CUSTOMIZING KNOWLEDGE MANAGEMENT SYSTEMS TO ACCELERATE NEWCOMER DEVELOPMENT

(Submitted in partial fulfilment of Degree Masters in Industrial Management)

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CONFIDENTIALITY STATEMENT

Owing to the sensitive nature of the findings of this research, The Company has requested that its identity not be disclosed herein. To maintain the anonymity of The Company, it shall herein be referred to in this document as "Co. X" Permission for this research was granted under this condition and has been adhered to strictly.

DECLARATION

I acknowledge and accept that plagiarism is unethical and prohibited. Each significant contribution to and quotation in this thesis, has been cited and attributed to the original author. I declare that the writings herein are my own work and I shall not allow any other party to reproduce this material with the intention of assuming credibility.

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ACKNOWLEDGEMENTS

The completion of this thesis was no menial task and I have been fortunate to have a great deal of support for the duration of my voyage, for which I am truly grateful.

To my beloved father, Jasson, and sister, Alexia... thank you for support, relentless patience with me, and for enforcing some balance in my life, without which, I was likely to come out the other end of this research anaemic and sleep deprived.

To my friends, particularly Michelle and Kevin, your encouragement and unwavering belief in my capability was instrumental in motivating me to finish.

To Corrinne Shaw, who without doubt is most pleased that I have *finally* finished, I owe the sincerest appreciation. Your guidance and contribution was indispensable in compiling this dissertation. Thank you.

ABSTRACT

The prevalence of staff turnover varies across organizations and industries. Dependant upon the organization's business requirements and activities, staff turnover may have little or significant effects upon organizational productivity. In an effort to mitigate the negative effects of loss of skilled and experienced employees, companies may implement a number of human resource management strategies. This dissertation, (assuming that the conditions that give rise to the rate of staff attrition are fixed,) addresses the challenge to optimise a training and induction programme that would accelerate newcomer development so as to minimise periods of reduced productivity. An ethnographic study was conducted, using the sales department of an IT Distribution company as the participant group.

The literature survey yielded information in the broad areas of individual learning, induction and knowledge management within an organizational context. The concepts that emerged from the theory offered insight into individual learning styles and assists both the individual's personal capacity development, as well as the modification of the organizational context to endow the individual with role-specific knowledge. The theory also included suggestions on how organization's can optimize the learning context.

Grounded Theory analysis was applied to the data gathered from observation and semi-structured interviews. The core variables emerged from the analysis. Considering Co. X's context, it was identified with confidence that the key elements that affect the development of newcomers are the quality of information sources and the degree of information-sharing. The implication of these variables emerging as the most influential factors in role-specific learning is that organizations can adapt their learning tools and aids to accommodate the various learning styles for optimized learning. Furthermore, the appropriate means of motivation applied to all stakeholders in the training process facilitate the achievement of training goals.

The specific analysis of the core variables for knowledge and skill development allowed for the identification of pertinent content and structure for the construction of a Knowledge Management System (KMS) model. The findings from the research allowed for the development of a customized Knowledge Management System to aid accelerated learning in the IT Distribution industry.

The application of such a solution can only be assessed in the future, following acceptance of the thesis findings by Co. X. executive management, and the necessary consent obtained.

CHAPTER 1: INTRODUCTION

1.1. Overview of Dissertation:

In almost every industry, it is becoming excessively difficult to compete due to competitive saturation. This has the effect of eroding profit margins and market-share. In the battle to create sustainable growth in increasingly fragmented markets, companies increasingly rely on customer loyalty and new customer acquisition. This can only be achieved through continued customer satisfaction. Since low- to mid-level employees are the frontline for any company, their competence is instrumental in maintaining customer satisfaction. "For any organization to survive and have a chance of growing, its rate of learning has to be equal to, or greater than, the rate of change in its external environment" (Garrat, 1990 in Wiig, 1993, page 212). In other words, retaining highly competent staff is one means of achieving competitive advantage.

One of the main difficulties for organizations is retaining developed competency within their ranks (Leonard & Swap, 2004). Staff turnover has a detrimental effect on the ability of the organization to provide excellent customer care. When employees leave, their knowledge and intuition is lost to the organization. This can not be immediately replaced by newly recruited employees. A challenge therefore exists for organizations both to create systems and processes to retain knowledge and to reduce the knowledge gap in the shortest possible time for new recruits.

There are a multitude of practical concerns related to employee recruitment and training. Firstly, individuals are naturally change averse and are likely to experience a certain amount of anxiety as they adapt to the organization. Reducing this anxiety would assist in instilling a degree of loyalty in new employees so that they are less likely to leave the organization (Lewin, 1952). Secondly, organizations would have to consider the impact of induction and training on both the new employees, as well as existing employees within this sphere of influence (Sanjay, 2006). Thirdly, it is of the utmost importance that the organization achieves standardization of conduct and service. New employees should assimilate knowledge and behaviour that is aligned with the organizations culture, strategy and standards (Wanous & Reichers, 2000).

The above factors are usually addressed through an induction process when the new employee enters the organization, which includes general familiarization and training. This induction process should allow the individual to meet cultural and operational requirements in the shortest possible period so as to minimize customer discontent. The purpose of this research is to investigate the training aspect of induction with the expressed purpose of identifying the most effective and efficient means for developing new employee competence so as to maintain customer satisfaction.

The chapter content within this dissertation is summarised as follows:

Chapter one provides a broad overview of the current context of Co. X. The general nature of the industry is described in terms of micro- and macro-environmental conditions. The observations recorded in chapter one guide the identification of systemic influences that are further elucidated in chapter two for the purposes of formulating the issues that are to be investigated and resolved. Chapter three conveys the theory that relates to the field of investigation and guides further empirical research. Chapter four explicates the researcher's philosophical position and the nature of the research conducted. The findings from the empirical research are reported in chapter five. The findings allowed for the design of a customized Knowledge Management System (KMS) as detailed in chapter six. Finally, chapter seven allows for the evaluation of the researcher's practice in terms of research process and conclusions.

1.2. Introducing the Context

The objective of this section is to inform the reader on both the organizational context and the environmental factors that directly influence the enterprise which will be herein referred to as Co. X. The nature of this thesis is that of a case study on a single company. Each company has it own unique mix of influencing variables, therefore, the results of this thesis are not intended to be generalized to other companies within the same industry, and the value created is solely for the benefit of this organization. However, the model presented could ideally be transferable with minor adaptation to other companies' unique requirements.

This research is undertaken within the framework of the information technology (IT) distribution industry. The industry is well-known for its highly competitive nature, where contributing factors within it include: An industry structure that yields low margins at high volumes; a general market trend that indicates a convergence of electronics and computers (mainly for home entertainment) which imply a larger subset of competitive threat; and the high prevalence of obsolescence. Co. X is an expanding international IT distributor, with branches in all of the major cities across South Africa. In addition to its growing operational requirement for an expanding sales team, the organization also faces the challenge of mitigating the negative effects of a high staff turnover. For the purposes of this dissertation, the focus shall be upon the business unit within the chosen distribution company, specifically marketing and sales, because it is comprised of the greatest revenue generating activities by far. According to estimates provided by the Cape Town Branch Manager, Hardware Assembly and the Technical department grosses approximately R270 000, which translates to around 1% of the annual profit. The rest of the revenue is generated from the sales department. This is illustrative of the heavily weighted contribution of the sales department to the profitability of the organization.

Prior to, and during this study, Co. X operated a semi-formal training program spear-headed by the regional manager who utilized senior staff for training new sales consultants; the intention was to present consistent content, but in practice the emphasis and content was continually evolving.

1.3. General Observations on Co. X. within Industry context:

Co. X distributes its products to all IT sub-related companies which derive revenue from the sale of IT hardware, such as: sub-distributors; retailers; value-added resellers; and networking and support specialists. Co. X is therefore operating in a Business-to-Business environment and its clientele are professionals who assume the role of vertical channel partners. In such relationships, the key element for distributors in satisfying their clientele would be to make their clientele more competitive in their own strategic markets, i.e. through Co. X's products, services and other value-adding activities the resellers would be enabled to satisfy their customers better than their competition could. This makes the distributor the most appealing business partner, or put another way, the preferred supplier.

As in any highly competitive environment, IT distributors are in a constant fray over market share, additionally, the IT hardware industry has numerous forces that contribute to the low margin; high-turnover nature of the businesses within it. In the researcher's personal experience within the industry, she has identified the following influences:

- Rapid technological progression reducing product life-cycles.
- Little brand and /or product differentiation.
- Over-saturated competitor market (Particularly due to the convergence of electronics and computer markets.)
- Increasingly educated consumer market.

The above factors create an environment in which competitive advantage can only be gained when organizations differentiate themselves by creating a business model that optimizes the delivery of similar products and services. Through exposure to the various internal business activities within Co. X, the researcher observed four main areas of concern for the company:

- Cost minimization and operational efficiency
- Effective and innovative marketing
- Efficient supply-chain management
- **Superior customer service**

Superior customer service, as one of the main means of leveraging competitive advantage, is mainly delivered through the marketing and sales departments within Co. X. For this reason, a great deal of management time is devoted to the development of customer relationship management skills within the sales department.

Having established that customer relations are largely dependant upon interactions with the sales department, the sales department was analysed to identify any indicators of problematic phenomena.

During 2006, Co. X had a 110% staff turnover recorded in the sales department, based on the assumption that at any point in time, there were 10 sales positions (refer to Appendix A for the employee details data table). Additionally, owing to the company's HR policies and strategies, all new employees are on average below 25 years old (Table 1.1 below). There appears to be a rapid rate of staff turnover, as can be seen in Table 1.1 below. Other than 6 long-standing employees, no other employee had been in the employ of Co. X in excess of a year (average of staff retention at 8 months and below). Although the IT industry is one which generally has a high degree of mobility and is a naturally young industry, Co. X's sales staff are comparatively young and the rate of staff turnover is greater than that of its competitors.

Table 1.1. Age and Length of Service statistics of employees in sales department.

Employee Age: (in years)		Length of Service: (in years)	
Mean	25.23	Mean	1.54
Standard Error	0.94	Standard Error	0.44
Median	**23.75**	**Median**	**0.83**
Mode	**23.50**	**Mode**	**0.25**
Standard Deviation	4.52	Standard Deviation	2.09
Sample Variance	20.41	Sample Variance	4.39
Kurtosis	4.40	Kurtosis	3.86
Skewness	1.94	Skewness	2.13
Range	19.17	Range	7.50
Minimum	20.42	Minimum	0.01
Maximum	39.58	Maximum	7.50
Sum	580.33	Sum	35.34
Count	23.00	Count	23.00

When one reviews the cost implications of frequent training (as a result of high staff turnover), the following are relevant. The costs involved in the training of the sales staff that were recruited in 2006 (as indicated by the highlighted lines in Appendix A) included: advertising costs; materials costs; and time costs including regional manager and senior staff time. (Refer to Figure 1.1 below). All costs were determined according to the periods of recruitment and their associated costs. The resignations (see Figure 1.2) precede periods of

hiring and new recruits replenish Co. X's sales personnel. As a result of frequent resignations the company incurs advertising costs, training costs and material costs proportionate to the number of employees and the periods following resignations (see Figure 1.1).

