and Higgs, 2005; Wallace, Ross and Davies, 2003). For the purpose of this study the hermeneutic circle is considered to be an analytical process whereby understanding the parts of the whole can only be achieved by having some understanding of the whole itself and vice versa (Paterson and Higgs, 2005; Patton, 2002).

Using the concept and practice of the hermeneutic circle, researchers recognize that the phenomenon or object of comprehension is understood as a whole because its parts are integrated in the whole and define it. At the same time researchers recognize how the whole contextualizes each of the parts, seeking to illuminate the phenomenon within its context. The process involves an examination of the parts, defining each component before it is reintegrated into the whole (Paterson and Higgs, 2005).

The hermeneutic circle of interpretation is an ongoing, iterative process, “with movement of understanding from the whole, to the part, and back to the whole” (Paterson and Higgs, 2005; Patton, 2002). Gadamer (1994) stressed the importance of researchers’ acknowledging their worldviews, i.e., their biases and prejudices, as part of the hermeneutic process. Gadamer (1994) asserts that the historical context plays an important role in the process of interpretation. The understanding of research findings occurs through a process of “dialogue between the past and our present”. Gadamer (1994) referred to the process mentioned earlier as a “fusion of horizons” between the present and the past horizons (Makaryk, 1995).

The literature on the topics of knowledge management, organisational culture and the impact of organisational culture on knowledge management form the historical horizon for this study while the present horizon is provided by the transcribed interviews and observations utilised for this study.

To assist me in identifying the whole and its parts to be explored in this research study, as well as understanding the interrelationships that exists, I applied systems thinking.

Systems thinking is a conceptual framework that allows one to apply a holistic approach to investigate complex situations by viewing the behaviour of wholes, and the many interconnections between the components, using a variety of methods (Senge, 1990; Lane, Armson, Hamwee, Martin and Paton, 2000).

Systems thinking tools, like systems maps, influence diagrams and causal loops, help to define the system of the interest, the components of the system, as well as the interrelationships that exist between the components and how the interrelationships influence the nature of the systems (Senge, 1990; Checkland, 1981).

Since hermeneutics is essentially an iterative process of understanding the whole through understanding its parts, I believed that the tools available in systems thinking would be suited to help me integrate the views, perceptions, experiences and my observations in order to understand the organisational culture of the Division and its impact on the sharing of knowledge.

3.4. The Research Design

My initial understanding of the concept of knowledge management was that it involved the capturing of data and / or information in order to make it accessible to other people. During the course of conducting the literature review, I came to realise that knowledge management involved more than the dissemination information. How we perceive knowledge influences the way we manage it (McAdam and McCreedy, 1999).

I believe that knowledge is intrinsically linked to a human being. Your knowledge is a product of your thoughts, experiences and reflections. Knowledge is subjective and dynamic in nature and is highly influenced by context (McDermott, 1999; Nonaka *et al*, 2001; Thomas *et al*, 2001). Knowledge is information that we have internalised through the process of reflection in order to make relevant to our context. Knowledge management should therefore be the facilitation of the process that enables people to convert information into something that has meaning and relevancy to them.

I have understood organisational culture to mean “the way we do things around here” (Schein, 1992). However, I have come to learn through the literature review that organisational culture is a much broader concept than the manifestation of formal and informal practices of an organisation. It includes the espoused values, basic assumptions, symbols, artefacts and how these different elements are projected and understood by the different members of the organisation. Organisational culture is not a homogenous, monolithic entity, it is far more complex. Contradiction, ambiguity and consensus co-exist within an organisational culture which implies changing an organisation’s culture is a far more daunting exercise than many academics profess it to be. In this research study I am looking for the manifestations of the organisation culture that highlight the pluralistic nature of the culture but also those manifestations that give the impression of a unitary entity (Martin, 1992; Wilson, 2001; Schein, 1992; Hatch, 1993, Flood and Jackson, 1991).

Culture can be an ally or enemy of a knowledge management initiative. A culture that exhibits trust and openness is more likely to be a haven for knowledge sharing rather than a culture that exhibits knowledge hoarding and a lack of communication. Embracing a view of knowledge in developing a knowledge management system that is diametrically opposed to the views of knowledge held by organisational culture members will be disastrous (Davenport *et al*, 1998; Hansen *et al*, 1999).

I felt that I needed to engage with employees and observe them in their natural work environment in order to discover how the Generation Division’s culture would influence knowledge sharing. Therefore I adopted interviews and observations as my primary methods of data collection. One of the characteristics of qualitative research is the ability to adapt your data collection method in order to explore new issues that emerge during the data collection process. I believed that unstructured interviews were best suited to allow for the probing of emergent issues during the course of the interviews. Unstructured interviews give s you the freedom to adapt your questions based on the responses of the participants and explore the new issues that surface.

Personal observations helped me to compare and clarify what was being said to what was actually happening. Observations were used to clarify, confirm and validate the data I received during the interview process as well as allowing me to see what actually happens(Cummings & Worley, 1993).

3.5. Population and Sample Selection

The population of the study consisted of all staff in the Generation Division of Eskom. The sample was drawn from all the Generation business units residing within Gauteng and Mpumalanga because these provinces had the greatest concentration of Generation employees as opposed to the other provinces. All contractors and temporary workers were excluded from the sample.

Convenience sampling was used to select the respondents for this study. This form of sampling allowed me to select those candidates that were easily accessible to me and were prepared to participate in the study. Convenience sampling is simple, cost effective and time efficient. A drawback of applying this approach is that no selection criteria was applied to ensure that the sample of respondents interviewed were representative of the Division in terms of race, gender, age, ethnicity,...., etc. However, this study is exploratory in nature which implies that the sample need not be a true reflection of the populace to provide me with meaningful insights to the problem being examined (Lunsford and Lunsford, 1995).

3.6. Sample Size

A total of 50 Generation employees were interviewed based on their availability and, willingness to participate in the study. The time constraints of the research study also limited the number of employees I could interview. As the study is a naturalistic inquiry, there are no rules on what an appropriate sample size is. The aim is to gather rich data to better understand the context and surface the problems that lay within the context. The study was not exhaustive; however there was no noticeable difference in the themes that emerged after I had interviewed 40 participants.

3.7. Interview Guide Design

Interviews are regarded as an effective method for collecting data as it allows real interaction between the researcher and the respondent to occur as a result of the researcher being able to ask direct questions to the respondent (Ghauri and Grønhaug, 2002; Cummings & Worley 1993).

Interviews can be placed into two broad categories, i.e., structured interviews and unstructured interviews. Interviews may be highly structured similar to questionnaires or highly unstructured where the respondent is given the freedom to “lead the way” during the interview (Cummings & Worley 1993, pp.117-118).

The use of open-ended questions allows respondents’ to fully express their own personal views or feelings on the issues to be explored. I felt that the best diagnostic tool to use in order to exploit this fact would be unstructured interviews. Unstructured interviews would enable me to probe emergent issues during the course of the interviews. This helped me develop better relationships with the respondents which also contributed to them, providing me with more candid responses that allowed me to gain a richer understanding of the impact of organizational culture on knowledge management.

One of the shortcomings of this approach is that it is time intensive. This is a direct result of allowing the respondent to fully express his or her views on the issues and adapting the questions to explore the issues that emerge. This approach also relies heavily on the rapport that exists between the interviewer and the interviewees. A poor rapport can result little or no meaningful input being received. Another area of concern is the biasness of the interviewer. He or she can influence the outcome of the interviews by leading the participants to respond in a manner that supports a particular view or perspective (Cummings & Worley 1993).

The interview guide was designed according to the guidance given by Ghauri and Grønhaug (2002):

- Analyse research problem – The greater the clarity of the problem statement, the easier it is to know what to ask.

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- Understand what information is required from the respondent – Interview questions must be compared to the research problem in order to ensure that there is consistency between what you are asking and what you are researching. Use the first draft of interview questions as a pilot study to determine whether the questions achieved the desired results and the time required for the interviews. Use this information to finalise the interview question set.
- Identify who will be able to provide you with the necessary information – Ensure that a situation is created where the respondent is prepared to give you the time to answer your questions. If he or she is not sufficiently motivated to give you his or her time, he or she has no reason or motivation to answer your questions.
- Recording of information – Though a tape recording is regarded as a good method of capturing information during an interview, respondents may be deterred from answering your questions openly and honestly due to fear of their responses being used, verbatim, against them at a later stage.

At the onset I reviewed the problem statement to reassure myself that I had a good understanding of what I was looking for which would help me formulate the interview questions. From the literature review I was able to identify “trust”, “collaboration” and an “open culture” as being key ingredients in establishing an effective knowledge management programme in an organisation. Those factors combined with proper incentives can sustain an effective knowledge management programme. Knowledge hoarding, a lack of communication and rapport due to hierarchical structures as well as the different perceptions of knowledge and knowledge management have been recognised as barriers to effective knowledge management. These concepts formed the basis of the open ended questions I developed to explore how the organisational culture in the Generation Division influenced knowledge management.

An initial set of interview questions was put together consisting of six open ended questions. These questions were pre-tested on five employees and were later revised and expanded to nine questions. The pilot study helped to clarify and reduce ambiguity in the questions.

The selection of the participants hinged on their availability and willingness to contribute to the study. If they were prepared to set time aside for me it implied that they are sufficiently motivated to answer my questions.

I chose not use a tape recorder capture the responses of the participants as I was concerned that it would deter potential participants from participating in the study as they may fear that their actual responses would be used against them at some later time.

3.8. Observations

Observations were also included to gather data. This enabled me to clarify information I had received during the interview process. Observations can come from a researcher who is completely immersed in the environment under study, or from a more detached perspective where the researcher is not part of the environment study. The advantage of using observations is that it is generally free of the personal bias of the interviewees (De Vos, Fouche, Poggenpoel, Schurink and Strydom, 1998). This allowed me to observe the cultural manifestations under question without having to rely purely on the information received during the interviews. Observations enable real time data to be collected on what is actually occurring within the environment under observation. This helps to eliminate the personal biasness that creeps in when people are asked to provide a recollection of their behaviours. Observations are also adaptive in nature as the researcher can modify what he or she is observing depending on the circumstances (Cummings & Worley 1993). A disadvantage of employing observations from one researcher is that the personal bias of the researcher can influence how the observations are interpreted (Macmillan and Schumacher, 1993).

I have been fortunate enough to participate in incident investigations, senior management meetings as well as attend other technical forums during the course of 2005. As part of incident investigation process, I was compelled to write my observations down when interviewing personnel involved in the incident. My notes included comments about their responses, their behaviour and the actual environment of the business unit with respect to organisational culture. At meetings and other technical forums I watched the behaviour of the participants and paid particular attention to how the power station and head office personnel interacted with each other.

3.9. Data Collection

Participation in this study was based on the respondent's interest, willingness and availability to be interviewed. Permission was gained from the respondents to be interviewed either face-to-face, by telephone or via e-mail. The aim behind the study was clearly explained to all the respondents. Each interview took roughly one hour to complete with some respondent's requesting feedback regarding my eventual findings.

Observations were conducted over six months at meetings, forums, incident investigations as well as informal site visits.

3.10. Data Analysis

The hermeneutic circle was used to analyse the data from the interviews, observations and literature review. The first part of the process required me to list my own views and perceptions of knowledge management, organisational culture and my gut feel of how organisational culture, specifically in the Generation context, influenced knowledge sharing. This first step helped me establish the horizon that I had created for myself based on past learning and experience (Paterson and Higgs, 2005).

The next part of the process involved me creating texts from reviewing the literature pertaining to knowledge management, organisational culture and the impact of organisational culture on knowledge management in order to understand the different ways the various authors were interpreting the key concepts involved in organisational culture's influence over knowledge sharing. This step in the hermeneutic process was to help me understand the influence of organisational culture from the horizons of the other authors (Paterson and Higgs, 2005). I developed questions that would help me gather information to explore the research topic. These questions were:

- What is knowledge management?
- What is organisational culture?
- What are the factors that influence organisational culture?
- How does organisational culture influence knowledge management?

Texts were created from the transcription of interviews and field notes taken during observations. I sat with the texts and read through them over and over again in order to understand what the texts were saying in relation to the research topic. I identified key concepts in my research journal and as well as comparisons between the ideas from my research texts and the literature review. This helped me explore the horizons of the research participants (Paterson and Higgs, 2005).

The concepts from the transcripts and field notes were transferred to brightly coloured pieces of sticky paper. The concepts were grouped according to their link to factors that influence organisational culture with respect to knowledge management. Each grouping was reviewed separately to identify the common ideas which were used to generate themes. These themes were then elaborated upon in order to answer the four questions mentioned earlier. The elaboration process involved clarifying and testing the bigger picture with constant comparison between the texts and the emerging interpretations of the topic under study by repeatedly reviewing the concept groupings and returning to the original transcripts.

The themes that were evident in the literature review were compared to the themes that emerged as part of the interview and observation process. The interpretation of all the text sources was used to understand and answer the research question. This process forms part of the hermeneutic process where the understanding of the parts is used to understand the whole and forms part of the “fusion of horizons” (Gadamer, 1994).

3.11. Validity

Validity refers to ability of a research instrument to accurately measure what it was intended to measure (Creswell, 1994). In qualitative research, validity is more closely linked to determining the “trustworthiness” of the findings than the accuracy of the research methodology. Creswell (2003) suggest eight primary strategies to prove the validity of the research. I will highlight the two strategies that were used to ensure validity of the findings in this study.