Training costs are significant because they include the amount of time required from management and senior staff. This is time that could have been devoted to revenue generating activities. Similarly, another significant cost related to recruitment of new employees, would be the time and costs involved in the recruitment process, i.e. interviews, and general employee screening. This data was estimated for inclusion in the analysis.

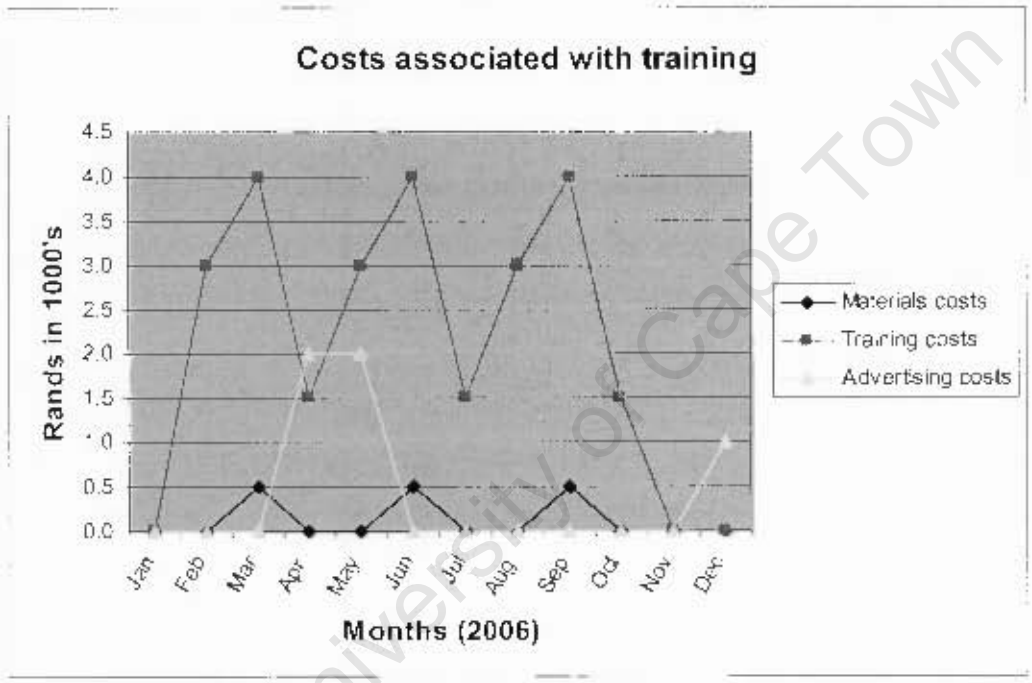


Figure 1.1. Behaviour over Time (BOT) graph of costs associated with training

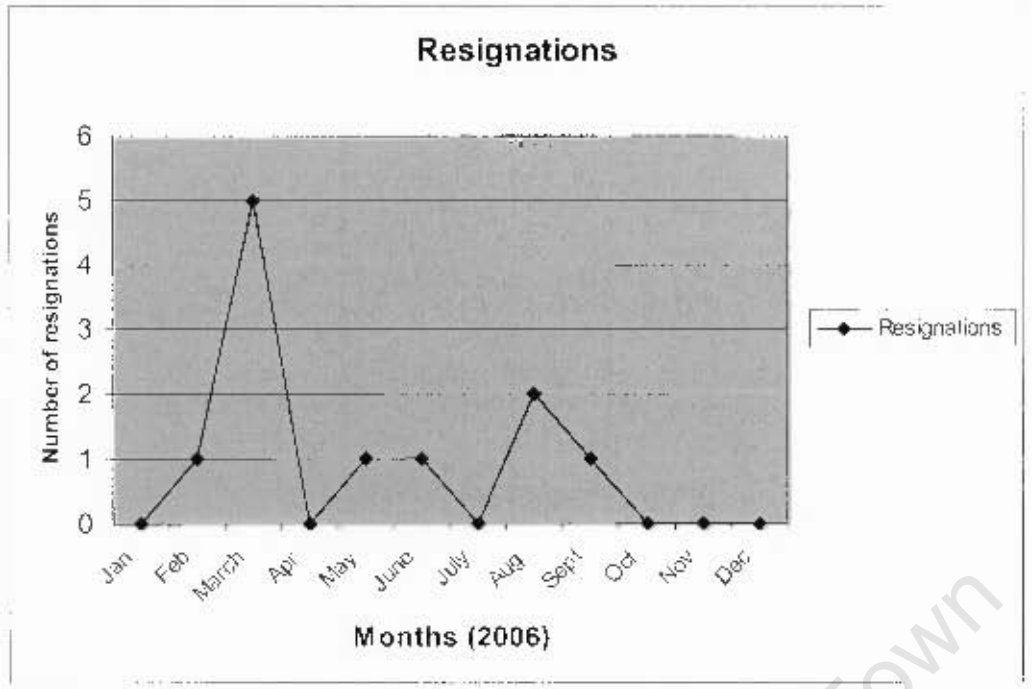


Figure 1.2. Behaviour over Time (BOT) graph of costs associated with training

In light of the fact that each organization has its own unique mix of influencing variables, the factors that have been highlighted in this chapter are significant in establishing Co. X's specific context for its particular problem definition. Owing to the forces that dominate the IT industry, (as detailed on page 4), it was established that superior customer service is one means of achieving competitive advantage. As a result, the human resource management of the company was examined because the employees are the agents of customer service management. The high prevalence of staff turnover and nature of new and existing sales staff indicated the need for rapid and frequent training needs of Co. X.

The observations introduced in the overview, together with the description of the macro-environmental influencers on Co. X and the company's specific culture and policies regarding employees, form the context of the case study presented in this thesis.

CHAPTER 2: PROBLEM FORMULATION

2.0. Introduction

The employee statistics as illustrated in Chapter 1 suggest that the general area of concern involves high staff turnover and its related consequences, such as frequent recruitment and training. The initial observations guided the researcher's exploratory research for the purposes of defining the specific practical problem and hence defining the scope of the research problem. In chapter 2 the exploratory data collection and analysis is presented. Upon identification of the variables involved in the broad problem area, a Causal Loop Diagram (CLD) was utilized. A CLD is a useful tool in validating assumptions within the area of recruitment and training. The use of a CLD would allow for the examination of all the variables that exert influence within the training and induction system. In the chapter that follows, the systemic impact of the variables on recruitment and training is discussed, followed by the identification of the specific research question within this dissertation.

2.1. Situation Analysis

An initial inquiry was conducted to assess the potential practical problems that Co. X could acknowledge and manage. Various stakeholders were approached in order to increase the breadth of inquiry, i.e. Informal discussions were held with Co. X's regional manager, a purposive sample group of Co. X's clientele, and the sales force.

2.1.1. Exploratory interviews

The perspective of senior management yielded a few problems that were particularly relevant to sales consultant competence and barriers to learning. The branch manager noted that only a small proportion of information that was disseminated by senior staff members was retained and recalled by sales staff. More specifically, the directives conveyed in sales meetings were neither adhered to, nor were they applied in sales practice. Furthermore, when information was utilized in the daily execution of the sales function, it would not generate the desired outcomes, i.e. sales staff are underperforming in terms of achieving organizational objectives.

In order to obtain a client perspective, a small purposive sample was selected across the various sectors that Co. X services, in that participant clients were selected according to the nature of their business so that the sample would be representative of all sectors of the IT industry. The clients were consulted in order to establish which sales staff characteristics or qualities would enable them to create customer satisfaction. The clients were asked to define what constitutes good service from a sales consultant, and were further asked to define what comprises general sales competency. A number of attributes were most commonly cited by clients. Some of the most prevalent desired attributes and characteristics included having good product knowledge[1], i.e. being technically competent, having a reasonable knowledge of the client's business for the purposes of making relevant recommendations, and taking ownership of problems and solution provision, i.e. being accountable and reliable. Amongst other highly valued activities cited was the open sharing of information to keep the client abreast of pertinent industry information. Clients also stated that they wished to deal with honest, courteous, consistent, attentive and efficient sales consultants. They acknowledged that this was largely related to the depth of relationship that was created through frequent and extended contact, which would build trust between both parties. This relationship was also dependant upon the sales consultant's personal attributes, such as his / her level of professionalism and personality. The final aspect of service, but no less important, was the sales consultant provision of information in a manner that would serve the best interest of the client, i.e. that would assist them in gaining competitive advantage within their respective markets.

The stakeholder input allowed for a concise definition of sales consultant competence. From their responses, it was evident that there are many dimensions of competence, and these include: knowledge, personal attributes, and behaviour. The dimensions of competence, as put forward by the relevant stakeholders were further assessed to determine the nature of the system in which they are contained.

[1] *Good product knowledge was defined by the clients as being able to provide detailed specification of products, code, compatibility, awareness of / and comparison to competitor products, and application thereof.*[1]

2.2. Situation Analysis and Causal Loop

Through the analysis of the organizational context, certain issues became evident.

Owing to the high staff turnover at Co. X, there is a constant need to recruit staff. The significance of this is three-fold. Firstly, with the high exodus of employees, there is less likelihood of retaining developed knowledge and competence. Furthermore, owing to Co. X's HR policies, there is a tendency to hire very young sales staff with little or no working experience. This would suggest that the new recruits would have a great deal less accumulated knowledge pertaining to the industry, products and general business acumen. Secondly, employee cycling has the outcome of alienating clients and severing client relationships with the company. This is based on the premise that people are naturally change-averse, and clients therefore experience a great deal of anxiety having to deal with new sales consultants. Finally, frequent training of new recruits by the regional manager and senior staff detracts from available time that would otherwise have been devoted to revenue generating activities and / or individual and group development. This has the secondary effect of creating frustration, stagnation and boredom, upon which senior staff begin to seek other employment, which in turn aggravates the staff attrition. The context is displayed in the Rich Picture featured as Appendix B.

The data extracted from the exploratory interviews revealed the main variables contributing to the information flow and human interaction systems contained within Co. X. Two Systems Thinking Tools (Senge, 1994) were utilized in order to extract the causal relationships that exist between the main variables that emerged from the initial observations. Both the Interrelationship Diagraph which illustrates all the possible causal relationships between the variables, and the Causal Loop Diagram which illustrates the dominant driving forces and outcomes, facilitated the rigorous process that allowed for the precise definition of the problem, and hence the specific research question (the theory and utility of Systems Thinking shall be detailed in Chapter 5).

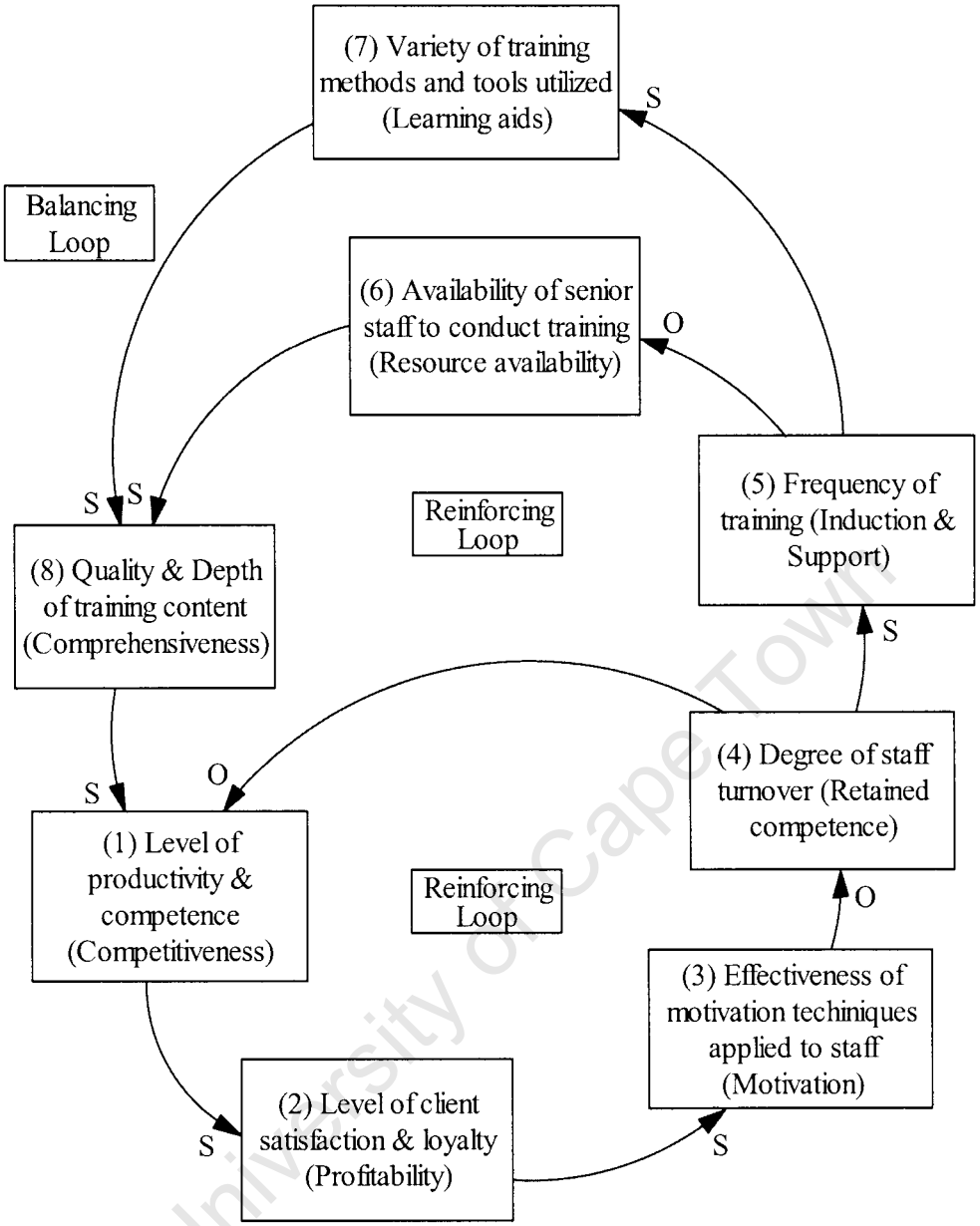


Figure 2.1: Causal Loop Diagram (CLD) of broad system variables

2.2.1. Identification and definition of the variables

The issues detailed above were further examined for noteworthy driving factors and the results are expounded in the paragraphs to follow. The results are reflected in the interrelationship diagraph in Appendix D.

(1) The relationship between " Level of productivity & developed competence" and "Level of client satisfaction"

The first variable refers to two aspects of new employee performance that jointly contribute to the same outcome, i.e. client satisfaction. It is evident that if newcomers are adequately prepared and equipped for the various requirements of their role, they would necessarily perform their job functions more efficiently and effectively. Owing to the fact that clients prefer conducting business with highly competent sales staff, these sales consultants would likely be the source of competitive advantage over other distributors who may not have as well equipped service agents. The level of client satisfaction would therefore equate to greater profitability for Co. X.

(2) The relationship between "Level of client satisfaction" and "Effectiveness of motivation techniques"

Providing good customer service is rewarding in that it not only lends itself to a reciprocal good rapport, but it also generates more business. Since a sales consultant's remuneration is highly dependant on commission, the monetary gain assists in positively motivating sales staff.

(3) The relationship between "Effectiveness of motivation techniques" and "Degree of staff turnover"

There are numerous factors that contribute to staff motivation, which can be summarized as the working conditions for the employee. The onus is upon the company to provide fair remuneration, opportunities for personal development, and a balance between a pleasant working environment and a reasonable amount of motivating stress. Failure to regulate staff motivation results in employee discontent and further staff attrition.

(4) The relationship between "Degree of staff turnover" and "Level of productivity & developed competence"

An increase in staff turnover would require the recruitment of new sales staff that would not yet have the capacity to perform at the same level as the sales consultants who had left the organization. The new sales consultants would require time and experience to develop the same level of productivity and competence. During this

period when newcomers are in this learning curve, clients would experience a decline in the level of service.

(5) The relationship between "Degree of staff turnover" and "Frequency of training"

Staff attrition and the recruitment of new staff imply that the organization is required to prepare new employees for their functional roles. As staff turnover increases, senior staff are obligated to increase the number of training rotations and the amount of time instructing newcomers.

(6) The relationship between "Frequency of training" and "Availability of senior staff to conduct training"

As a result of more frequent training, there is a greater prevalence of scheduling conflicts. This means that senior staff involved in the training and induction of the new staff have greater difficulty in committing to training sessions. Training is therefore often postponed or cancelled dependant upon senior staff availability.

(7) The relationship between "Availability of senior staff to conduct training" and "Quality and depth of training content"

Owing to the fact that senior staff have increasingly difficult in keeping to training schedules, training sessions are often re-organized around the availability of a trainer. As different trainers are responsible for teaching different content, the content is delivered in a haphazard and illogical manner. Additionally, time constraints may prevent the trainer from covering the full spectrum of the training material.

(8) The relationship between "Frequency of training" and "Variety of training methods and tools"

The onset of training and induction requires the use of multiple training methods and tools in the delivery of the training content. There are various standardized training materials, e.g. documents and presentations that are utilized in initial training. Additionally, there are numerous individuals that collectively contribute to the newcomer's development. Each individual offers a unique knowledge set and information delivery method, to accommodate the many trainees and their varying learning styles.

(9) **The relationship between "Variety of training methods and tools" and "Quality and depth of training content"**

Owing to the fact that multiple methods and tools are utilized by numerous trainers, there is a prevalence of repetition of information. The use of multiple trainers also reduces the likelihood of "knowledge gaps" because the trainees would have the benefit of gaining information from one trainer that would otherwise not have been conveyed by another. The sum of information from the trainer group is more comprehensive owing to the nature of the trainers' individual mental models and exposure within the company.

(10) **The relationship between "Quality and depth of training content" and "Level of productivity and developed competence"**

The greater the comprehensiveness of the training, the greater is the likelihood of producing knowledgeable and competent sales staff. Well-informed sales staff that have a great understanding of internal policies and procedures, processes and systems, and information sources and channels, are more likely to be adept in servicing clients and resolving problems. This level of competency lends itself to better time management for both the speedy service of clients and the ability to devote a greater proportion of time to activities geared towards group and self-development.

2.2.2. Extracting the causal relationships

The causal loop illustrates the organization's current context involving the induction and training of employees. The largest causal loop within the diagram is a balancing loop, which is offset by two smaller reinforcing loops. A positive growth within any of the variables within these two loops, contributes to an exponential positive influence within the entire system, particularly within the area of concern that was alluded to in the exploratory interview with the Regional manager of Co. X, i.e. the system involving "client satisfaction" and "employee competence."

The variables relate to each other in the following manner:

There is a particularly **high staff turnover** in Co. X which has various negative consequences for the organization. Not only does the organization have to contend with an increase in administrative work to be compliant with legal requirements, as well as internal monitoring and control systems, but considerable time is required for the effective induction and training of the new employees. This puts considerable strain on senior staff time-management. Additionally, during the period of induction and training, when the new employee is being equipped to fulfil their functional roles, there is a general lack of **productivity and developed competence** in servicing clients. Owing to the general lack of competent staff, during the periods where new recruits are being trained, clients experience a drop in the level of service, which causes a general feeling of discontent with Co. X. The fall in **client satisfaction and related loyalty** as a product of the poor service perceived by themselves, translates into a loss of revenue to Co. X.

One of the motivating factors for sales staff is that of monetary compensation. Sales salaries are heavily subsidized by a commission component, which is directly related to client turnover and gross profit percentage. Since client satisfaction generally translates into a decrease in spend with Co. X, this directly impacts sales staff earning potential and a loss in remuneration is a strong de-motivating factor. Without the monetary incentive, there is a general decrease in the **effectiveness of motivation techniques** applied to staff. De-motivated and generally discontented employees are more likely to seek other employ, which aggravates the **degree of staff turnover**. Moreover, the employees that are most likely to leave the organization are those individuals who already developed the desired level of skill and competence, allowing them to find other employ easily. This exodus of competent staff further exasperates the general drain on productivity of the organization for two reasons. Firstly, new employees need to be recruited and trained, as mentioned above. Secondly, the accumulated knowledge that enables greater productivity is lost to the organization when the competent individuals leave.

Co. X already has some form of training and induction system in place for new recruits in an attempt to assimilate these individuals into the organization's culture, performance standards and code of conduct. This requires a great deal of commitment from senior staff because they are responsible for the training of the new employees. However, an increase in

frequency in training makes it increasingly difficult for senior staff to accommodate all of their responsibilities. There is therefore a shortage in **availability of senior staff to conduct the training.**

Owing to the multitude of learning styles utilized by individuals, Co. X utilizes various **methods and tools** in instructing recruits. This is done for a few reasons, namely: Repetition consolidates information and allows for greater retention; A single training tool may not appeal to all recruits and therefore be ineffective for information transfer; and utilizing numerous training methods and tools reduces the information gap because information that might otherwise have been excluded in one method, would be included in other methods.