3.11.1. Triangulation

Triangulation involves gathering different sources of information, examining the evidence from these sources in order to build a coherent justification for themes (Creswell, 2003). In this study the primary sources of data were obtained through observations and interviews. Confidential incident investigation reports, climate surveys and the literature review provided the secondary information sources to collaborate my findings. I also compared my findings to a similar research study conducted on another Division within Eskom to determine whether there were any similarities.

3.11.2. Clarification of Researcher Bias

As mentioned earlier, qualitative research can be heavily influenced by the researcher's worldviews which can not only affect the interpretation of the data collected but what data is collected. In order to mitigate the impact of my own personal views on the subject I had to actively engage in self-reflection in order to ensure that I did not allow my own personal bias to sway the participants to provide responses that justified my opinions. I also adopted a questioning approach, challenging my reasoning in arriving at conclusions during the data interpretation process.

CHAPTER 4 – DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

The previous chapter explained the research methods applied in this study. This chapter is devoted to the analysis and interpretation of the data collected through the interviews and the personal observations.

4.2. The Context

The aim of this section is to provide the reader with a description of the context within which the organisational culture of the Generation Division resides. Some of the factors within the context, like organisational structure and management practices have been identified in the literature review as being important to knowledge sharing (Wilson, 2001; Gupta, 1999). Other factors within the context, like the nature of the working environment with respect to hazards, also provides an indication of the drivers that affect the need for personnel to collaborate, which is essential for knowledge sharing (Gold *et al*, 2001; Havens and Haas, 1998).

The Generation Division is made up of 20 power stations and 12 head office departments. The head office departments provide strategic support services to the power stations in the areas of human resource management, financial management, supply chain management, information management, quality assurance, technical support, risk management as well as safety, health and environmental management. The power stations are responsible for generating the electricity which forms the operations backbone of the business.

4.2.1. Population and Structure

The Generation Division has approximately 10 000 employees employed at the various business units.

Each power station has essentially three core functional areas, namely Operations, Engineering and Maintenance, as well as two support functions namely, Human Resources

and Finance. The core and support functions consist of several departments that are integrated into a hierarchical structure with the Power Station Manager sitting at the top.

The average population size of a power station is 450 with approximately 60% of the workforce consisting of blue collared workers. Though the actual hierarchical power station structure differs from station to station; there are at least two layers of middle management that separate the frontline worker from the Power Station Manager. Each power station is considered to be a single business unit and they are grouped into seven production clusters (see Figure 14) which are each headed by a Production General Manager to whom the Power Station Managers have to report. Below is an example of the hierarchical structure that exists within a Production Cluster (see Figure 15). Only the hierarchical structure present within the operating department is illustrated. Six layers of management stand between the frontline worker, in this case the plant operator, and the Power Station Manager.

Figure 14 Systems map of Generation Division’s clusters

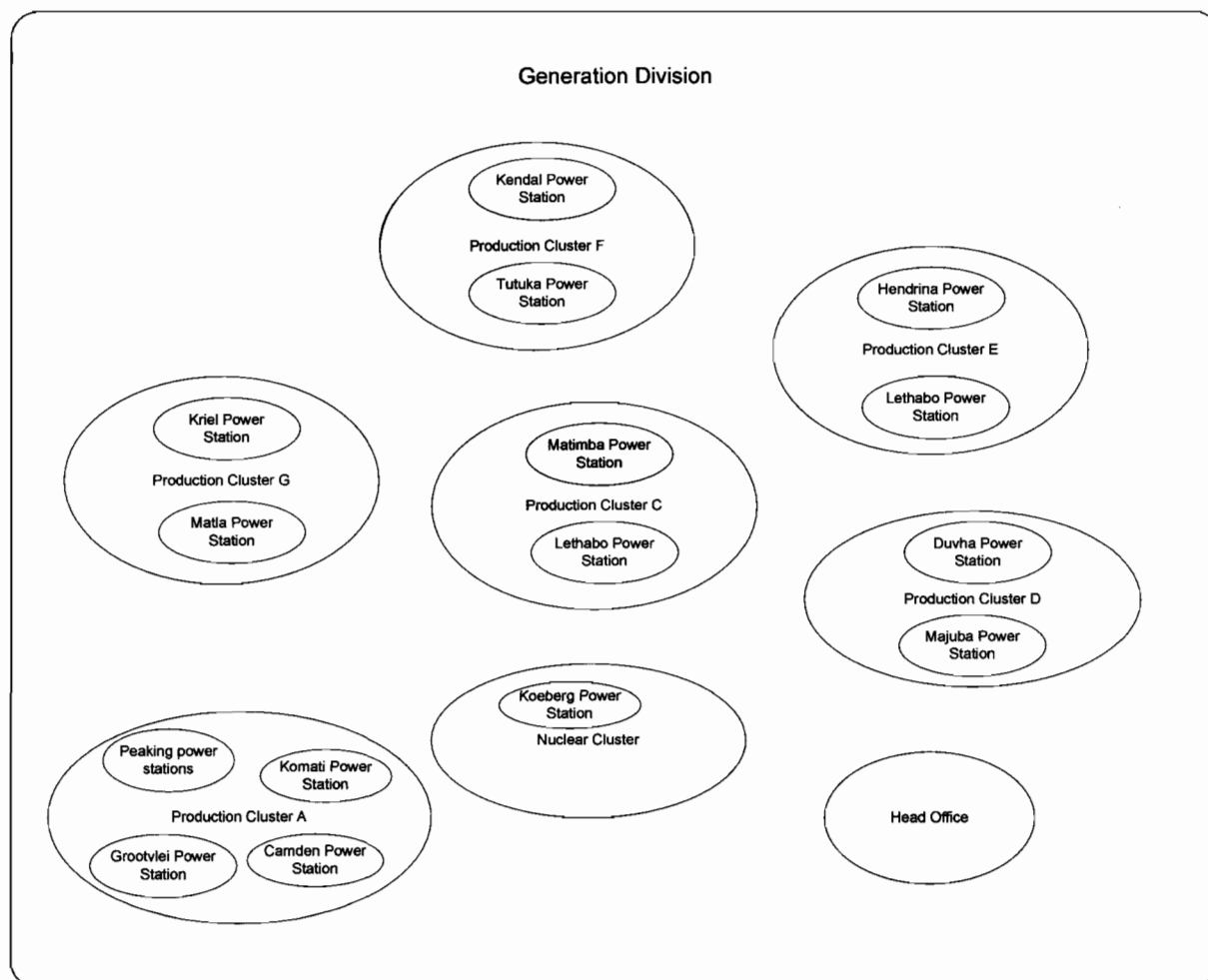
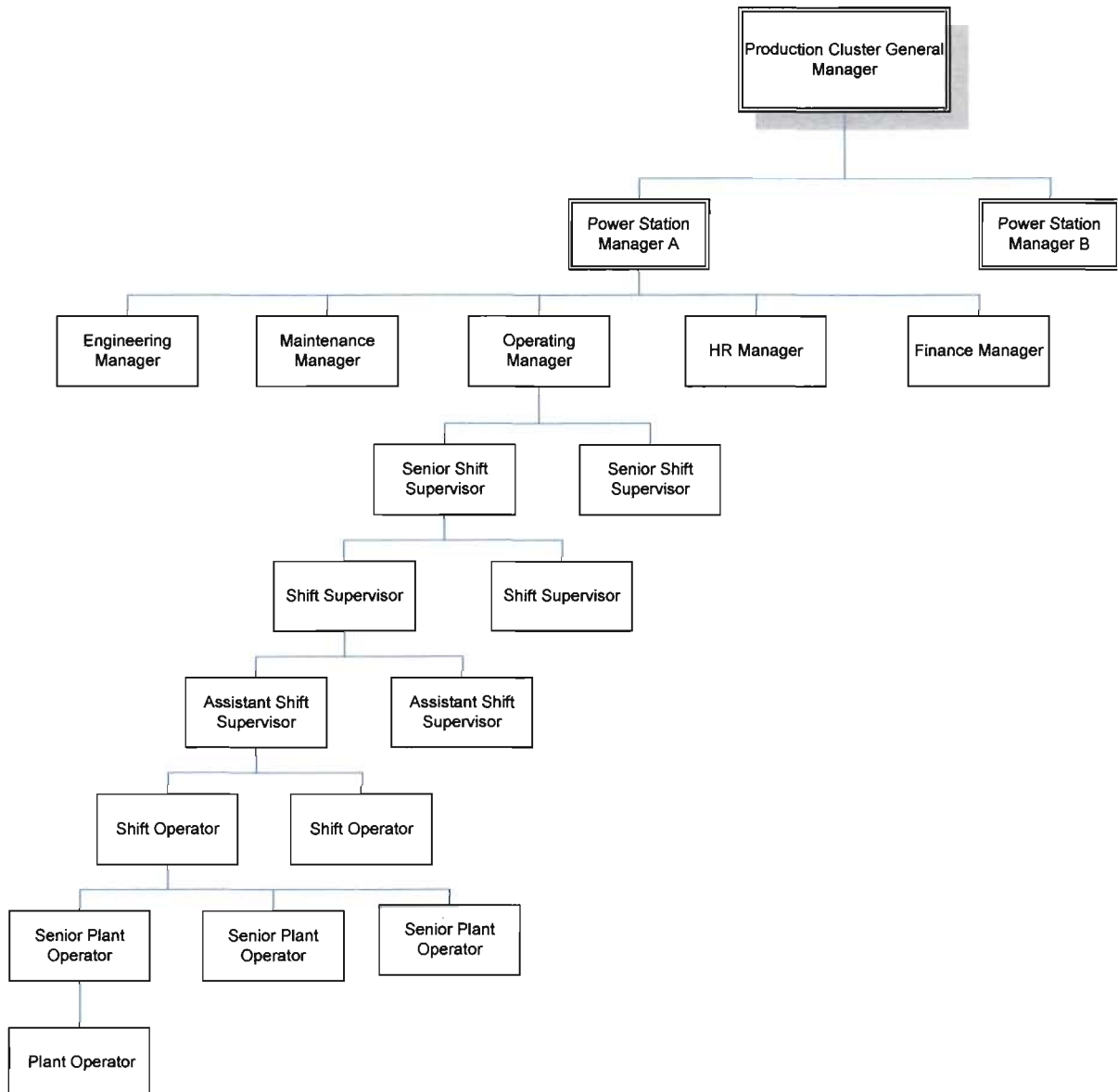
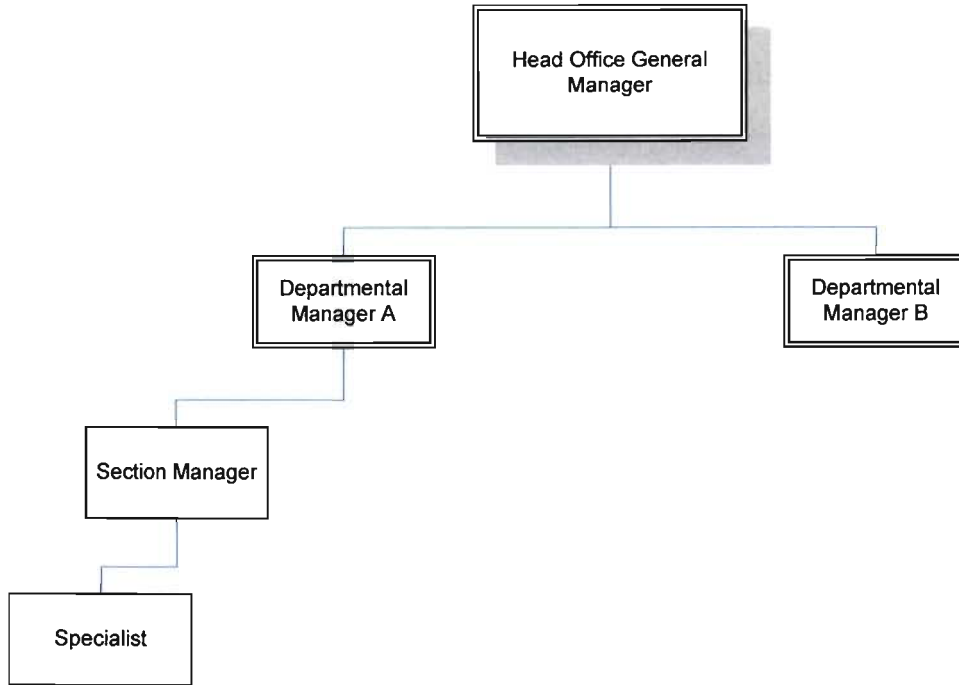