The use of these various methods enables the transfer of information that would improve the **quality and depth of training content,** which would result in greater **productivity and developed competence.** This contributes to their ability to provide better **client service and satisfaction** (as mentioned above). Focused knowledge would assist in designing more focused and relevant training and induction furthering the organization's ability to develop competent staff that would allow it to retain and grow its competitive advantage in the IT Distribution industry.

2.2.3. Practical Problem

The situation analysis revealed the practical problem as follows. Internal and external factors contribute to the high turnover of sales staff leading to client dissatisfaction and loss of revenue to the organization. As can be seen from the initial data analysis of contextual variables, the average age and number of months of service to the organization is low. This supports the researcher's assumption that the sales staff at Co. X have a low level of competence and little developed knowledge and experience. This is a result of Co. X promoting the recruitment of young inexperienced staff as a means of maintaining low operational costs, by paying entry level salaries. In addition to the low remuneration structure, there could be a cultural influence that drives frequent resignations and high staff turnover, which contributes to the low level of competence of the sales force.

However, the recruiting policies and salary structures of the sales staff are developed by executive management, and the researcher had neither power to investigate or exert influence in these matters.

Owing to the fact that the organization is unlikely to modify its company culture, recruitment policies or motivation techniques, one could surmise that one's point of influence lies in mitigating the negative impact of high staff turnover, as opposed to the prevention thereof.

2.2.4. Research Question

There are numerous effects of high staff turnover, all of which should be considered when designing a suitable intervention. However, the constant need to recruit and train individuals is of particular concern. Additionally, this is the only point of interception that is viable within Co. X's systemic context, because of Co. X's rigidity in terms of their motivation techniques and HR policies. Returning to the problem of training and induction, it is evident that a great deal of time is required to assimilate new recruits and equip them with the necessary skills and knowledge to perform their functional roles to the defined competency standard. This requires a great deal of commitment in terms of time and effort from senior staff.

Given the context of this practical problem, the following research questions were devised:

What are the problems with the existing training, induction and knowledge management systems, and how can it be refined to accelerate newcomer development? Furthermore, what aspect of training during induction would facilitate the desired competence within the relevant time parameters and minimum disruption to the organization?

2.3. Conclusion

Through the use of System's Thinking Tools (Senge, 1994) i.e. the ID (see Appendix D) and the CLD (Figure 2.1), Co. X's particular context has been refined so as to determine the causal influences upon the development of newcomer competence. The information gained

from exploratory interviews allowed for the construction of the CLD, and the confirmation that training, induction and knowledge management is the point of interception in resolving the problem of low employee competence in job performance at Co. X. The identification of this theoretical domain serves as a guide towards the research design and execution. In the chapter that follows, a thorough literature survey shall be conducted with view of investigating how training has been addressed by previous scholarly work and what theories are applicable to this study.

CHAPTER 3: CONCEPTUAL AND THEORETICAL PERSPECTIVE

3.0. Introduction

In chapter two it was indicated that the ultimate objective of this dissertation was to resolve the training and induction dilemma of Co. X and it was suggested that this could be achieved by optimizing training and induction to accelerate the development of competence. Three broad theoretical areas were chosen because they were alluded to by the respondents in the exploratory data collection and analysis. A literature review on the broad subject areas was conducted and the content cited was selected based upon its particular relevance and fit to the subject under investigation, as well as its fit in terms of common conditions and outcomes. In this chapter, learning theory, induction theory and knowledge management theory are explored as they pertain to individual learning within organizations.

3.1. Learning theory

"To improve, we must continually acquire and create new knowledge... we must learn... and put it to use! This applies equally to us as individuals and to our organizations." (Wiig, 1993)

Although individuals have their own particular learning styles which determine the type and rate of their own personal knowledge development, the organization has an impact on how that individual achieves learning goals. One aspect of organizational learning addresses how the organizational context and culture can foster individual learning. It is for this reason that both organizational learning and individual learning have been addressed in the literature survey.

3.1.1. Organizational Learning

Argyris (1999) proposed that a true learning organization is one that is highly adaptable to changing environmental conditions and avoids the perpetuation of existing models for the sake of stability. Learning organizations achieve this through the creation of a culture and context that would foster individual learning and growth. Garvin (1993, in Argyris, 1999) affirms this in his statement that the learning organization is vigilant of the development of models facilitating deep understanding, because it enables the individual to apply his

knowledge in innovative and broad ways. However, "Learning does not always lead to intelligent behaviour. The same processes that yield experiential wisdom produce superstitious learning, competence traps, and erroneous inferences," (March & Leavith, 1998, in Argyris, 1999, p. 12). Erroneous inferences are a product of inter-subjective interpretation and are only likely to be reduced where there has been adequate discourse on the subject matter, creating a greater shared understanding.

Argyris (1999) identified 2 common errors organizations make in their efforts to become learning organizations. Firstly, they fail to define learning in terms of content, context and scope. It is necessary to conduct a thorough assessment of the internal environment and define the knowledge required to achieve goals, whilst combating defensive attitudes and behaviour resulting from intermittent failures. Secondly, organizations should overcome the perception that motivation is the sole influence of learning. Beyond having an in-depth understanding of the knowledge requirements of each functional role within the organization, there is a need to understand how individuals interpret, assimilate and utilize knowledge in order to effectively equip individuals for those roles. In doing so, management needs to consider the different forms of knowledge, their particular sources, individual learning styles in assimilating that knowledge, and the types of activities and processes most suitable in disseminating that knowledge.

An aggressive learning strategy is one where the organization actively records and archives existing and new knowledge, and creates incentives for the maintenance of the knowledge management system and the dissemination of information (Wiig, 1993). Wiig (1993) suggests that a good means of retaining and transferring knowledge within an organization is to translate lesson-laden experiences into case references for new employees to access. This would provide support in similar situations in the future. Wiig (1993) made reference to this as the "Corporate Memory System" (p. 216) which retains knowledge assets. When one considers existing knowledge transfer, there are numerous aspects that would be desirable to transfer. Not only would the organization wish for pertinent information and skills to be transferred, but also relevant insights, perspectives, understandings, systems and methods that would be held tacitly by experts within the organization (Wiig, 1993, p. 217). The manner in which knowledge is transferred to individuals, as well as how knowledge is made available to them when they engage in information-seeking behaviours is detailed in Table 3.2.

Knowledge transfer is dependant upon both the knowledge sources and the manner in which the information is conveyed. Individuals with developed knowledge are responsible for the knowledge transfer. These individuals are described below, as well as particular tools and contexts that optimize the transfer of knowledge.

3.1.1.1. Knowledge Disseminators

Learning is highly dependant upon the skill and level of proficiency of the trainer and the learning environment. Senior members of organizations are required to support knowledge management by fostering a culture that values learning and development. These organizational members who are by function responsible for the dissemination of knowledge are deemed knowledge workers. According to Wiig (1993) an ideal knowledge worker should be well educated and trained within their specific functional roles. That knowledge worker should also be highly proficient along all four conceptual knowledge levels (as described in section 3.1.2.1) and be able to act intelligently in various contexts. Moreover, they would necessarily be willing and able to disseminate information across the organization. Further, the organization should support the knowledge worker by providing a suitable infrastructure and cultivating an organizational culture that fosters learning.

3.1.1.2. Knowledge Enablers

Nonaka & Takeuchi (2004) refer to 5 knowledge enablers that can be implemented by knowledge workers, namely: Instilling a knowledge vision; managing conversations; mobilizing knowledge activists; creating the correct context; and globalizing local knowledge. For our specific purposes, the first four are the most pertinent of these factors. Mobilizing knowledge activists is of particular importance because it is the critical stimulant producing learning activities. Knowledge activists have multiple purposes, but their roles are static. Their main function is to guide, motivate, facilitate and prepare individuals for knowledge creation and transfer. Knowledge activists are indispensable within an organization because of their administrative role in the process.

With regards to the learning environment, effective learning is facilitated through a number of organizational strategies. Wiig (1993) proposes that four factors comprise a learning context. Firstly, learners should be exposed to a structured means of communication of a

specific knowledge area. Secondly, learners should have supplementary materials, e.g. manuals, provided to them. Thirdly, the knowledge should be presented in such a way as to build upon existing knowledge. Finally, the learner should have defined value outcomes. In order for the knowledge to be effectively internalized, the material should be relevant, and congruent with existing knowledge (Wiig, 1993). It is then internalized through codification, representation, contextualization and association with existing concept hierarchies (Wiig, 1993).

Finally, barriers to learning should be acknowledged for their role in the learning context. Defensive reasoning is the common deterrent of learning and ability to adapt to change. In order to overcome defensive reasoning, a number of strategies can be implemented. Organizations can promote change by presenting valid data confirmed by critical reasoning and moving individuals up the ladder of inference. This would only be effective if the data is adequately connected to the organization's real business context and aligned with both individual and organizational goals and desired outcomes. Moreover, individuals would have to be permitted an opportunity to express their assumptions and "practice" without the fear of reprisal.

3.1.2. Individual Learning

3.1.2.1. Dimensions of knowledge

Wiig (1993, 2002) proposed that people may hold knowledge according to how they might use it and this is a direct reflection of individual levels of proficiency in a knowledge area. These are divided into 4 conceptual knowledge levels which may affect the individual's learning and decision-making capabilities, as well as how one may collaborate with other individual's who have varying knowledge and capabilities. The four conceptual knowledge levels are: Idealistic Knowledge; Systematic Knowledge, Pragmatic Knowledge; and Automatic Knowledge.

Idealistic knowledge is the level at which an individual can have a vision of the ideal and know why the ideal is appealing. Systematic knowledge is the level at which an individual recognizes related systems and schemas within the knowledge area, and realize that the ideal can be achieved. Pragmatic knowledge is the level at which individuals have a sound factual

foundation and are able to make decisions and solve problems. Finally, the level of automatic knowledge is where individuals perform their role without any conscious reasoning. Their actions are based upon tacit competence. The relevance of these levels to Knowledge Management within an organization is that a manager would ideally like to facilitate the development of his / her employees across the various conceptual knowledge levels, because if achieved, it would necessarily be the case that the employee would be able to perform his role effectively and efficiently. Intrinsic to an organization's approach to learning, is the understanding of requisite knowledge, as well as its purpose and ends. An employee would be considered competent if he / she displayed deep knowledge and technical skill proficiency. Each of these elements is achieved through a different method of knowledge dissemination. For example, techniques are best endowed through training and deep knowledge is best achieved through education. Furthermore, employees would better service the organization's clients at a higher conceptual knowledge level.

3.1.2.2. Individual Learning Styles

Wiig (1993) states that there are three major learning perspectives which relate to the manner in which individuals process information, how they perceive and reason a situation, and how they behave accordingly. The first perspective suggests that individuals process information either actively or passively. The second perspective maintains that individuals engage new knowledge in one of two ways, they either assume an active role in their learning by participating, or they would tend towards reflective observation detached from the situation. Finally, the third perspective relates to how the first two perspectives would interact and as a result what the individual's corresponding behaviours and best learning styles would be. The third perspective classifies individuals into four categories: innovative learners (divergers); analytical learners (assimilators); common sense learner (convergers); and dynamic learners (accommodators) (Refer to table 3.2.).