Figure 15 Hierarchical structure within a Production Cluster

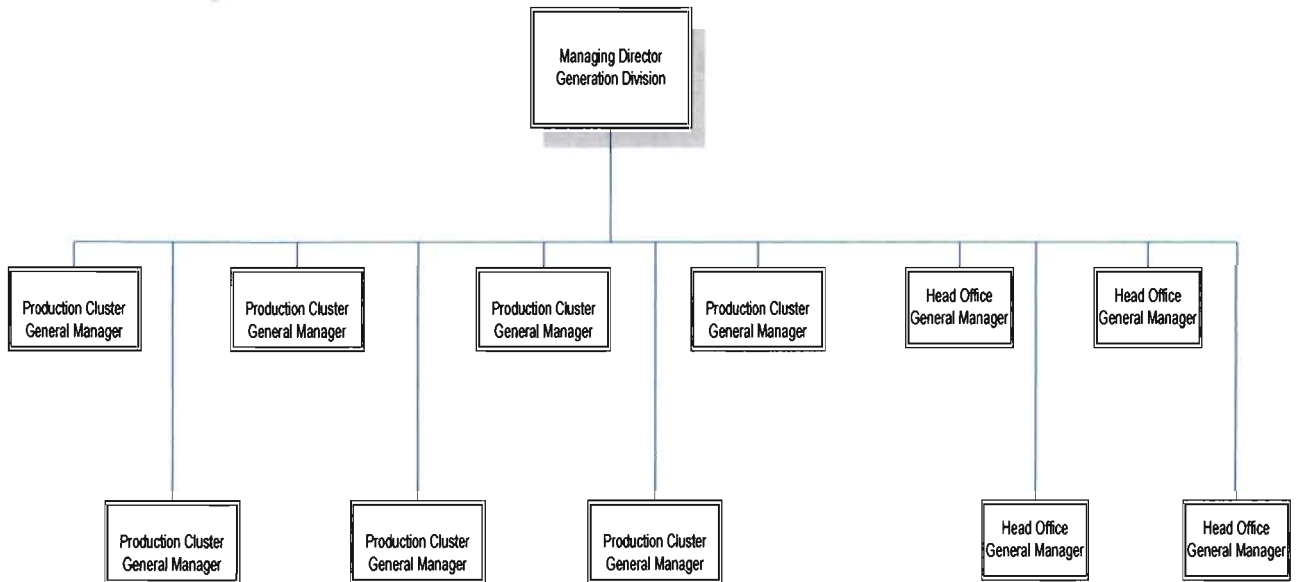
Each head office department is considered to be a business unit on its own. The average population size of a head office department is 30. Though each head office department also has a hierarchical structure, it is significantly flatter when compared to a power station. The departments are usually headed by a Senior Manager, who enjoys the same standing in the Division hierarchy as a Power Station Manager. The head of departments in turn have to report to a General Manager. A large percentage of the head office employees (80%) consist of white collared workers who usually have at most one layer of middle management between themselves and the head of department. (See Figure 16)

Figure 16 Hierarchical structure in Head Office



The Production General Managers and the Head Office General Managers form the Generation Executive Committee and report to the Managing Director. (See Figure 17)

Figure 17 Executive hierarchical structure in the Generation Division



4.2.2. Regulations and Environment

A power station consists of complicated mechanical machines that must be operated in an integrated manner in order to generate electricity. A malfunction may not only affect a station's ability to generate electricity; it can also pose a significant threat to the safety of plant personnel. Due to the potential hazards that exist in a power station there are a number of internal and governmental regulations that need to be adhered to in order to protect the plant personnel and ensure productivity of the station. To ensure the safety and the productivity of a power station plant personnel are compelled to work together. Collaboration is thus an important part of the power station environment which also is necessary for knowledge sharing (Gold *et al*, 2001; Havens and Haas, 1998).

The head office departments are not as highly regulated as compared to the power stations. Most head office departments specialise in particular support functions like environmental management or quality assurance. There is little or no need to collaborate with other head office departments in order to accomplish departmental goals or targets. Hence, collaboration would not play a very significant role in knowledge sharing within the head office environment.

4.2.3. Transformation and Other Staffing Challenges

Both the power stations and the head office departments face similar challenges with regards to an aging work force. There is an earnest drive to acquire and develop younger personnel in anticipation of the eventual departure of a significant chunk of the Generation workforce.

The South African government has played a pivotal role in transforming the Generation Division and Eskom as a whole. Affirmative action and gender equity programmes are strongly driven within the organisation. Though the majority of the blue collared workers in the Division are black, Generation is striving to ensure that its entire workforce is more representative of the demographics of South Africa. Women developmental programmes are put in place to ensure the fast tracking of female candidates into senior technical and managerial roles. The introduction of more black and female employees into work environment has forced employers and employees to become conscious of and prevent

behaviour that may be deemed to be acts of gender and / or race discrimination. The promotion of black and female employees to senior positions, ahead of their male, white counterparts has lead to discontent.

The above factors have a major impact on how organisational members communicate with each other and hence influences knowledge sharing (Gold *et al*, 2001; Cross and Baird, 2000).

4.3. Data Collection

I conducted one-on-one interviews with 50 Generation employees from both the power station and head office environments. I contacted the participants in person, telephonically or via e-mail. During my initial contact with potential participants I clearly explained the nature of my study, the time constraints as well as answering any questions they had regarding the study. I was also given referrals on whom to contact at the various business units to get a more holistic picture of knowledge management within the Division.

Participants were selected based on their interest in the topic, their willingness to participate and their availability. Once a participant had confirmed their availability, I made an appointment with them either telephonically or through the internal e-mail system.

Interviews were either conducted in the participant's offices or another venue which afforded us privacy and allowed the participant to feel at ease. I started each interview reiterating the intent of the study, reassuring the participants of their anonymity and allaying any fears that their comments would be used to prejudice them in any manner or form. As the participants responded to my questions I took notes.

I have also used my personal observations to learn more about the organisational culture within the Division. I have been fortunate enough to participate in incident investigations, senior management meetings and forums. During the course of my participation I jotted down my personal observations of how the different role players interacted with each other, the behaviours they displayed and their views on their respective business units and the Division as a whole.

The research questions that formed the basis of this study were:

- What is does the word “knowledge” mean to you?
- What does the concept of “knowledge management” mean to you?
- How helpful and co-operative are your fellow colleagues when asked for advice or information? Please provide reasons to substantiate your answer?
- Please describe the culture that exists within your business unit and the Generation Division in terms of trust, respect and caring for each other? Please substantiate your answer?
- What do you believe happens to a person’s value to an organisation when they share their knowledge?
- How do you believe people are encouraged to work together in groups / teams in the Generation Division?
- What do you think are the organisational factors within the Generation Division that promote knowledge management?
- What do you think are the organisational factors within the Generation Division that hinder knowledge management?
- How do our incentive and reward systems promote knowledge management?

4.4. Findings

The purpose of this study is understand how organisational culture influences knowledge sharing in the Generation Division of Eskom in order to provide insight into how organisational culture should be approached when developing a knowledge management strategy for the Division. Most of the findings are represented under themes or issues which emerged from the analysis of the interviews, my personal observations and the literature review. Excerpts from the interviews were also included to provide a “thick description” (Patton, 2002).

4.4.1. Knowledge seen as a product of human activity

Below are some of the excerpts from the interviews on knowledge:

“Knowledge is a collection of facts and understanding plus the ability to apply it to relevant situations.”

“Knowledge is what you know.”

“Knowledge is life experience, interaction with people, together with theory.”

“Knowledge is the value we derive from data. Intelligence is applied to data and information to convert it into a useable form called knowledge.”

“Knowledge means experience. It’s the ability to apply theory. It is theoretic know how. Knowledge translates into something you can find value in.”

In general, every participant, irrespective of his or her educational background, believed that knowledge was a part of them and not something that existed outside their consciousness. Knowledge was seen to be a summation of personal experience and theory. Knowledge management was considered to be the process of making knowledge available to others in order for them to use and learn from. The views expressed by the participants ties in with the views stemming from the literature review where knowledge was seen as being intrinsically linked to the people who used and created it (McDermott, 1999; Nonaka *et al*, 2001; Thomas *et al*, 2001).

4.4.2. Knowledge Management Awareness

“Knowledge management is packaging organisational history, memory and experience into a form that can be used to add value to the business to move forward.”

“Knowledge management is the process used to ensure than the tacit knowledge and experience of an individual is effectively transferred to those who need it.”

“Knowledge management involves capturing the value of converting data into something useful and managing that resource for the betterment of the organisation.”

“Knowledge management is managing what you know.”

“Knowledge management is making knowledge available to all people within an organisation so that it can run optimally.”

When explaining what their views of knowledge management were, many of the participants were unconsciously presenting knowledge as something that can be captured and stored in documents and books, which contradicts their earlier views of what knowledge means to them. Many of the participants created the impression that knowledge was easy to capture in a form that was readily understandable to others and easy to disseminate. The views of knowledge management projected by the participants were in line with the corporate views on knowledge management, i.e., knowledge management is seen as a process to disseminate information to employees. Knowledge management was not seen from a holistic perspective that included having the right organisational culture where people were willing to share knowledge with each other (Kermally, 2002).

“There is an official awareness that knowledge sharing should be promoted. People have been assigned to look into the matter and this is a sign that management is committed to this at strategic level.”

“I didn’t even know we had a knowledge management drive”

Communication regarding senior management’s intention with regards to knowledge management is not consistent. Not all employees are ware of Generation’s plans to start looking into leveraging its core knowledge and operational experience to improve performance.

“Generation does not know what its knowledge base is. We need to critically analyse what skills we need to sustain our business.”

A few participants argued that work was still needed to determine what the critical skills and knowledge requirements for the Division were. Once that exercise has been completed, the Division needs to establish what its current knowledge base is and put plans in place to close any gaps between what is required and what currently exists.

4.4.3. Inconsistency between Actual Behaviours and Espoused Values

The Generation Division has four espoused values that the executive management believe should guide the behaviour of their employees. These values are:

- Integrity
- Customer Satisfaction
- Excellence
- Innovation

Integrity is defined as constantly acting in a manner that promotes trust, dependability and a commitment to honesty at all times. The expected behaviours associated with this value are:

- Delivering on promises.
- Fully subscribing to operating within the laws of the country and good Corporate Governance.
- Applying the rules equally to all
- Having zero tolerance for dishonesty.
- Challenging dishonest behaviour.

Customer satisfaction is defined as providing service excellence that exceeds our customers' expectations. The expected behaviours associated with this value are:

- Consistent and reliable quality delivery.
- Fanaticism of response.
- Always keeping customers informed.
- Being open and honest with our customers.
- Recognising and supporting the importance of the value chain that we are part of.

Excellence is defined as continuously striving to be the best through exceptional performance that exceeds expectations. The expected behaviours associated with this value are:

- Exceeding expectations by beating set targets.
- Continuous improvements (improve on set targets, improve expertise).
- The ability to admit mistakes.
- Taking accountability and responsibility for own actions.
- Effective application of policies and procedures.

Innovation is defined as fostering an environment that nurtures innovative people and creative solutions. The expected behaviours associated with this value are:

- Create solutions for customers through improving ways of doing things.
- Having an open-mind; creating a culture where innovation is rewarded.
- Using creativity in support of innovation.
- Allowing people to constructively challenge the status quo.
- Freedom within the constraints of best practice always in the interest of the company

If the above values of innovation and integrity were ingrained within the organisational culture it would form the bedrock upon which a successful knowledge management system can be built. Integrity is associated with trust which is essential for knowledge sharing (Skyrme and Amidon, 1997; Brelade and Harman, 2000; Holowetzki, 2002). Being allowed to challenge “the way we do things around here” in a constructive manner will help nurture knowledge creation and sharing (Holowetzki, 2002; Gupta and Govindarajan, 2000).

However, there have been a number of instances during the course of incident investigations, disciplinary hearings and audits where senior management members have behaved in a manner that makes a mockery of the values that all Generation employees have to adhere to.

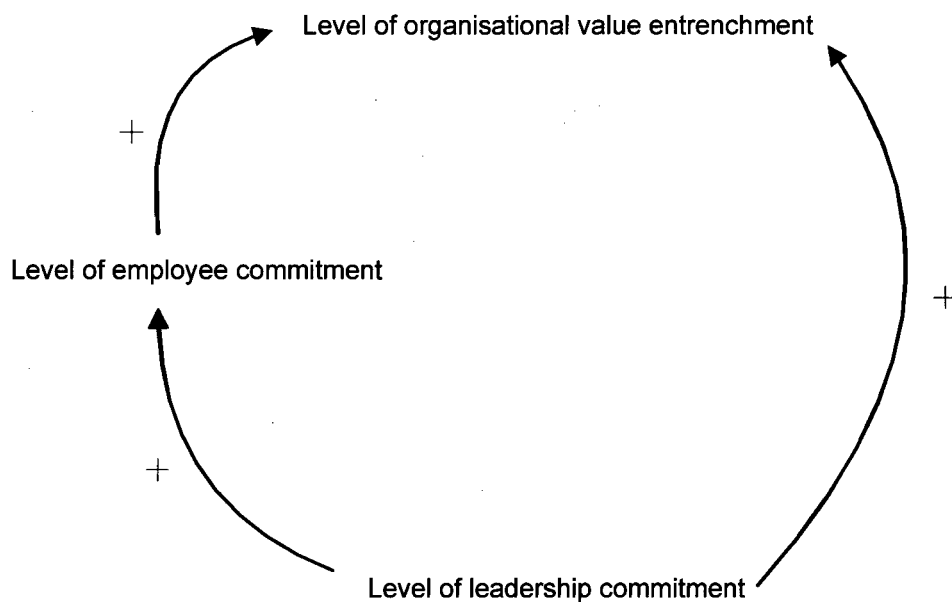
“Trade unions are constantly complaining that Generation management are not consistent with their rulings with regards to administering punitive measures against employees. An ordinary employee will face suspension or even dismissal for minor offences but if a senior specialist or manager is found guilty of embezzling Eskom’s money then all he or she receives is a slap on the wrist.”

According to the views of the participants the espoused values are platitudes and they have no real substance attached to them. The values are seen to represent the Generation Executive

Committee's attempt to modify the culture of the organisation by setting management expectation with regards to behaviour.