The characteristics of the individuals that fall into these categories directly relate to the best means of motivation for learning and the teaching methods that would best facilitate knowledge integration. (Refer to table 3.1) Furthermore, the different learning styles and teaching methods would lend themselves to specific functional strengths. It would be near impossible to accommodate all the variations in a training program, without making it rigid and inflexible. However, it is possible to include the four teaching methods and incentives to

create the best learning environment. Thereafter, it would be a manager's decision on how best to place the individual within the organization, so as to leverage that individual's specific capabilities.

Because individuals have particular learning styles that are innate to them, organizations would be well-advised to incorporate numerous methods into their training and induction programs so as to accommodate these differences in knowledge internalization. Wiig (1993) goes on to describe some common knowledge building activities. The activities that are dependant on existing internal and external knowledge sources include: formal education; formal training; reading; assimilation of knowledge through media; peer knowledge transfer; and computer-based multi-media education and training. Activities that create new knowledge within individuals are typically transferred through: On-the-job training; trial-and-error; research; and innovation. Although classroom education and training and on-the-job training have traditionally been the easiest to control in terms of cost and quality, the parallel use of the alternative methods of knowledge building are useful in increasing breadth and depth of training content, and instil balance and homogeneity into a training program so as to reduce the possibility of knowledge gaps occurring (Wiig, 1993). Moreover, individuals that are initially exposed to teaching methods that provide idealistic and systematic knowledge and then gradually introduced to automatic and pragmatic knowledge are better equipped with a deep understanding that would allow for broader decision-making and problem solving skills. This teaching process is referred to education. "In contrast, the main objective of training is to impart knowledge to improve recipients' proficiency in performing well-defined, routine tasks" (Wiig, 1993, p. 247). Although training may have more tangible and immediate results, education equips individuals to execute more difficult and complex work.

Table 3.1: Learning Styles (Adapted from Wiig, 1993)

INNOVATIVE LEARNERS (DIVERGERS)		ANALYTICAL LEARNERS (ASSIMILATORS)	
Teaching Method:	Discussion	**Teaching Method:**	Provide with information, primarily idealistic and systematic knowledge
Process:	Integration with existing knowledge	**Process:**	Forms new concepts as the new situations are assimilated
Incentive:	Requires reason for need to learn	**Incentive:**	Concerned with facts
Behaviours:	Interactive	**Behaviours:**	Teacher needs to be active
Strengths:	Can generate practical knowledge from abstract knowledge (particularly pragmatic from systematic knowledge)	**Strengths:**	Can create valuable theoretical insights
Weaknesses:	May create concrete approaches that are idealized and impractical	**Weaknesses:**	Are not very practical
COMMON SENSE LEARNERS (CONVERGERS)		**DYNAMIC LEARNERS (ACCOMMODATORS)**	
Teaching Method:	Coaching	**Teaching Method:**	Self-discovery and peer teaching
Process:	Learner practices while internalizing new knowledge	**Process:**	Integrates application and experience while learning
Incentive:	Wishes to try while learning the new situation	**Incentive:**	Self-motivated to learn
Behaviours:	Student acts and reacts	**Behaviours:**	Self-generated student-teacher interaction
Strengths:	Generates abstract knowledge from practical experiences	**Strengths:**	Learns new skills quickly (particularly pragmatic and automatic knowledge)
Weaknesses:	May have problems assimilating theoretical education and abstract information	**Weaknesses:**	May not be good at acquiring and integrating underlying understanding (particularly idealistic and systematic knowledge)

3.1.2.3. Individual Learning Strategies

In order to aid effective learning, there are a number of strategies that an organization can apply. In order for the knowledge to be effectively internalized, the material should be relevant, and congruent with existing knowledge (Wiig, 1993). It is then internalized through codification, representation, contextualization and association with existing concept hierarchies. (Wiig, 1993)

According to Wiig (1993), seven basic learning strategies exist for individuals:

(1) Rote Learning
(2) Learning by instruction
(3) Learning by deduction
(4) Learning by induction
(5) Learning by analogy
(6) Learning from examples
(7) Learning through observation and discovery

It is also the case that the gain of proficiency in any conceptual knowledge level is best achieved by internalizing the knowledge through repetition (Wiig, 1993). Repetition within the knowledge area facilitates the ultimate transition to the automated knowledge level. It is often the case that most training programs are unable to accommodate sufficient repetition of information because of time constraints. Retention of the information disseminated is greatly reduced as the demand on the individual's capacity to absorb factual information increases (Wiig, 1993). Knowledge therefore remains as idealistic knowledge which, as has been previously mentioned, is insufficient for deep understanding and the level of competence required for superior client satisfaction.

Training and education is utilized to transfer skills and deep understanding respectively. Furthermore, individual knowledge is built through engagement in functional activities that either impart improvements in performance, or facilitate the redesign of activities to improve performance. Beyond interactive learning, individuals shall need to draw from existing knowledge resources as the occasion may arise. These resources pertain to "how-to" (Wiig, 1993) knowledge and is made available through explicit forms such as: documents and manuals; books and articles; knowledge bases; and knowledge-based systems. Finally, individuals are aided in their development through access to and utilization of embedded knowledge in organization-specific technologies, operations, systems, and products and services.

Table 3.2 Examples of how organizations learn and build knowledge (Adapted from Wiig, 1993)

METHOD OF KNOWLEDGE BUILDING	PURPOSE OF KNOWLEDGE BUILDING
Build Knowledge In People	
Train People	Transfer skills & Know-How to Perform Tasks
Educate People	Transfer Basic Knowledge & Understanding
Learn on-the-job 1	Improve Ways of Performing the Task
Learn on-the-job 2	Improve Ways of Redesigning the Task
Hire Knowledgeable People	Obtain Knowledge that is Missing or Sparse
Build Knowledge in Repositories Outside People	
Capture & Codify Lessons-learned	Learn from Past Successes & Failures
Document Knowledge in Manuals	Codify & Distribute How-to Expertise
Document Knowledge in Books & Articles	Codify Basic & How-to Expertise
Build Knowledge Bases	Codify & Archive How-to Expertise
Perform Research & Document Results	Create New Basic & How-to Knowledge
Improve Corporate Culture	Spread & Institutionalize Knowledge
Improve Corporate Structure	Reflect & Preserve Management Knowledge
Build Knowledge-Based Systems	Codify, Distribute, & Automate How-to Expertise
Build Knowledge by Embedding	
Embed Knowledge in Technology	Improve Technology & the Way It is Used
Embed Knowledge in Standards	Improve Standard Technology Solutions
Embed Knowledge in Operating Practices	Spread Better Ways of Operating to All
Embed Knowledge in Organization Structure	Facilitate Operations Based on Experience
Embed Knowledge in Systems & Procedures	Ease & Require use of Better Methods
Embed Knowledge in Products & Services	Improve Products & Services

The above learning styles and learning activities are taken into account in Wiig's (1993) idealized teaching model, which is detailed in the paragraphs below.

3.1.2.4. Individual Learning Model

In order to optimize an individual's development, Wiig (1993) proposed a cumulative learning process. The primary phase is one in which a specific knowledge unit or script is presented to the learner and this is then expounded with examples and general characteristics, which are introduced in order to provide systematic understanding upon which further knowledge can be built. Further examples are then presented that must be congruent with the existing script so as to impart concrete knowledge. The next step requires the description and perhaps an execution of a routine scenario. This is to instil pragmatic knowledge within the same knowledge domain. Variants are then related to these routines to broaden systematic knowledge. Once emphasis has been shared by pragmatic and systematic knowledge, the foundation has been laid for the learner to internalize the knowledge through repetition. This process of "abstract-concrete-abstract" is repeated for all aspects of a functional role so that the learner gradually builds competency through the conceptual knowledge levels (Wiig, 1993, pp. 230-231).

There are two important aspects of this teaching model. One aspect is that the learner builds understanding of concepts within a particular knowledge domain and further develops relationships through associations and concept hierarchies (Wiig, 1993). Secondly, and perhaps more importantly, this model allows individuals to learn faster and more effectively through mixed top-down and bottom-up strategies. This is achieved because sufficient systematic, pragmatic, automatic and idealistic knowledge are imparted so that the individual can develop the appropriate decision-making and behaviour judgements (Wiig, 1993). Moreover, individuals would have developed the ability through conceptual knowledge that would guide them in utilizing the appropriate external knowledge sources and tools to facilitate further knowledge.

3.2. Induction Theory

Recruiting and integrating new employees into an organization is a daunting process for both the employee and the employer. The new employee is faced with the challenge of assimilating the necessary skills and knowledge in order to perform their roles. From the organization's perspective, they require employees to adopt the culture of the company and become mobilized as soon as possible so that they may actively contribute to the productivity of the company. But an induction process is more than just a period of training. It influences employee attitudes about the company, the work they are to perform and their roles in the organization (Robbins, 2002). During this period persistent perceptions and motivations are established with regards to the company (Penzer, 1973).

Robbins (2002) suggested that formal orientation programs effectively reduce staff turnover, increase productivity, improve morale, and most importantly, facilitate learning. Additionally, this induction process should be conducted in such a manner that it fosters employee commitment to the organization so as to fuel the employee's learning efforts and performance improvement (Reichers, Wanous & Steele, 1994). A tactic that can be utilized by employers to foster commitment would be to emphasize the credibility and prominence of the company early in the induction process. Reichers, Wanous & Steele (1994) purport that this would increase the newcomer's eagerness to identify with the company. Another means of promoting devotion would be to provide newcomers with certain privileges and freedoms that they may not feel they are yet deserving of. This may result in a feeling of obligation and need to reciprocate this good-will.

Chancey (1968) proposed that the most effective orientation programmes were those that addressed the delivery of the following 4 factors:

- Comprehensive information that employees would need and / or want in order to perform their jobs with regards to people, products, processes and problems (Penzer, 1973).
- Suitable assignment of individuals that would facilitate the induction process (Such as mentors or "buddies")
- Structured information dissemination
- Verification of completion of all aspects of induction

Beyond training and development content, organizations should be mindful of the role that socialization and role models play in the integration of new employees (Filstad, 2004). The influence that existing members of the organization have on new employees cannot be disregarded, particularly in the realm of tacit knowledge. It is further the case, that observation alone is not sufficient for the transfer of tacit knowledge. Direct interaction with organizational members within the context of social practice is essential (Lave & Wenger, 1991, in Filstad, 2004).