There is a "basic assumption" implicit in the Generation Executive Committee's attempt to change behaviour through setting management expectations. The assumption is that by articulating what their expectations are, the Executive Committee believes employees will begin to model their behaviour around what is expected of them. The problem with this approach is that the employees are more likely to follow what their executive management do, rather than what they say (Schein, 1992). If the corporate values are not being lived by senior and executive management, there is very little hope of ingraining the values within the organisation. In Figure 18 we can see that the degree of entrenchment of the desired organisational values depends significantly on the level of commitment shown by the leadership of the organisation who in turn influence the level of commitment shown by the employees.

Figure 18 Causal loop diagram of organisational value entrenchment



4.4.4. A Lack of Trust

Trust is an essential ingredient to establishing an environment that is conducive to knowledge sharing (Skyrme and Amidon, 1997; Brelade and Harman, 2000; Holowetzki, 2002; Ford, 2001). The participants had contradictory views on whether the levels of trust in the Generation Division were adequate for knowledge sharing to occur.

"I trust the people in my department."

"The people I work with do not have ulterior motives. We are honest and open with each other and I believe that same can be said for the Division as a whole."

In some instances it was very clear that high levels of trust formed the bedrock upon which strong interpersonal relationships were built between colleagues. Participants from such business units seemed more relaxed and comfortable to discuss their experiences. There also seemed to be a strong sense of camaraderie that emanated from these business units. Having high levels of trust provides a strong indication that knowledge sharing would flourish within the environment (Skyrme and Amidon, 1997; Brelade and Harman, 2000; Holowetzki, 2002; Gold et al, 2001).

"People play their cards very close to their chests. The desired levels of trust are not there yet. There is a severe lack of trust. Business units have their own agendas. It is an ugly culture."

"There is a shortage of trust between senior management and their staff. Management are not prepared to reward their staff for their good performance through promotions or salary increases."

The experience of other participants was completely different. They had experienced a closed culture filled with *"lies and deceit."* From the experiences of these participants Generation employees come across as being people who a *"self-centred and only have their own interests at heart."*

“Trust has to be earned in the Generation environment. Some people are more trusted than others and there isn’t necessarily a justifiable or logical reason for this.”

Some participants felt that trust was not readily afforded to people in the organisation and this was especially true for newcomers to the Division. Some participants felt that an individual had to prove his worth to management as well as his peers in order to gain their trust. There were no standard criteria used to judge whether or not you should be trusted. The bestowing of trust is a very personal and subjective matter.

“People in a power station are like one big family. There is a sense of belonging. People at the station were generally friendly. Coming to Megawatt Park was a major culture shock for me. The people in head office are so cold and distant. Everyone is only concerned about themselves. They don’t care who they have to trample in order to climb corporate the ladder.”

“I have all my friends here at the power station. We have worked together for many years. You could say that they are like family.”

“We need to trust each other in a power station. We all have to do our bit to keep the station running. If we don’t trust that each person will do what they are supposed to, then things will never be right.”

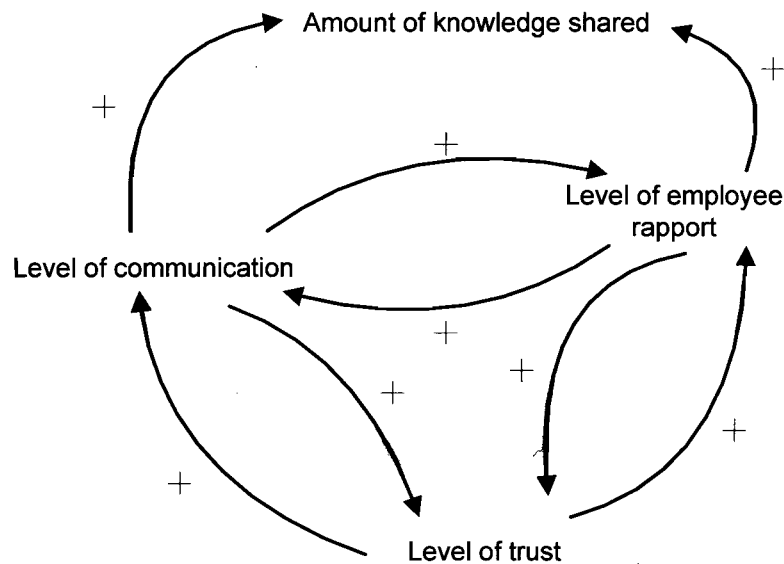
“People have hidden agendas in head office. The only time they are nice to you is if they have want something from you.”

Some participants who were from a power station or who had previously been in a power station expressed the sense of family that they had experienced. They projected the impression of an amiable culture that was supportive and open. The head office environment was seen as being far too removed from the camaraderie that they experienced at the station. Head office employees were considered to be far too reserved and unsociable.

The different views expressed about trust are to be expected as organisational culture contains contradictions (Martin, 1992). However, for effective communication and knowledge sharing

to occur there has to be reasonable levels of interpersonal trust between employees and organisational trust throughout the organisation (Ford, 2001).

Figure 19 Causal loop diagram of impact of trust on knowledge shared



From Figure 19 it can be seen that high levels of trust would promote increased communication, help develop rapport and in the process also contribute to knowledge sharing. In fact, the levels of communication, rapport and trust form a positive feedback loop, i.e., the higher the levels of trust, the more communication will take place, the better rapport between employees which in turn strengthens the level of trust. This also implies that low levels trust reduces communication, hinders the development of rapport between employees and leads to reduced levels of trust.

From the interviews there was no indication that the levels of interpersonal trust were high enough in all areas to support knowledge management, especially the transfer of tacit knowledge (Skyrme and Amidon, 1997; Brelade and Harman, 2000; Holowetzki, 2002; Gold et al, 2001).

4.4.5. A Shortage of Mutual Respect

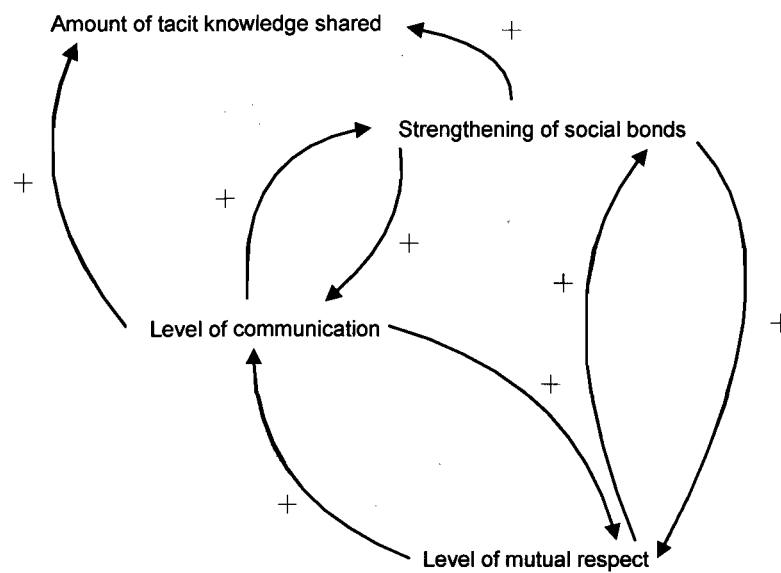
“There is a healthy level of mutual respect that exists in this department. We are all specialists and we have already proven ourselves at the stations”

“I believe that we all do respect each other mutually in this department. But this was not the case when I first started. They didn't know what I could do and more importantly who I was...I mean they didn't what kind of person I was...whether I was a team player, sociable, friendly...etc. After they got to know what I am all about and I completed some tasks I could see a change in the way they responded to me. Ya, I think they respect me now.”

“Though mutual respect may exist in the Generation, not everyone has the same understanding of the concept. There needs to be a common understanding throughout the Division.”

Not all the business units had the same levels of respect within their environments. However, the departments that possessed high levels of trust also had high levels mutual respect as well. Some participants felt that just like trust, mutual respect in the Generation Division was not unconditional. One had to prove one's self competent and worthy of respect. However, some participants argued that mutual respect was a relative term and that everyone in the Division did not necessarily use the same criteria in determining who to respect and who not to.

A rapport between employees based on mutual respect is necessary for knowledge, more specifically tacit knowledge, to be shared (Brelade and Harman, 2000; Gold *et al*, 2001; Cross and Baird, 2000).

Figure 20 Causal loop diagram of influence mutual respect on knowledge sharing

The causal loop diagram above (Figure 20) depicts the role mutual respect has in the sharing of tacit knowledge. The greater the levels of mutual respect amongst employees, the stronger the rapport amongst employees will be which will help to improve the levels communication amongst employees. The increased communication helps boost the amount of tacit knowledge that will be shared. Low levels of mutual respect would lead to low levels of communication and a poor rapport between staff which would have an adverse affect on tacit knowledge sharing.

Mutual respect is not readily practiced in the Division which would pose a significant problem in being able to tap into the rich operational experience of the veteran employees and have them share their knowledge with others.

4.4.6. An Absence of Care

“Care...I don’t really think that happens here”

“Caring for each other is a foreign concept in Generation”

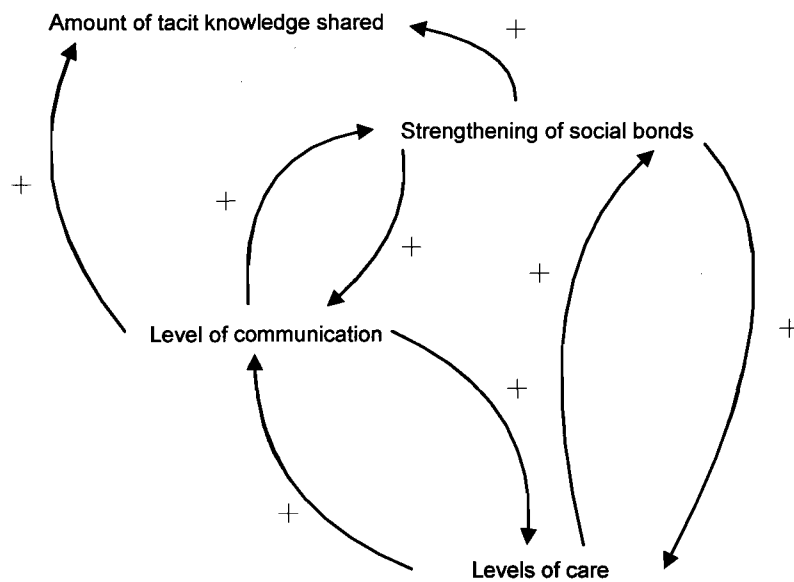
“I think that everyone in my department does show genuine concern for each other.”

“Care for each other is not actively promoted”

In contrast to those participants who enjoyed a “family” like environment, there were many other participants who experienced a distinct lack of concern from their fellow colleagues. These participants felt that their colleagues were more concerned with completing their jobs and receiving their salary slips than socialising. During the office hours you work, after office hours you can socialise.

Encouraging employees to care about each other is not actively promoted. Some participants put forward the notion of the generation gap being an obstacle to senior management understanding how the new generation of employees view the concept of care. One participant claimed that the problem lies with the number of hierarchical levels that separate senior management from the frontline workers. Senior managers were considered to be too far removed from the frontline workers to be able to empathise with the masses and the problems they experience. Senior management does not know how to show their staff that they care.

Having strong relationships between employees is crucial to sharing tacit knowledge and the levels of care or compassion that exists within the organisation provides an indication of the strength of the bonds that exist between employees (Gold *et al*, 2001, Cross and Baird, 2000).

Figure 21 Causal loop diagram of impact of care on knowledge management

The causal loop diagram for the impact of care on knowledge sharing (Figure 21) is similar to the impact mutual respect has on knowledge sharing. Caring, like mutual respect, influences the rapport between people which encourages communication and the sharing of tacit knowledge.

Though the levels of care exhibited by Generation employees towards each other, varies from business unit to business unit, there does not seem to be enough compassion shown within the Division as a whole that would facilitate the sharing of knowledge across business units.

4.4.7. Lack of Team Work

“Due to the specialisation and the nature of the work which is individually focussed, team work is not encouraged.”

“The very structure of the Division encourages teamwork. We have maintenance teams, information management teams and engineering teams, for example.”

“People are encouraged to work in teams however circumstances do not allow team work to naturally occur. The concept of teamwork can’t be universally applied throughout the Division.”

“The performance management system forces us to work together.”

“In theory we are encouraged to work together however in practise the workload inhibits team work.”

“People do work in groups and teams however there is a problem of professional jealousy. Multi-disciplinary teams don’t work well because of professional jealousy.”

“Though one can achieve more as a team than an individual, the workloads inhibit teamwork.”

“The power stations are still caught up in a de-regulated mind frame where they have to compete with each other. They don’t want to share their expertises and knowledge because they believe that it is their competitive advantage”

The success of a power plant hinges on the integration of the Operating, Maintenance and Engineering teams. Without the cooperation of these various disciplines, a power station will not be able to function properly and generate electricity. By its very nature, a power station compels people to work together.

A successfully operating power station does not imply that the group dynamics within the station are fine. Friction does exist between the three dominant disciplines. The Operating Department is generally blamed for any failures in production. They become the proverbial scapegoats for failure, even though the root cause of the problems may lie with the Engineering or Maintenance departments. This leads to unnecessary tension which inhibits teamwork. Political agendas also creep into the framework of a station. A lack of collaboration can also be the result of personal conflicts.