It was further suggested by Reichers, Wanous & Steele, (1994) that the correct socialization process is dependant upon specific job and employee characteristics. The two most important factors that determine socialization design are the newcomer's level of experience, and the nature of their experience. These factors influence the newcomer readiness to be easily assimilated into the new organization, because a well-developed schema enables rapid assimilation of similar knowledge and processes (Reichers, Wanous & Steele, 1994). Therefore, it is necessary for the organization to assess newcomer competence and experience so as to leverage it in terms of reducing the amount of information that is required, as well as the need to conduct contextualization activities and discussions.

Reichers, Wanous & Steele (1994) identified 4 basic levels of employee experience. Employees with limited experience were deemed neophytes. Initiates were those employees who had some degree of experience that was similar to that of the organization. Converts and veterans were those individuals that had substantial, but irrelevant experience, and vast, relevant experience respectively (Reichers, Wanous & Steele, 1994). Neophytes form a large

subset of the newcomer groups to Co. X. When designing an induction process for neophytes, organizations need not focus on reforming pre-existing schema because of their limited experience. The focus in inducting neophytes revolves around the dissemination of job and organizational knowledge specifically. Moreover, all efforts should be made to reduce anxiety, (which is highly prevalent in this group), so that employees can concentrate on performance enhancement. Reichers, Wanous & Steele (1994) proposed three forms of instruction that would be most successful in inducting neophytes in the most practical and rapid manner. These include: formal and informal instruction; mentoring; and on-the-job training.

Organizational socialization occurs through inter-individual and inter-group interaction. This process allows individuals to adopt and appreciate values, abilities, expected behaviour and social knowledge (Taormina, 1997, in Filstad, 2004) within the organization. Beyond organizational strategies of induction, individuals have their own attributes and behaviours that influence their assimilation. Miller & Jablin (1991, in Filstad, 2004) purport that individuals display their own information-seeking behaviours. Chao et al. (1994, in Filstad, 2004) expand that concept to include feedback-seeking behaviour. Moreover, it is the case that individual expectations and experience influence the outcomes from socialization (Tierney, 1997, in Filstad, 2004).

Kraimer (1997, in Filstad, 2004) states that the different domains of socialization, i.e. organizational socialization strategy, information-seeking behaviour, and individual pro-activity and other attributes, have different focuses, and should therefore have separate models developed in securing their effectiveness. In terms of organizational socialization, it was suggested by Chao et al (1994, in Filstad, 2004) that individuals develop role-specific skills, elucidation on roles and responsibilities, and cultural assimilation. The primary means of delivery of these aspects of new employee induction, is through existing employees, i.e. superiors, colleagues and supporting staff., which illustrates what an important role relationship-building plays in the induction period (Adkin, 1995; Griffin et al, 2000; Morrison, 2002; Saks & Ashforth, 1997; Chan & Schmitt, 2000, in Filstad, 2004). Although a distinction can be drawn between the roles of supervisors and colleagues, i.e. supervisors provide functional knowledge, whilst colleagues illuminate cultural and behavioural norms and provide emotional support, (Miller & Jablin, 1992; Morrison, 1993, in Filstad, 2004) it is evident that all interpersonal relationships offer valuable input in the induction of employees.

However, many authors agree that the supervisor assumes the most important role in the orientation process, because of the level of influence that he / she asserts on a daily basis (Robbins, 2002).

Role models are people with whom new recruits can identify and emulate preferential behaviours. The precise defining characteristics and behaviours of role models have yet to be clarified (Hackett et al, 1989, Nauta & Kokaly, 2001, in Filstad, 2004), however, it is regarded by many that role models possess desirable attributes to those individuals who emulate them (Butcher & Steling, 1977, in Filstad, 2004). It is noteworthy that no single role model is in possession of all the attributes that an individual would regard desirable for their particular purposes, and therefore it is likely that individuals may select multiple role models (Gibson, 1995, in Filstad, 2004). Individuals acquire these various attributes and assimilate them according to their own personal style and behaviour (Filstad, 2004).

New recruits shall experience variations within their socialization. This variation is due to the personal characteristic of those individuals, such as their expectations, prior experience, confidence and competitive nature (Filstad, 2004). It was determined that experiences within the first four to six weeks of the new recruit's employ within the organization, had the most profound effect on the outcomes of socialization (Filstad, 2004). Owing to these facts, it is imperative to align new recruits with all the relevant role models possessing all the attributes that the organization most wishes to be emulated.

Filstad's (2004) study focuses on the causal factors behind relationship-building within the organization, particularly with regards to the chosen role models and the factors that determine those choices. The personal characteristics that underlie these choices are the new recruit's level of self-confidence, personal motivation and degree of pro-activity. The findings of Filstad's research suggest that a new approach to individual learning may be necessary to accommodate organizational socialization influences. Particular emphasis on interaction and discourse should be made during the first four to six weeks of induction, and management should involve existing employees with the particular characteristics that they wish the new recruit to acquire. Additionally, management should be aware of "informal communities of practice" and make attempts to manage their affect on the individual's socialization. Further consideration should be made that the employee should be treated as a newcomer for the first six to twelve months and permitted trial-and-error learning experiences without fear of reprisal.

These findings were rather broad and non-specific in their interpretation. Filstad did not account for how the organization could identify and measure particular individual characteristics. The author also did not make any suggestions on particular processes that the company could implement in its execution of the induction process that would accommodate these personal characteristics and choice of role models. However, the value in her research was the confirmation that a variety of role models are to be involved in the induction process, so as to expose new recruits to a variety of specialist knowledge areas, as well as a variety of desirable personal attributes and behaviours.

3.3. Knowledge Management:

3.3.1. Individual Knowledge

The knowledge-creating company is one that mobilizes individuals and groups in learning and growth activities and enables the acquisition, creation and dissemination of personal knowledge transfer to the rest of the organization (Nonaka & Takeuchi, 2004).
The terms "information" and "knowledge" are often used interchangeably, however, for the purposes of this thesis, it is the case that knowledge is constructed from information. Knowledge is essentially information in a specific context with a particular purpose. "**Information** consists of facts and data that are organized to describe a particular situation or condition," (Wiig, 1993, p73). Dretske (1981, in Nonaka & Takeuchi, 2004) claimed that information yields knowledge through the transmission of specific signals, and that knowledge is therefore an information-produced, sustained belief. "**Knowledge** consists of truths and beliefs, perspectives and concepts, judgements and expectations, methodologies and know-how. Knowledge is accumulated, organized and integrated and held over longer periods to be available to be applied to handle specific situations and problems," (Wiig, 1993, p73). Furthermore, an individual's knowledge comprises a large number of assimilations and associations. As a result, knowledge models can always only be a simplification of what has been elicited from individual perspective (Wiig, 1993).

Information is a flow of messages and knowledge, and is therefore related to human action. Berger & Luckmann (1966) state that interpersonal interaction grounded within a specific social, historical and cultural context, collectively constructs social reality and the related

language and knowledge. This knowledge would influence individual perception, cognition and behaviour. Knowledge is said to be derived from the perception and acquisition of external objects, however, Polanyi (1996) maintains that knowledge is assimilated through human interaction and personal involvement with external objects.

According to Nonaka & Takeuchi (2004), knowledge consists of two components, i.e. explicit knowledge and tacit knowledge. Explicit knowledge comprises data that can be expressed through sound or visual means, and as a result the knowledge is more easily transferable. It is available to our conscious minds as public knowledge because it can be formalized in tangible forms for examination by the learner, e.g. manuals, documents, computer applications and files (Wiig, 1993). In this form, knowledge can be shared, communicated and recorded for future use. Conversely, tacit knowledge is more ephemeral in nature, because it is entrenched within individual values and experiences and elusive to individual awareness and outward expression. Tacit knowledge is knowledge which is considered to be personal knowledge which has been internalized so that it is manifested automatically. It comprises: facts and mental models; perspectives and concepts; judgements, expectations and beliefs; and reasoning and methodology strategies (Wiig, 1993). Polanyi (1996) maintains that individuals are unable to outwardly express all the knowledge they have acquired. The nature of tacit knowledge is such that individuals are not readily able to articulate it and it merely guides our routine behaviour subconsciously, (Wiig, 1993) and is therefore not easily elicited from individuals for the purposes of knowledge sharing. Due to the fact that knowledge comprises these two interdependent components, it is considered paradoxical in nature (Nonaka & Takeuchi, 2004). Tacit knowledge is further segmented into two dimensions. The cognitive dimension relates to knowledge embedded within our mental models that aid individuals in their interpretation of environmental stimuli and further guide their behaviour. The technical dimension refers to the formal skills. This is derived from individual experience and produce insights and intuitions (Nonaka & Takeuchi, 2004). Grant (1997) asserts that tacit knowledge is manifest in application and is not amenable to transfer. This concept was challenged by Nonaka and Takeuchi (2004) in that they believed that codified and explicit knowledge is actually the starting point for additional knowledge creation and not the outcome. It stands to reason that variable amounts of probing, reflecting and reasoning will facilitate the extraction of tacit knowledge.

One of the main aims of the learning organization is to attempt to leverage tacit knowledge and transfer it to explicit knowledge so that it may be disseminated and preserved (Wiig, 1993). The objective then is to transfer explicit knowledge to tacit knowledge in individuals to increase their competence and improve their level of insight and frames of reference, i.e. develop new understanding, concepts and associations (Wiig, 1993). Two other forms of knowledge flow exist in addition to the two described above: explicit-to-explicit; and tacit-to-tacit. In explicit-to-explicit knowledge flows, pre-existing tangible forms of knowledge are compiled, summarized or modified to customize it for the specific purposes of the organization. This is implicit in managing knowledge assets. Tacit-to-tacit knowledge flows occur when individuals work in close proximity with one another through collaboration. This learning is referred to as inference-based learning. In doing so, they are sharing aspects of their tacit knowledge that is particular to the knowledge area within which they are working (Wiig, 1993).

Nonaka and Takeuchi (1995) claim that knowledge is created through a socially constructed cyclical process, because the interaction between tacit and explicit knowledge is a result of dialogue. This is known as the socialization-externalization-externalization-combination cycle (SECI cycle). They propose that learning is adhoc, and occurs at an individual level, as opposed to an organization level (Bennett, 2001). Davenport (1998) suggested that managers derive their cognitive knowledge largely through discourse. In fact, it was found that two thirds of managers derive knowledge through informal discussion, as opposed to through formal documentation. Similarly, in a study conducted by McAdam & McCready, (1998) informal discussions and collaborative group discussions were more highly cited as effective learning activities compared to formal discussions and presentations respectively.

Organizations that embrace learning and development are in a constant process of synthesizing paradoxical phenomena, such as tacit and explicit, top-down and bottom-up management, or hierarchy or taskforce structure. As previously mentioned, tacit and explicit knowledge are inseparable paradoxical elements, and constantly interacting in a spiral manner to create knowledge (Nonaka & Takeuchi, 2004).