For the past four years, the Generation Division has been restructured in anticipation of a de-regulated electricity market where the various power stations would be competing against

each other. Stations were grouped into clusters which had trading offices. These trading offices were used to trade electricity on hourly rates with the national electricity transmission operator. A station that could provide a reliable supply of electricity without breaking down could bring in a significant amount of revenue. This factor discouraged stations from sharing solutions to problems that they all faced as they felt it would weaken their competitive advantage.

The Department of Public Enterprises came out strongly against the notion of de-regulating the generation of electricity. Following the government's stance, the Generation Executive Committee decided to put an end to the competition between stations by disbanding the clusters. However, the competitive mindset of the power stations has not changed, which implies that they are still not sharing their experiences with each other in order to learn and improve.

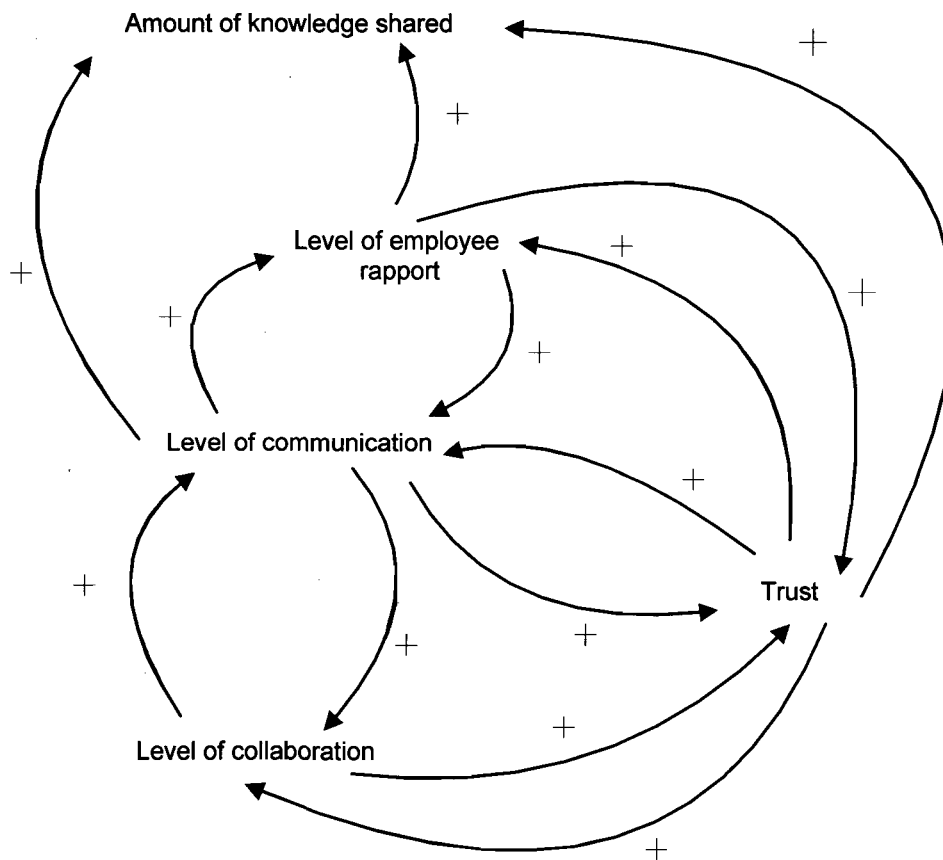
The head office environment consists of departments that offer specialised functions. As mentioned before there is no need for head office departments to collaborate with each other in order to achieve their objectives. The specialisation of work encourages head office employees to work in silos rather than collaborate with each other. Even though a single head office department may offer one unique service, the departmental members themselves may specialise in different areas of that unique service.

The performance management system of the Division has been modified to focus on departmental performance. Individual performance contracts now have to reflect key performance areas that are directly related to the performance of their business unit. The establishment of such key performance areas was driven by the idea that people needed to be adequately motivated to focus on the overall performance of their business unit rather than just their own individual performances. If one departmental member performed exceptionally well while his colleagues performed dismally, he would suffer as well. In order for him to receive a substantial performance bonus he would not only have to focus on his performance but also help his fellow colleagues to achieve their targets as well. It was hoped that this sort of incentive would encourage teamwork however; many of the participants did not believe that such team performance incentives were achieving the desired results.

Some participants also complained that the shortage of skills and the high workloads also inhibited team work, especially in the head office environments. Other participants felt that team work across power stations was inhibited primarily by the professional jealousy of employees.

A collaborative environment is fundamental to knowledge sharing (Havens and Haas, 1998; Gold *et al* 2001; Guptara, 1999). Though power station environments usually engender collaboration more than head office environments, there is very little evidence that suggests employees from other business units collaborate with each other under normal circumstances. However, when there is a crisis at a power station, employees from both power station and head office departments, will work together to quickly respond to the problem. The above trait is reminiscent of an organisational culture that has high levels of solidarity (Goffee and Jones, 1996).

Figure 22 Causal loop diagram of the effect of collaboration on knowledge sharing



Collaboration leads to increased communication which contributes building trust and developing rapport amongst employees as well as trust. Both trust and strong interpersonal relationships are necessary to share knowledge. (See Figure 22)

Given that the levels of trust within the organisation are not relatively high, Generation's culture would be best suited to a codification knowledge management strategy (Rivière, 2001).

4.4.8. Racism, Affirmative Action and Gender Inequality

“Eskom's implementations of affirmative action and employment equity drives have led to the loss of skills. There is a perception from the white male work force that affirmative action and gender equity candidates are using their present positions as stepping stones to better positions.”

“Racial tension seems to be a problem. White staff don't want to share their knowledge with Affirmation Action candidates.”

Based on discussions with employees, Eskom has been embarking on a racial transformation programme since 1994 to ensure that its workforce reflected the demographics of the nation. However, its transformation policies were not restricted to race. Gender inequality was also an issue on the top of the agendas of change management initiatives in the company.

Some white male employees were given separation packages and others left due to the 'radical' programmes that were being implemented. Some knowledgeable white employees were being overlooked for promotions because of their skin colour. According to some participants the above acts created much resentment amongst some white employees and built up tension between white and black colleagues. Some participants have experienced situations where white colleagues have refused to share their knowledge. Reasons for this may be turf protection or even job preservation. Those individuals who do not share their knowledge may be prone to believe that by withholding their knowledge they would not de-value their personal worth to the company.

There is evidence of 'culture' diversity workshops being conducted in the Division to foster tolerance and understanding between the different race groups but they have proved to be ineffective. These were once off change management initiatives that were very superficial and assumed that all the participants attending the workshop were at the same educational level. The workshops were not customised to cater for the different literacy levels and working environments from which the attendees came from.

"Those old white males just don't want to share their knowledge. They are afraid of us because we are highly qualified, ambitious, black and female."

The black female participants that were interviewed have expressed a common challenge in getting white males to accept the fact that black people were intelligent and that females were just as technically inclined as males. They believed that their male counterparts were intimidated by their qualifications and resented the fact that more opportunities were available to females as a consequence of the gender equity drive in the company.

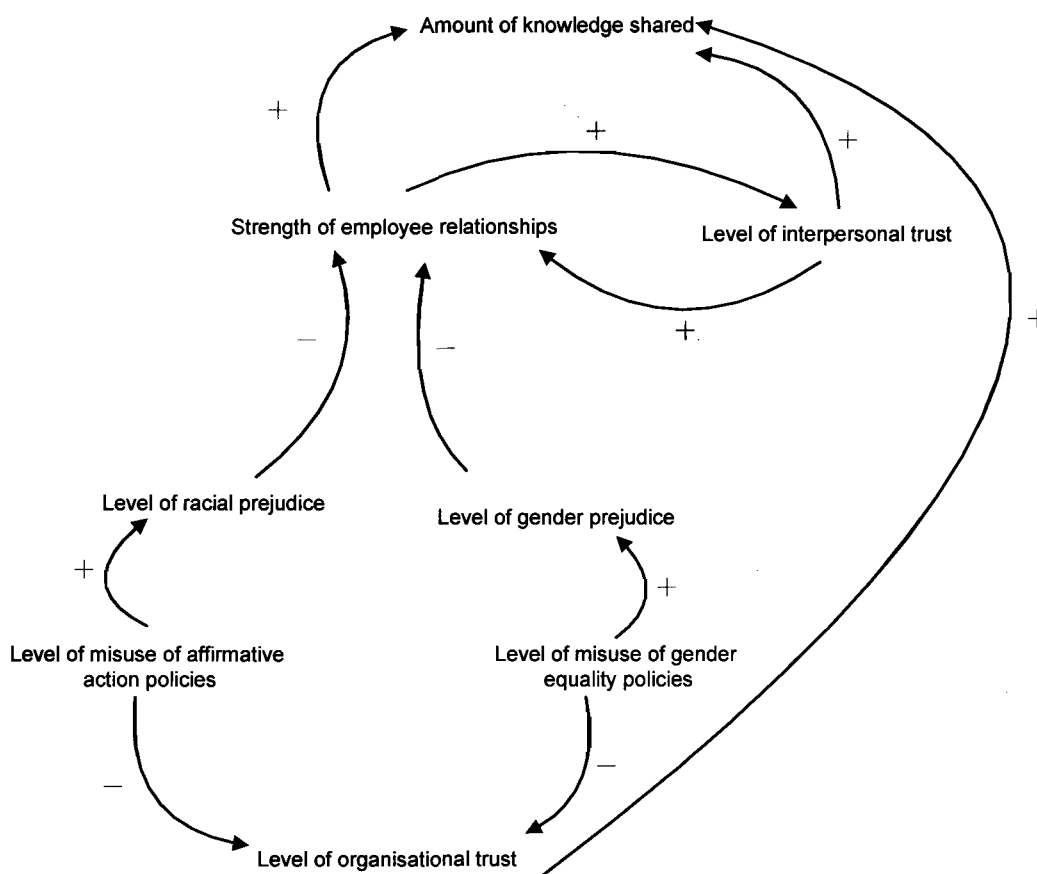
"With the accelerated advancement in place, some candidates are not spending enough time in positions to learn form more experienced colleagues."

Some participants complained that they had seen black females being placed in senior positions without having the necessary experience and knowledge to perform at that level. One participant related a story of a black female manager who was placed at the head of the Operating Department but she had never spent any time as an operator herself, learning the fundamentals of the discipline. This problem of not spending enough time in the lower ranks to learn ones craft is not unique to gender equity candidates. Other participants related stories of other senior managers at power stations and head office environments that were inexperienced but were placed in critical positions due to their skin colour.

The business environment of an organisation has an influence on its organisational culture. Business environment factors like national culture, society and Government can play a very big role in shaping organisational culture (Wilson, 2001; Hofstede and Hofstede, 2005). Policies like apartheid and the more recent affirmative action and gender equality drives have played a role in shaping organisational cultures of businesses operating in South Africa. With Eskom being a parastatal, the influence of government policies is even more pronounced.

Eskom can be considered to be a microcosm of society and hence the problems experienced between racial groups and between gender groups may be considered to reflection of the problems experienced in South African society at large. However, the manner in which affirmative action and gender equality policies are being applied by Eskom to address the past inequalities within the company, has amplified the race and gender issues stemming from society.

Figure 23 Causal loop diagram of influence of gender and affirmative action policies on knowledge sharing



By applying the policies to ensure that the quotas recommended by Government are achieved at the expense of placing competent candidates in positions of influence, creates frustration for those who have been overlooked for promotion due their skin colour or gender. This increases the levels of antagonism between the gender and race groups. The organisational trust of employees, who have been overlooked for promotion, gets eroded and the relationships between those who have been promoted, either due to gender or skin colour, and

those who have been overlooked, deteriorates. As stated previously, good relationships between staff and organisational trust are necessary for knowledge to be shared. Poor employee relationships and low levels of organisational trust are a hindrance to knowledge management (Skyrme and Amidon, 1997; Brelade and Harman, 2000; Holowetzki, 2002; Ford, 2001). (See Figure 23).

4.4.9. Ethnic Divisions

Race and gender are not the only barriers confronting knowledge management. A senior manager commented that when he first joined the Generation Division more than 25 years ago he initially found it difficult to acquire knowledge from his more experienced colleagues.

He was at that stage a young, white English speaking male from KwaZulu Natal who found himself amongst an older group of Afrikaner engineers. His cultural background was totally different to that of his colleagues. He believed that some of them still harboured hatred towards the British or anyone else from British decent due to the Anglo-Boer war. Since he was able to speak Afrikaans without an English accent, it enabled him to build a rapport with his Afrikaans colleagues. Establishing the rapport helped facilitate the transfer of knowledge which he so desired but it was a painstakingly slow process.

“The different culture and ethnic groups in the division don’t really mix. People tend to stay with their own kind which doesn’t really help creating an environment that promotes knowledge management”

“All the black people sit together in the coffee bars and speak in their own tongues. And then you get all the Afrikaans speaking people sitting together and speaking Afrikaans. Very rarely do you see mixing between the two groups.”

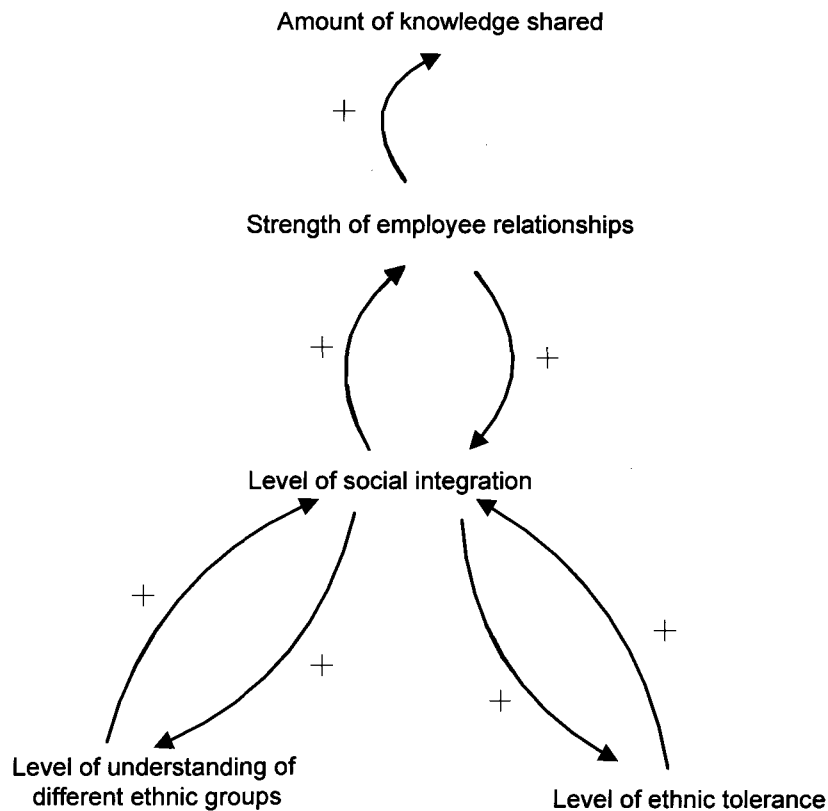
The Generation Division consists of a diverse array of people from different cultural backgrounds. Employees tend to associate with those that have a similar cultural background to themselves. The Xhosa, Zulu, Sotho, Afrikaans and English speaking people tend to socialise within their own ethnic groups, rather than joining and mixing with others. Very

rarely do we see Generation employees from different cultures sitting together and socialising in an informal setting.

Participants felt that employees were too afraid to step outside their comfort zones to begin the process of building meaningful relationships with those that are different from themselves. The lack of social integration is not just symptomatic of the Generation Division; it is a reflection of the lack of tolerance, understanding and social integration that is missing from South African society in general. Many participants felt that the people of South Africa are still recovering from the ravages of apartheid which polluted their minds with ideas of superiority, inferiority, hatred, fear, anxiety and distrust. In their opinion South Africans are still in the process of learning about each other and respecting the different values, beliefs and principals that emanate from our diverse cultural backgrounds.

The problems experienced with Eskom employees from different cultural backgrounds socialising with each are a manifestation of the problems inherent in South African society. It is natural for people from a similar cultural background to want to associate with each other (Hofstede and Hofstede, 2005). Apartheid amplified ethnic intolerance therefore there is a lot for South African society to overcome to bridge the ethnic divide.

Figure 24 Causal loop diagram of impact understanding and tolerating different ethnic groups in knowledge sharing



Gold *et al* (2001) have asserted that the interaction of employees informally and formally is necessary for knowledge to be shared. Encouraging employees to start socialising informally will be important in order to promote and sustain knowledge sharing.

From the above causal loop diagram it can be seen that the higher the levels of understanding and tolerance of the different ethnic groupings, the better the employee relationships would be which will promote knowledge sharing. Socialising with different ethnic groups also contributes to improving understanding and tolerance of different ethnic groups.

4.4.10. The Generation Gap

“Newcomers seem to be disrespecting the elder statesmen in the business. These newcomers don’t realise that the older guys have a wealth of information from which they could learn.”

There is a perception that the new generation of employees are dismissive of the ideas and suggestions from the older employees. Some participants have stated the new employees do not take heed of the “*wealth of experience*” possessed by the “*elder statesmen*”. Some of the newer employees who were interviewed did not believe that those employees with many years of service to the company were necessarily experienced. An older employee who has served Generation for 15 years may not have been exposed to different challenges over the 15 years; he may have been exposed to the same challenges year in and year out for 15 years.

“Things have changed over the years. There are new and better ways to do things now.”

The new employees believed that they had fresh ideas that challenge the way the business is conducted and they believed that it created discomfort for those who would like to maintain the status quo. Some older statesmen in the organisation have stated that having new ideas does not imply that one needs to cast aside the views and opinions of people who have been part of the business for a long time. They may have already tried the “new” ideas in the past and can provide some interesting insights into how to improve your ideas.

The generation gap experienced at work is symptomatic of society in general. The importance of having mutual respect (see Figure 20) is brought out again between the elder and the younger generation of employees. Without having a mutual respect as a basis for relationships between these two grouping of employees, knowledge transfer will not be successful (Brelade and Harman, 2000; Gold *et al*, 2001; Cross and Baird, 2000).

4.4.11. Shortage of Time and Informally Sharing Knowledge

“There are too many meetings to attend which means that there is not enough time to share specialist knowledge.”

“There are not enough people with the right skills to cope with the present work load. There isn’t the time to sit and mentor someone. There just isn’t enough time to share knowledge.”

Some participants complained that there was not enough time available to spend sharing knowledge. They felt that they were overloaded with work and had to attend too many

meetings. Some complained that the lack of time was due to a shortage of skilled resources to do the work. Other participants said the technical specialists practised poor time management and were not disciplined enough to set time aside to share their knowledge. They claimed that knowledge sharing was not seen to be a priority.

Most of the technical specialists I spoke to were more than willing to share their knowledge but they had no idea of just how vast their knowledge base was. One specialist in particular commented that he required a stimulus to remind him of what he knows:

“Sometimes an incident or an event occurs that just jolts your memory and you can remember similar incidents occurring at a station years ago. You remember the stuff as if it happened yesterday.”

Capturing the tacit knowledge from those who are the subject matter experts is a difficult task. If the right questions are not asked, valuable knowledge can be lost. Even if the knowledge is captured there is no guarantee that the knowledge has been codified into a form that can be easily understood by other people.

Some participants complained that there were people who were just not cooperative and were not prepared to share what they knew. Some participants claimed that employees did not want to share what they know because they fear they may lose their jobs as their value to the company would diminish as they transferred the knowledge across. Turf protection was also considered to be a problem. Some participants claimed that certain specialists do not like others venturing into their area of expertise. By withholding their knowledge, these participants believed that the specialists guaranteed their importance to the company. Other participants claimed that certain of their colleagues, who were regarded as subject matter experts, were reluctant to share their knowledge as they feared their shortcomings would be exposed, i.e., people would realise that the so-called subject matter experts were not that knowledgeable after all.

During the interviews, not a single participant believed that one's value would decrease if one shared one's knowledge within the organisation. On the contrary, they believed that if you shared your knowledge, you would in fact increase your value to the company.

“We’re suffering from an information overload. We are being bombarded with information from emails and other company communication. With so much to look at a person can easily ignore or overlook important information.”

There is too much information being sent out into the organisation via e-mail. Employees are inundated with e-mails ranging from senior management promotions to HIV and AIDS awareness campaigns. With such a large volume of information being received it is very easy to overlook an important e-mail which can be quite costly.

“People are very willing to share information.”

In business units where trust and mutual respect were high, participants acknowledged that their colleagues were more than willing to share their knowledge with other people.

“I only get the bare minimum I need to do my job. Nothing more.”

Other participants complained that some of their colleagues were only prepared to give them just enough information for them to be able to perform their jobs. Those participants claimed that the individuals who were restricting the knowledge that they shared were not interested in developing their colleagues. There were still other participants who complained that they received too much information. Instead of just receiving the information that they required, they were drowned in a flood of details and facts by that were irrelevant to the questions they asked. This overload of information was just as frustrating as not receiving any information at all.

The impression created by a few participants is that people in the power station environment were more prepared to share their knowledge with you in order to help you with your work. They had no hidden agendas. People from the head office environment would only share their knowledge with you in order to curry favour or impress you with their intellect.

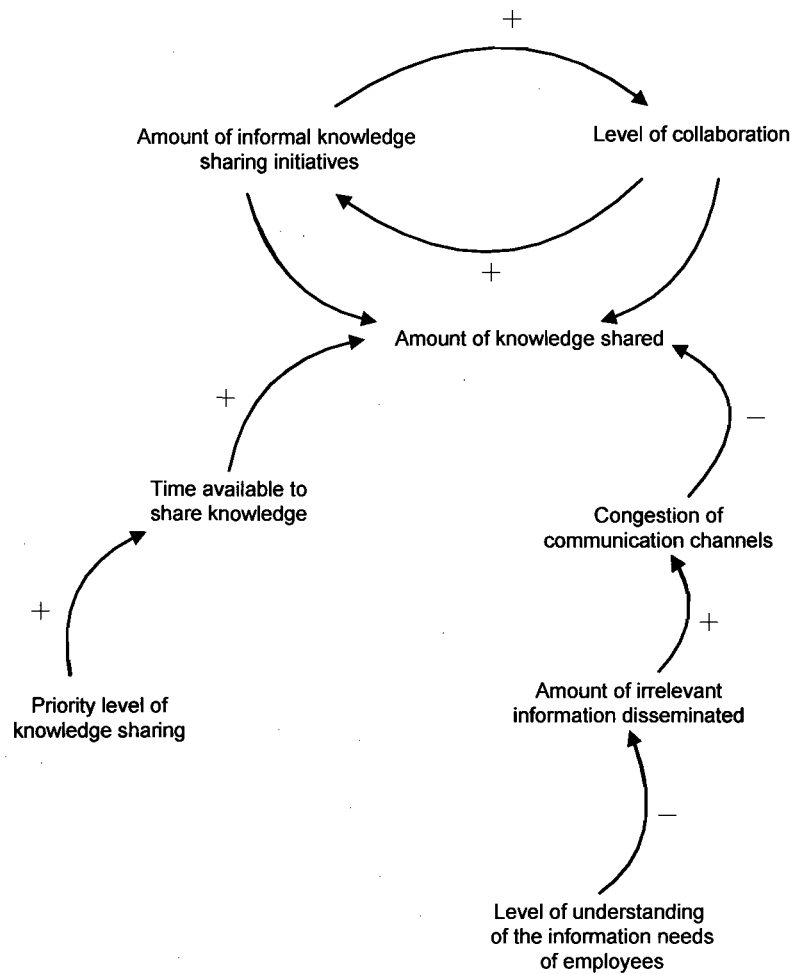
“There are no formal processes to encourage knowledge management. Knowledge is only spread through informal networks.”

“Informal mentoring helps spread the tacit knowledge of experienced mentors to aspiring individuals within the Division. There is a need encourage people to have informal mentoring form a wide range of subject matters.”

There are no formal systems and processes in place within the Division to share knowledge. Generation employees with common interests in the business have formed informal groups to share their knowledge. There are no terms of reference for these groups as anyone can join as long as they share in the common interest of the group. For example, after the investigation into a major hydrogen explosion at one of the power stations, concerns regarding the Division’s fire mitigation systems were raised by the company’s insurers. Fire system engineers and station fire fighters from the Division rallied together to form a Fire Care Team in order to address the concerns of fire management at all the stations.

Newcomers who join the business are encouraged to find a mentor within their immediate working environment to help them adjust to demands of the Generation business. Even Power Station Managers have informal relationships with mentors who were past power station managers themselves. They seek their advice on issues relating to the technical challenges they face as well as the soft side of the business, i.e., labour relations.

Figure 25 Casual loop diagram of influence of the availability of time, informal knowledge initiatives and information overload on knowledge sharing



The shortage of time is seen as an obstacle to knowledge sharing. However, if we delve a lot deeper into the issue, it is not the lack of time that is the issue but rather that there are other tasks that are seen as priorities while engaging in knowledge sharing is seen as a chore, over and above, what employees are required to do. Knowledge sharing is not given a high enough priority in the organisation (See Figure 25). One way of emphasizing the importance of knowledge sharing is having the leadership introduce practices that encourage employees to share knowledge and reward those who display the desired behaviours (Holowetzki, 2002; Gupta *et al*, 2000).

Information overload is symptomatic of an organisation that does not know what its employees need to know in order to do their work. The information needs to be categorised according to its criticality to the business and its operations (Zack, 1999). Flooding the

communication channels with irrelevant information hinders knowledge management. (See Figure 25).

Informal knowledge sharing can help develop a collaborative culture which will provide fertile ground for implementing and sustaining knowledge management initiatives (Dixon, 2000). (See Figure 25).

4.4.12. Absence of Incentive and Reward Systems related to Knowledge Sharing

“People with the critical knowledge are not encouraged to share it.”