Nonaka & Takeuchi refer to 4 modes of knowledge conversion, otherwise known to be learning mechanisms:

- Externalization (Tacit to Explicit)
- Socialization (Tacit to Tacit)
- Combination (Explicit to Explicit)
- Internalization (Explicit to Tacit)

Externalization is generally the formal development of tangible documents for the purposes of defining concepts and recording knowledge in an easily transferable form. This is usually facilitated through dialogue and reflection. Socialization facilitates exchange of knowledge through joint activities that involve one or more people in general interaction, conversation and sharing of experiences. The theory is similar to theory of group processes and organizational culture. Combination is the process by which information is converted into a form that can be utilized by all stakeholders and can be integrated into the company's existing knowledge base. This is firmly entrenched within the information-processing paradigm. Internalization can best be described as learning by doing. This is the knowledge generated by experience, and is subconsciously assimilated into existing mental models (Bennett, 2001). Senge's (1990, 1994) theories relating organizational learning are prominent within this learning mechanism.

Nonaka and Takeuchi assert that the learning mechanisms are grounded within focussed knowledge spaces. Davenport & Prusak (1998) termed this the "Ba", which is a direct translation from "place" (Nonaka & Takeuchi, 2004). A "Ba" is a shared space for conceptual knowledge exchange, where there is a resource concentration and a means for knowledge transfer. The "Ba" is said to be a high density field in which explicit knowledge can crystallize through discussion and observation. This can be done when individuals synchronize their communications and develop a common language for shared understanding. "Ba" are not restricted to physical spaces in that they encompass interactions that occur in all time and space. "Ba" provides a platform to convert tacit to explicit and back again in order to advance collective knowledge (Grant, 1997), and it can be carefully constructed to suit knowledge requirements and activities, yet must conform to "system owners" perceptions, goals and purposes (Davenport & Prusak, 1998).

There are four different "Ba" relating to the four learning mechanisms as stated above.

- Originating (Socialization)
- Interacting (Externalization)
- Cyber (Combination)
- Exercising (Internalization)

Originating "Ba" are usually direct interfaces, specifically within open organizations, in which individuals can openly share feelings and experiences. It is highly dependant upon a culture of trust and commitment. Interacting "Ba" are deliberately constructed environments that facilitate dialogue and reflection. Cyber "Ba" is aptly named because of its virtual nature, e.g. digital environments such as online workgroups, and enable systemic knowledge transfer. Exercising "Ba" occur in environments wherever there are interactive knowledge transfers, such as mentoring or other experiential learning. This process has come to be known as the SECI cycle.

The process by which knowledge is created through the SECI cycle is known as knowledge conversion and is reliant upon social interaction and not confined to individual action. Furthermore, the cycle is dependant upon 5 conditions for effective knowledge transfer (Nonaka & Takeuchi, 2004). The SECI cycle is first and foremost driven by **organizational intent**, i.e. the organization's strategy in achieving its vision and goals. Only through the definition of organizational goals, and collective understanding and action, shall the knowledge management requirements emerge. Hence the individual commitment to the activities dedicated to achieving those knowledge goals is formed. Secondly, a reasonable amount of individual and group **autonomy** is required to promote knowledge management activities. Greater autonomy allows for greater flexibility in acquiring, interpreting and relating information, as well as foster individual motivation and responsibility for one's own learning initiatives. The third condition for the SECI cycle to occur is the presence of **intra-organizational fluctuation**, in the sense that internal conditions would require interaction between individuals and groups both within the organization and with the external environment. Breakdowns in routines and systems occur as a result of changing environmental signals, which necessitates reflection and reconsideration of the existing status quo. This in turn motivates conceptual redefinition and generation of knowledge creation activities through social discourse. **Redundancy** is the fourth condition for the propulsion of the SECI cycle. The meaning that is implied by "redundancy" in this context is that of

information that extends beyond the minimum knowledge requirements of the organization (Nonaka & Takeuchi, 2004). Information that is shared with members who do not have a particular use for it at the time, promotes broadening of perspectives and greater systemic insight, due to the overlap of information across functional boundaries. Redundant information assists with both retention of information and the building of communication channels for further information transfer. The final condition is that of **requisite variety**. According to Ashby, (1956, in Nonaka & Takeuchi, 2004) the individuals within an organization must have as closely matched complexity as the environment within which they are based, in order for them to be able to cope with the variety of situations that they may encounter. Possessing requisite variety allows individuals to adapt swiftly and effectively. This ability to adapt fosters a greater capacity and willingness to learn.

Neither the top-down nor the bottom-up model of management is sufficient to develop knowledge according to the SECI cycle (Nonaka & Takeuchi, 2004). The transfer of knowledge from the top of the organization's hierarchy through information channels to lower level employees is referred to as the top-down model. This focuses mainly on the combination and internalization learning mechanisms. In contrast, the bottom-up model comprises the information transfer up the organizational hierarchy, and utilizes the learning mechanisms socialization and externalization (Nonaka & Takeuchi, 2004). It was suggested by Nonaka & Takeuchi (2004) that "middle-up-down" strategy would be the most effective model, because middle managers would synthesize the necessary knowledge components between the front-line workers and the vision and strategy from senior executives.

3.3.2. Knowledge Management Systems

By Wiig's definition, Knowledge Management (KM) is a framework that collectively represents activities and perspectives involved in the management of the corporation's knowledge assets, their conditions and the benefits thereof (Wiig, 1993). In designing a knowledge management system, one must not only consider individual learning, but the broader system within this occurs (Wiig, 2002). Furthermore, Wiig (2002) states that an effective knowledge management system aligns itself to the organization's direction in terms of vision and practice while fostering a knowledge-supportive culture.

Essentially, KM facilitates management's ability to define approaches and processes to achieve knowledge objectives in various operational areas. Wiig (1993) identified 8 salient knowledge areas:

(1) Develop, maintain and secure knowledge of resources within the organization
(2) Encourage knowledge creation and innovation
(3) Define specific knowledge requirements for individual work tasks in order to maintain quality, and make the requisite knowledge explicit to the relevant employees.
(4) Structure the organization in such a way as to optimize the acquisition and use of knowledge assets, whilst decreasing knowledge gaps and information bottlenecks.
(5) Plan, execute and monitor long-term knowledge strategies and activities.
(6) Safeguard proprietary knowledge and regulate the access and use of confidential knowledge that would be of value to competitors.
(7) Infuse KM into the organization's practices and cultures so that it becomes an activity executed concurrently with other business activities.
(8) Measure the value derived from KM practices in order to adapt according to the prioritized missions and objectives of the organization at that time.

According to Wiig (1997), there are four basic factors one should consider when designing and managing a KMS. These factors are instrumental in effectively creating, acquiring and exploiting knowledge that would assist the organization in gaining competitive advantage. In order to achieve this, it is necessary to assimilate all relevant perspectives and approaches (Wiig, 1997). The four factors include:

- Monitoring and facilitating knowledge activities
- Establishing and updating knowledge infrastructures
- Creating, renewing, building and organizing knowledge assets
- Distributing and applying knowledge assets effectively

These factors are founded upon the manner by which knowledge is manifested in people's thoughts and behaviours, how it is dispersed, as well as how it is utilized in reasoning and problem-solving with the expressed purpose of serving the organizations broader goals and objectives (Wiig, 1993, 1997). Organization's focus their knowledge management against one of 5 strategies (Wiig, 1997). It is the contention of the researcher that the strategy best aligned with the desired outcome of this dissertation, is that of the "personal knowledge asset

responsibility strategy" (Wigg, 1997, p. 8) which states that personal knowledge responsibility allows for the effective management of knowledge specific to that employee's direct area of accountability and hence aids competitive strength.

Despite the fact that knowledge is amongst the greatest assets within an organization, it should be customized according to each individual employee's learning styles and functional requirements (Wiig, 1993). It is important to recognize what the employee needs to know in terms of their basic functional areas as well as how it is integrated into standard organizational practices, systems and procedures (Wiig, 1993). As a result, knowledge should be managed by keeping in mind the variety of perspectives (and the facts, concepts, judgements and reasoning approaches below them), as well as how it is used to conduct business (Wiig, 1993). At the point that all the knowledge has been codified, it has been made explicit (Wiig, 1993). It should be determined what level of proficiency an individual must possess within a specific knowledge area in order to perform quality work to the organization's standards. By establishing the various requirements and proficiencies related to a specific work function, one is better able to determine knowledge development strategies, particularly for new hires. Thereafter, the utilization of multiple knowledge transfer activities would aid accelerated learning (Wiig, 2002).

Once an organization has implemented a knowledge management system (KMS) it becomes increasingly easier to identify what knowledge is required, at what level, its value and how it should become available to employees (Wiig, 1993, 2002). Hence it becomes easier to identify where and when knowledge investments should be made, e.g. when to invest in formal education or practical training. Additionally, the use of information systems advances the elicitation and codification of knowledge, which has the effect of redistributing to points-of-use, and automating less complex aspects of dynamic and tacit knowledge and reasoning utilized during the deployment of work activity (Wiig, 1993, 2002).

Wiig (1993) details 5 activities required to build knowledge, which includes: obtaining; analyzing; reconstructing; codifying and modelling; and organizing. In an effort to obtain knowledge, one can create new knowledge through research and development activities, or through individual innovations and experimentation. More importantly, for the purposes of this dissertation, is the activity of importing knowledge from existing sources. The means by which one acquires existing knowledge are many and varied. The first source is knowledge

elicited from professionals and experts. The second source is that are documented knowledge in the form of books, manuals and all forms of printed or digital text. Thirdly, knowledge is transferred through the process of transferring people between departments, because their differential experience adds different information and perspective. Finally, one could infer certain knowledge by merely observing real people in their working environments.

Acquiring knowledge, however, is insufficient for the purposes of work activity. It is necessary to extract pertinent information so as to discern between irrelevant information and useful material. One should further be aware of any contextual changes that might yield different results from the use of the knowledge and identify any causal relations. Thereafter, knowledge must be synthesized into a coherent and valid form that can be generalized in everyday use and represented in an easily understood manner. This knowledge should then be documented, for the retention of intellectual property within the organization and should be easily accessible to employees in a knowledge base. As previously mentioned, knowledge is dependant upon the perspective in which it is viewed. It could therefore be asserted that through collaborative teams, a more accurate and comprehensive knowledge base could be created (Wiig, 1993).

In order to effectively manage the knowledge transfer within the various knowledge areas, one should develop an approach to relay information to the relevant personnel. Scripting (Wiig, 1993) is one such method. Scripting of specific business processes and activities explicates the required knowledge and skills to deal with work tasks. In order to create comprehensive scripts, managers can draw from existing knowledge-based systems (Wiig, 1993). Scripts include various aspects required to perform the work task in question and include: scripts for specific scenarios; steps required in performing the tasks and the activities therein; task-specific information; goals, strategies and methodologies in performing the task; and skills and personal characteristics required in performing the task (Wiig, 1993).