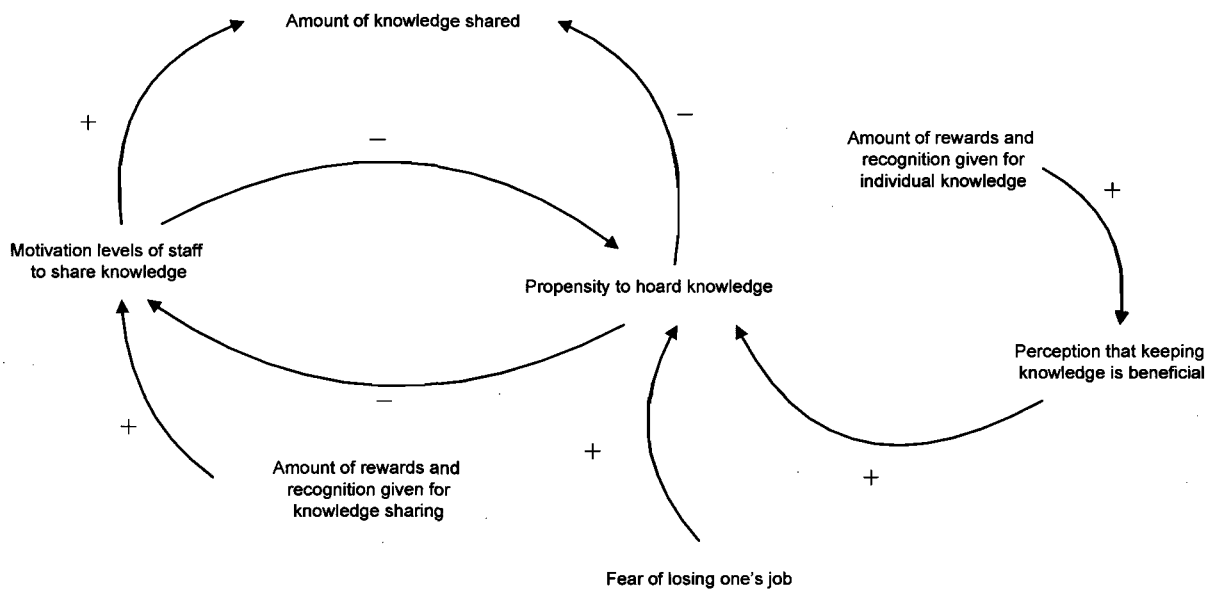
“There are no incentives for knowledge sharing”

“People may share their knowledge but it is not driven by any corporate incentive or reward.”

The participants were unanimous in their views that the present incentive and reward schemes did not directly contribute to knowledge sharing. Some believed that the incentive and reward schemes were neither promoting nor disabling knowledge management initiatives. Some participants expressed a view of the incentive schemes promoting individual performances rather than encouraging teamwork. Knowledge management does not feature as a key performance area in the generation performance management system. Other participants stated that the performance system was too subjective to add any value to drive knowledge management in the Division. One participant claimed that the reward scheme, in the form of Managers Awards, did encourage team work in project environments.

In order to promote knowledge sharing through out the Division both intrinsic and extrinsic motivators like financial incentives and peer recognition should be used (Holowetzki, 2002; Skyrme and Amidon, 1997). Employees should be recognised for sharing knowledge rather than hoarding knowledge (Holowetzki, 2002; Gupta and Govindarajan, 2000; Davenport *et al*, 1998). (See Figure 26)

Figure 26 Causal loop diagram of influence of rewards and incentives on knowledge sharing

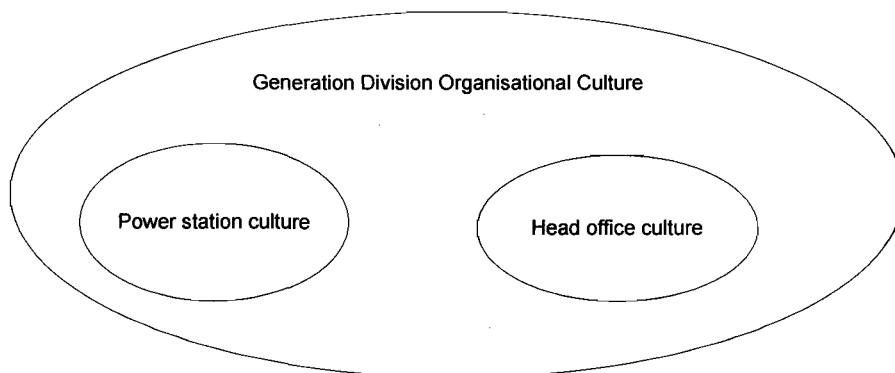


Currently, rewards and recognition are not used explicitly to motivate staff to share knowledge. According to Kermally (2002), motivated staff is a key factor in knowledge management. Without motivated staff, implementing and sustaining knowledge management initiatives within the Division will be impossible.

4.5. Summarising and Integrating the Findings

The Generation Division does not have a homogenous culture but rather two very distinct subcultures namely the head office culture and the power station culture (See Figure 27).

Figure 27 Systems map of Generation Division’s organisational culture



A function of organisational culture is to help the employees make sense of their work environments and to provide a control mechanism that guides and shapes their attitudes and behaviours (Robbins, 1986; Kreitner and Kinicki, 1998). Then it is only natural to expect the subcultures evident in power station and head office environments to vary as the behaviours and attitudes required to meet the challenges in both environments differ. Employees who work in power station environments are expected to work together in order to keep a power station running safely. The collaborative environment helps engender a feeling of family where there are closely knit bonds between people. On the other hand, head office employees are considered to be specialists in their individual fields and are expected to work independently of others. The nature of the work in the head office environment does not require collaboration. Employees tend to work in silos therefore building a rapport with other employees is challenging. The subcultures provide employees with a mental model of how to interpret their work environments and to be effective within it. Therefore employees transferred from a power station to a head office department will initially encounter difficulty in understanding their new work environment as their interpretation of their new work environment is based on their previous experiences in a power station.

The head office and power station subcultures are not homogenous, by that I mean all members in the business unit do not display the same set of work behaviours, attitudes and values. There are isolated pockets within each subculture that have characteristics that contradict the generalised perceptions about each subculture. For example there are a few departments in the head office environment where the people are very friendly and sociable so much so, that some members go on holidays together, which contradicts the view that head office employees are distant and cold.

There is a greater gap between front line workers in power station as opposed to a head office environment, where there is at most one layer of middle management separating the senior management from the front line workers. According to Gupta (1999), one would expect to have greater problems with communication in a power station environment due to the number of hierarchal levels that exist. It is the head office environment where there seems to be a greater gap between senior management and the front line workers even though there is at most one hierarchal layer separating the two.

When Delong and Fahey (2000) conducted their research, on how organisation culture affects knowledge management, they stated that the organisational culture creates the context for social inter-action. They did not consider the role that the national culture had on organisational culture. It is in fact the national culture that provides the context for the development of the organisational culture.

The racial and ethnic divisions present within South African society are exasperated by the manner in which transformational policies like affirmative action have been applied. Culture diversity workshops have proven to be ineffective in sustaining racial tolerance and understanding. Gender equity programmes have also met with resistance due to the poor decisions taken in appointing inexperienced candidates to critical positions. No formal support mechanisms, such as mentoring programmes, were put in place to assist both gender equity and affirmative action candidates.

Female participants talked about the difficulties they experienced in establishing themselves in a male dominated environment. They felt pressurised by the fact that people were just expecting them to make mistakes because they believed that women were not technically competent. Black female participants also complained of the added pressure they felt when given positions of authority especially over black males. Within the African culture, black females are supposed to be subservient. Black men are supposed to be the ones who gave out the orders. This created a dilemma for some black female supervisors and managers who had older black subordinates that opposed being given instructions by a woman. The gender problems experienced in the Division is a reflection of the problems experienced in society at large. However, employees who do not listen to a supervisor or manager, because of her gender, pose a significant obstacle to knowledge sharing within an organisation.

Trust, mutual respect and care for fellow colleagues are not values that are universally ingrained in the organisation. Cross and Baird (2000) believed that mutual trust is the deciding factor on whether knowledge is passed on to someone or not. Ford (2001) claimed that interpersonal trust is a prerequisite for effective knowledge sharing to occur. Gold *et al* (2001) believe that establishing relationships between employees is important as employee interaction forms the basis for communicating tacit knowledge and transforming it into explicit knowledge. In both formal and informal social gatherings at work, people from different ethnic backgrounds tend to socialise within their own ethnic groups. Very rarely

would one find a gathering of people from different ethnic backgrounds sitting together and socialising. Currently, the Generation Division resembles an environment devoid of trust, respect and compassion which inhibits building meaningful relationships that will contribute to knowledge sharing.

Knowledge hoarding is not an uncommon occurrence and in some instances contradicts the perception of an open and honest working environment projected by some participants. Various factors contribute to knowledge hoarding but the most dominant is the fear of losing one's job.

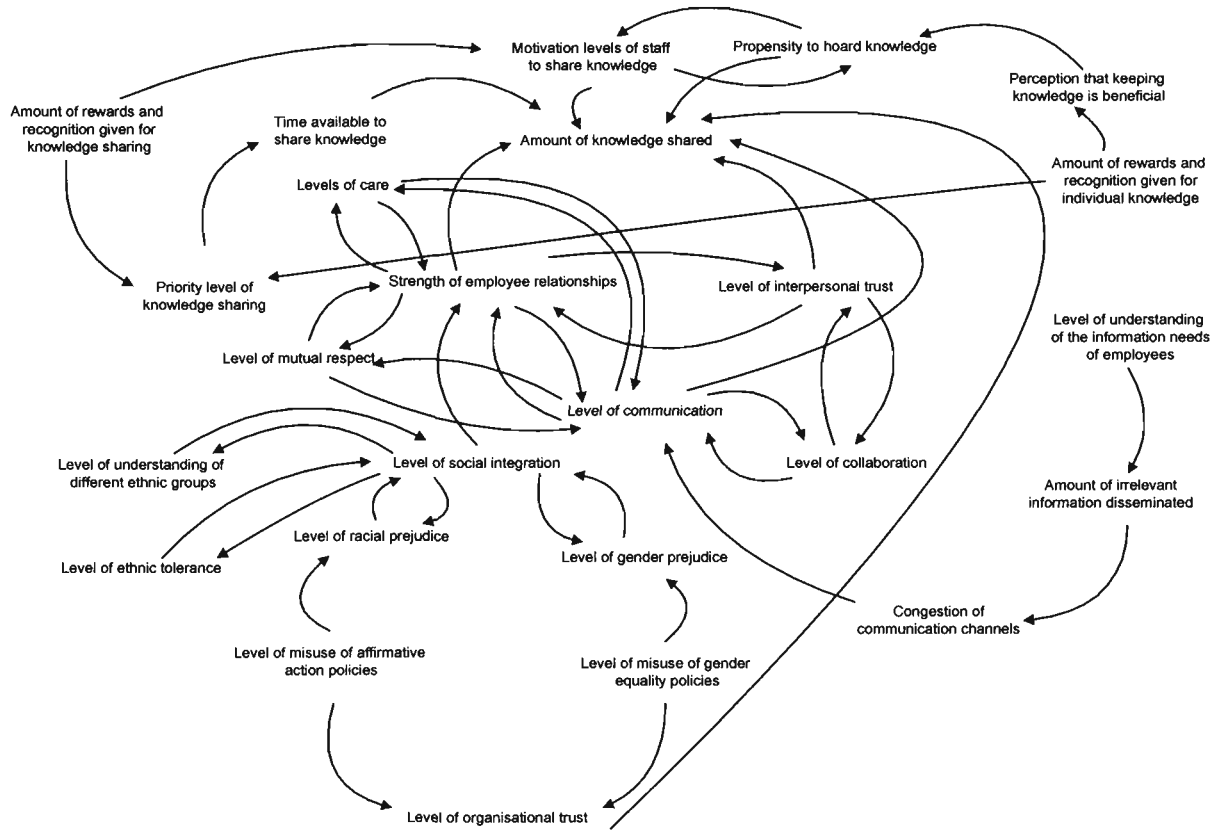
Collaboration is essential for knowledge sharing (Havens and Haas, 1998; Gold *et al* 2001; Gupta, 1999). The performance management system of the Generation Division has been adapted to build in a performance modifier that focuses on team effort rather than just individual performance. The aim of this incentive is to encourage employees to move out of their silos and to focus on the efforts of their colleagues and their department as a whole. In a power station environment such a team based modifier is redundant as the overall performance of the station dictates the size of employee's performance bonuses anyway. In the head office environment, this form of team based incentive initially seems suitable however due to the nature of the work which is highly specialised; individuals may not be able to help out their colleagues with their work due to the high degree of specialisation. At the end of the day the team based modifier does not encourage people to work together and share knowledge.

The performance and reward schemes do not directly encourage knowledge sharing, if anything, they encourage employees to hoard their knowledge. In order to promote knowledge sharing through out the Division both intrinsic and extrinsic motivators like financial incentives and peer recognition should be used (Holowetzki, 2002; Skyrme and Amidon, 1997). Employees should be recognised for sharing knowledge rather than hoarding knowledge (Holowetzki, 2002; Gupta and Govindarajan, 2000; Davenport *et al*, 1998). Punitive action should be taken against employees for not participating in knowledge sharing. For example, only employees who participate in knowledge sharing should be eligible for career advancement and financial rewards (De Long and Fahey, 2000).

In Figure 27, the factors influence knowledge sharing within the Generation Division have been integrated into a multiple cause diagram that helps to provide an indication of the complex interrelationships that exist amongst these factors. Of particular interest is the importance of the quality of employee relationships in knowledge sharing. In order for Generation to survive the future challenges it faces, it needs to be able to tap into the tacit knowledge of its employees and make it available to other employees to use.

According to Gupta and Govindarajan (2000) face-to-face communication is the ideal transfer mechanism for tacit knowledge which is dependent on the quality of employee relationships that exists within the organisation. In turn, there are a number of factors that contribute to the quality of the employee relationships in the Generation Division, for example, ethnic and racial divisions, gender prejudices, and a lack of interpersonal trust, mutual respect and care amongst employees. Communication in the interests of knowledge sharing cannot occur if the social bonds amongst employees are poor. Though the factors that influence employee relationships may be considered to be symptomatic of South African society in general, the effects of these factors are amplified by the manner in which transformational policies have been applied.

Figure 28 Multiple cause diagram of factors influencing knowledge sharing in the Generation Division



Currently, the organisational culture of the Generation Division of Eskom poses a significant barrier to knowledge sharing.

4.6. Conclusion

The qualitative nature of the study and the systems thinking tools helped to provide an insightful understanding of how the Generation Division’s organisational culture will influence future knowledge management projects. Some of the findings of the study are in line with what has already been established in the literature review, however, the impact of gender inequality and racism on knowledge management has not been addressed before.

Overall the study meets its objectives in providing a greater insight into the cultural obstacles that need to be overcome in establishing knowledge management in the Generation Division.

CHAPTER 5– CONCLUSIONS AND RECOMMENDATIONS

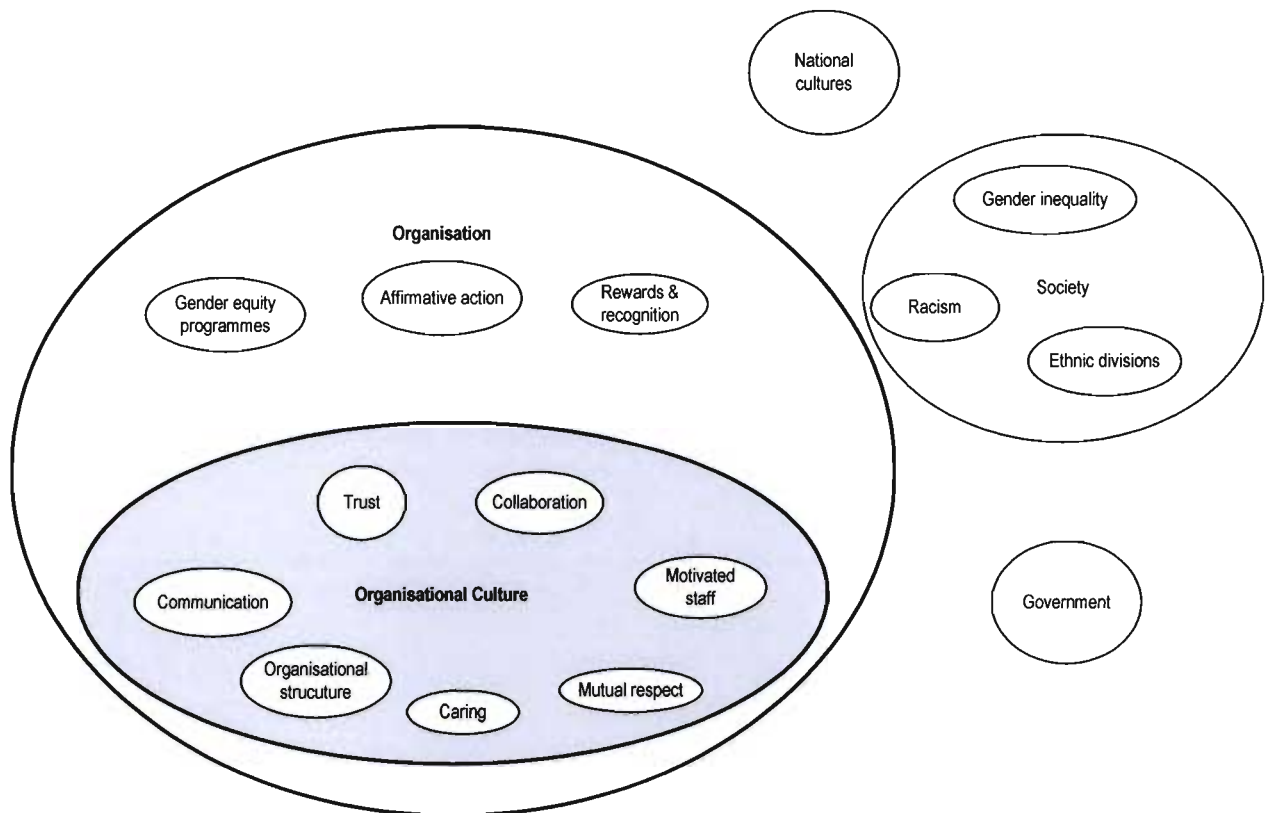
5.1. Introduction

In this chapter that research findings are summarised and compared to the literature review conducted in Chapter 2. Recommendations on how to use this research are also provided

5.2. The Purpose of the Study and the Research Findings

The purpose of this study was to explore and gain insight into how organisational culture influences knowledge sharing, within the context of the Generation Division. The overall aim was to determine what factors within the organisational culture influence knowledge management and to provide guidance on how organisational culture should be addressed when developing a knowledge management strategy for the Generation Division of Eskom.

Figure 29 Systems map of organisational culture and the factors that influence its effect on knowledge sharing



There are two distinct subcultures within the Generation Division, viz., the power station subculture and the head office subculture. Each subculture promotes the desired behaviours

and attitudes that employees need to display in order to be effective within their respective work environments. Collaboration is deemed to be a necessity for work within a power station whereas working independently is encouraged within the head office environment.

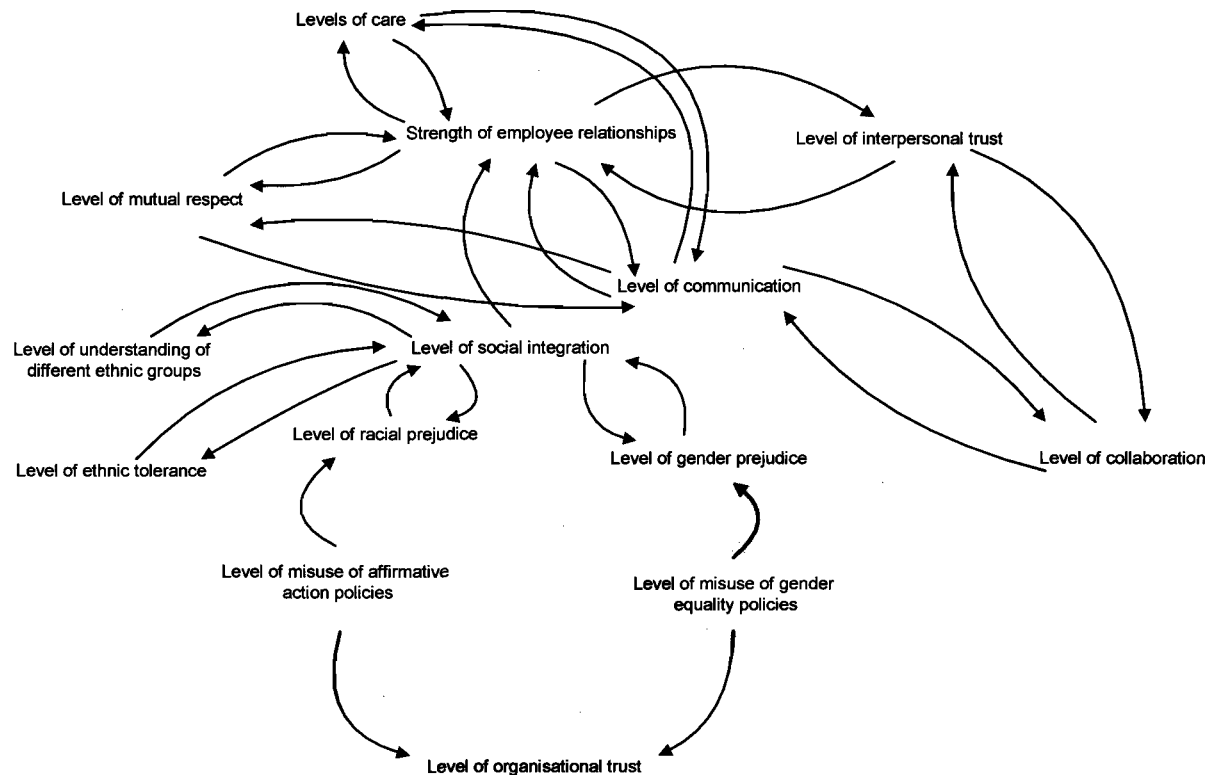
Guptara's (1999) assertions of communication problems being experienced in organisations with several hierarchical layers separating senior management from the frontline workers were unfounded in the Generation Division. Power station environments are able to compensate for the layers of separation between senior management and the frontline workers by creating a family like environment where employees are encouraged to speak to each other irrespective of status within the organisation hierarchy. Head office environments, on the other hand, have greater chasms that separate senior management from their subordinates that is independent of the hierarchical structure. There is no sense of camaraderie emanating from the head office departments. Head office employees tend to work like a group of independent specialists rather than members of a team.

Knowledge sharing is sustained in organisational culture where collaboration is a dominant feature (Havens and Haas, 1998, Gold *et al*, 2001). Although collaboration is evident within power station environments, there is no indication that the collaborative atmosphere extends to other business units. Attempts have been made to motivate staff, specifically head office staff, to focus on the efforts of their departmental colleagues rather than just their individual efforts. However, due to the nature of the specialised work performed by individuals it is very difficult for head office employees to offer much assistance to each other. The lack of an overall collaborative culture poses a barrier to knowledge management.

Trust, mutual respect and care for fellow employees are not evident in all business units in the Division. Therefore the quality of relationships that exist amongst employees leaves a lot to be desired from a knowledge management perspective. The quality of employee relationships is also influenced by factors that exist within South African society like racism, gender discrimination and ethnic divisions. The abuse and misuse of gender and affirmative action programmes amplifies race and gender discrimination. Employees who feel aggrieved at not being promoted due to their gender and / or skin colour have no reason to sustain high levels of organisational trust which is necessary for knowledge sharing (Ford, 2001). Figure 30 depicts how trust, mutual respect, care as well as ethnic divisions, racism, gender inequality, affirmative action and gender equity programmes influence employee relations. A good

rapport amongst employees is critical to be able to transfer tacit knowledge (Gold *et al*, 2001). The Generation Division needs to harness the tacit knowledge of its seasoned employees in order to provide South Africa with a reliable, sustainable supply of electricity. Therefore the Generation Division has to invest in improving the quality of employee relationships if it hopes to achieve its strategic and operational objectives.

Figure 30 Multiple cause diagram depicting influences on employee relationships



There are currently no rewards and incentives to encourage employees to share their knowledge. There also no punitive measures to discourage organisational members from withholding their knowledge (De Long and Fahey, 2000). In order for knowledge sharing to flourish within the organisation, employees need to be rewarded using both intrinsic and extrinsic motivators (Skyrme and Amidon, 1997; Holowetzki, 2002; Gupta and Govindarajan, 2000; Davenport *et al*, 1998).

In order for knowledge sharing to be sustainable in the organisation, effort must be focussed on improving employee relationships coupled with providing rewards and incentives to employees motivating them to share knowledge. If the fear of losing one's job is a reason for

knowledge hoarding, it should be made clear that only employees who participate in knowledge sharing activities can safeguard their jobs.

As it stands, the present organisational culture of the Generation Division poses a significant barrier to knowledge sharing.

5.3. What have I learnt

A naturalistic form of inquiry is very demanding as you have to constantly engage in self-reflection during the data collection and interpretation phases challenging your own ideas and conclusions. It is difficult to consolidate the data collected from the interviews and personal observations into a coherent form that is understandable to an outsider. Personal bias can easily skew the findings and conclusions drawn and one has to be constantly vigilant of this effect.

It is extremely challenging to build a rapport with the interviewees over a short period of time. However, it is a personal rapport that establishes a level of trust that allows the interviewee to be more candid with the interviewer and expose deeper lying issues that they would not put forward under normal circumstances.

5.4. Recommendations

Establishing and strengthening employee relationships is a pre-requisite to establishing any knowledge management initiative in the Generation Division.

In order for Generation to be in a position to harness the tacit knowledge of its employees, the employees have to willingly reveal their tacit knowledge. Employees need to have a sense of security that they will not be abandoned once they share their knowledge with others.

Providing recognition and financially rewarding these employees for sharing their knowledge will help allay their fears of losing their jobs. Employees also need to have a reasonable rapport with the individuals to whom they will be imparting their knowledge. Formal activities, like team building exercises focussed on developing and strengthening employee relationships, coupled with informal activities like going out to lunch together, should be used

to improve employee rapport. Formal mentoring programmes can also assist in developing a rapport between the protégé and the mentor which will help in the transfer of tacit knowledge.

Whatever initiatives are applied to improve employee relationships, they must be tailored to the unique the subcultures of the head office and power station environments. Fortunately, power station environments have an advantage over the head office environment in that a collaborative culture already exists. The challenge would be to build on the collaborative culture and expand the collaborative nature to go beyond the borders of the power station to include other business units. Head office environments would require greater focus to be placed on getting employees to socialise with each other. Informal activities like drinking coffee together and focussing on the similarities of the worldviews of the head office employees will help to engender camaraderie in the long term. Culture transformation is not an overnight occurrence. It requires an unwavering commitment from the Division's leadership to do what needs to be done.

The findings have also highlighted the problems of gender inequality and racism that is still prevalent in the organisation. Though the problems are not generic, the isolated pockets where these issues are prominent can have a major impact on knowledge management initiatives, especially if it involves senior management and subject matter experts.

The impact of these factors on knowledge management needs to be explored in to gain a better understanding of how rife the problems are and what can be done to address the issue in the specific environments.

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