Organizations can also enable knowledge transfer by securing knowledge that has been previously generated. Despite the effort that organizations exert in training and educating employees, there are often few, if any, mechanisms focussing on the recording of knowledge generated. This results in a tremendous amount of time lost in relearning (Wiig, 1993). Additionally, the organizational culture determines the amount of collaboration and sharing

of knowledge within the organization. This is a product of the tendency within organizations to chastise individuals who admit that they don't know, or fail to take full ownership of a problem, as well as, a lack of incentive to share knowledge (Wiig, 1993). Generally employees are evaluated and promoted based upon their personal knowledge and skill, and not upon what they can contribute to the rest of the organization in terms of knowledge development. In such circumstances, individuals are more likely to be guarded against knowledge sharing for fear of losing value compared to other employees. Individuals are more likely to share knowledge if the organization formally recognizes their efforts through promotions, compensatory gains and peer recognition (Wiig, 1993). Another method of facilitating knowledge sharing is the passing down of responsibility, fostering a sense of pride and value within the employee.

It is imperative that the organization fosters a culture that supports, facilitates and incentivizes learning, otherwise all learning initiatives are likely to fail. One barrier to creating such a culture is the general tendency for managers to accept, or even prohibit, subordinate suggestions and feedback in favour of top-down knowledge flows. Wiig (1993) referred to this as Taylorism (page 251), because managers believe that employees can not be relied upon to make appropriate decisions and create appropriate solutions, employees are therefore expected to follow instruction and perform work as stated and without question.

3.3.3. Knowledge Management as applied to the sales function

As previously mentioned, Knowledge Management (KM) is traditionally conceived of as the design and implementation of initiatives that would facilitate the conversion of tacit into explicit knowledge. Bennett (2001) presented a paper in which he assessed the applicability of Nonaka & Takeuchi's SECI cycle to the management of the sales function and the various organizational factors that contribute to the openness of the organization in individual learning.

Tacit knowledge is the most valuable form of knowledge in a firm, particularly within business-to-business selling. This is because the knowledge that would aid sales is not developed through traditional knowledge systems. Rather, it is the result of emergent and evolving context-based dialogue. Additionally, sales consultants whose sales function is support by technological tools are three times more productive due to the fact that their

resources are largely automated (Barker, 1997). Grant (1997) asserts that the degree of "ba" within an organization is dependant upon a number of factors. Some of which include: the nature of the company's knowledge management systems; level of bureaucracy; individual and group ability to accommodate change; and the degree of centralization and innovativeness.

Organizational learning is somewhat dependant upon intangible insights, beliefs and intuitions, as well as, individual and group perceptions, schemata and mental models (Grant, 1997). In order to accommodate this, tacit and explicit knowledge must be combined within the same framework and continuously interact.

Grant (1997) asserts that tacit knowledge is central to the selling function, because customer and selling technique knowledge is anecdotal in nature. Neither of these knowledge areas are created or shared through traditional channels, but rather emergent and evolving (Edvinsson, 1996; Keillor et al, 1997). Knowledge management systems allege that with an increase in customer service, there will necessarily be a decrease in response time in servicing the clients. There would also be an increase in interdepartmental co-ordination (Grant, 1997).

Ainscough et al (1996) made mention of creating a knowledge base for sales consultants. This knowledge base could comprise: selling scripts, product information; procedural information; and selling tools and aids. They suggested that through an automated information system, the organization could increase their knowledge base relating to customer information, market information and distribution channel information. Additionally, it is purported that teamwork and knowledge sharing is critical to the effectiveness of this activity, especially if reinforced by behaviour-based motivation.

There are 4 dimensions of motivation as stated by Piercy et al (1998):

A. Group Behaviour-based mechanisms
B. Individual Behaviour-based mechanisms
C. Group Outcome-based mechanisms
D. Individual Outcome-based mechanisms

Outcome-based motivation mechanisms reward sales outputs such as turnover, gross profit and gross profit percentages. These are more easily quantified and therefore remuneration is

more easily determined. Behaviour-based motivation mechanisms rely on appraisals of individual contributions to knowledge activities, as opposed to the actual sales outcomes.

Piercy et al (1998) maintains that behaviour-based motivation mechanisms tend to increase sales consultant involvement and commitment to the organization, whilst increasing their knowledge on products, the company and general industry knowledge. It also tends to increase the occurrence of teamwork in an advisory and supporting capacity. Outcome-based motivation mechanisms, however, tend to encourage knowledge hoarding. Davenport (1997) suggests that knowledge hoarding occurs in an organizational setting because of organizational politics because it is threatening and unnatural.

In Bennett's (2001) study a number of correlations were discovered. There was a strong correlation between increased sales force effectiveness and having an extensive "Ba" within the organization. This suggests that organizations that foster learning and facilitate learning activities develop more competent sales staff. Similarly, extensive "Ba" within organizations allow individuals to familiarize themselves with the information systems in the support of the sales function resulting in more effective sales results. Moreover, "Ba" are highly prevalent in organizations that are change-friendly, i.e. that moderate the negative impacts from change and encourage transition. Bennett (2001) stated that this can be attributed to the fact that originating "Ba" creates redundancy and hence a reduction in anxiety and increase in individual acceptance of change. Cyber "Ba" also contributed to the reduction of change-induced anxiety in that it was presumed to facilitate new knowledge management systems, and therefore improved accurate and efficient dissemination of information. Furthermore, there tended to be greater knowledge sharing in high "Ba" companies.

3.4. Conclusion

The literature survey yielded information in the broad areas of individual learning, induction and knowledge management within an organizational context. The concepts that emerged from the theory above elucidated the nature of individual learning in terms of their functional roles within organizations, as well as the means by which organizations can enable and optimize their learning activities.

Before an organization can begin designing a training and induction programme for new employees, it is necessary to conduct a comprehensive assessment of the knowledge and skill requirements, in terms of content and depth, for the new employee. It is further necessary to define the knowledge that is to be held by the individual, as well as distinguish which knowledge resources and channels are operationally viable. These would become clear to the individual if they have been made aware of their specific roles, responsibilities and performance measures. This would direct their growth activities.

In designing the training and induction process, there are a number of factors that should be considered. Various methods of disseminating information, as well as various motivation mechanisms, should be embedded within the training so as to accommodate the different learning styles and personal attributes of the new employee. Additionally, a firm structure should be put in place that would highlight all the various learning resources and tools, as well as the appropriate channels through which they can be obtained.

The above phenomena have been taken into consideration during the data collection and analysis phase of this dissertation. In the chapter that follows, the researcher's approach to data collection and analysis, within this particular field of knowledge, is made explicit.

CHAPTER 4: RESEARCH FRAMEWORK:

4.0. Introduction

In general, research is directed according to the nature of the subject matter and is influenced by the researcher's perspective. The qualitative approach to research is based upon the researcher's ontological and epistemological assumptions, and hence they determine the appropriate approach to the research. There are various approaches one can assume that span across the subjectivity-objectivity continuum. This chapter examines the researcher's theoretical perspective and describes the research design appropriate to the nature of the study including the research methodology and the specific data collection tools. Systems Thinking Tools were utilized to enable the identification and validation of Co. X's practical problem (chapter 2). The principles of this approach and its related tools for problem formulation are detailed in the paragraphs to follow. Thereafter, Grounded Theory was the methodology elected as the means to examine Co. X's current context, and the analysis thereof, to ascertain potential solutions. The grounded theory process is described using both theoretical propositions and exemplified through the inclusion of open, axial and selective code note tables. Finally, the particular data collection techniques are discussed according to scope and process.

4.1. Philosophical perspective:

In the work presented here, the researcher's perspective is founded upon the ontological proposition that reality is socially constructed. Through frequent discourse and the collective co-creation of meaning, reality is constantly evolving according to purpose and context (Smircich, 1980). Individuals and groups assign meaning to signs and symbols (both verbal and non-verbal) in order to generate mutual understanding and direct behaviour.

Within organizations, social reality is necessarily embedded within the particular culture and language (e.g. industry/company jargon) that had been developed over time. This reality continues to evolve as both internal and external influences impact the social system. New members of the organization would have to be socialized into the culture through multiple interactions so that they may assimilate the organization's perspectives. Social reality is

further dependant upon the context in which phenomena occur. Numerous variables influence the manner by which individuals collectively perceive a problem, and as the variables fluctuate, so does the social system under investigation.

The researcher is concerned with the lived experience of employees within Co. X., with particular emphasis on the way they experience their own learning and development within the organizational context. An understanding of their individual motives, feelings and thoughts, and how those guide their behaviour, is sought. Deep understanding is derived from the analysis of a variety of concepts and perspectives, and how they interrelate. Hence the researcher is engaging in interpretive social science. Smirchich (1980) claims that the interpretive approach is the systematic analysis of social activities, created and re-created by people, through the observation of people in their natural contexts. This would allow the researcher to arrive at understandings and interpretations of how people construct and propel their social worlds.

Interpretive social science adopts a practical orientation in its efforts to methodically gather exhaustive information, to develop a deep understanding of the phenomena under investigation. In keeping with the principles of interpretive research, Co. X. employees were studied in the context of the organization to discover the particular processes that are relevant and meaningful to them. From this it could be established what improvements would be perceived to be appropriate to the context and significant to both them and the organization.

The problem under investigation at Co. X. is social by nature, and is located within a particular context over a defined period of time. The problem is also highly dependant upon organizational strategy and execution thereof. Furthermore, individuals may have differential experiences relating to the training and induction process. It is for these reasons that an ethnographic study was conducted to investigate the current training and induction processes at Co. X. Ethnography is an alternative to experimental and quasi-experimental research designs in that it is phenomenological in nature and is arguably more suitable for social research. In ethnographic study, the researcher immerses himself / herself in the group under investigation in order to acquire an in-depth understanding of socially constructed signs, symbols, events and behaviours (Easterby-Smith et al, 1991). This allows

the researcher to explore meaning systems for that particular group within their specific context.

4.2. Systems Thinking Paradigm:

4.2.1. Systems Thinking:

Systems Thinking emerged in the 1940's as an alternative to mechanistic views of organizations. Mechanists are reductionists by nature in that they propose that all phenomena can be analysed by deconstructing them to their base elements and analysis thereof. In contrast, Systems Thinkers assert that systems are complex entities in which the elements contained therein are synergistic by nature and their sum exhibit properties that can not be explained by any of the separate elements in isolation. This is owing to the influence that each variable (internal or external) exerts within the system in an interactive and interdependent manner (Wiley, 1991). These processes are characterized as feedback processes, whereby any changes in one variable necessarily result in changes in one or more variables within the system. These processes determine whether a system is stable or in a constant state of fluctuation. From this, it can be intuited that an intervention at one or more points within the system could achieve the desired outcomes. System's thinking is primarily used to investigate systems behaviour through understanding the variables within the system and the nature of their relationships. By using system's thinking tools, individuals are able to challenge their assumptions and broaden their perspectives, through an iterative process. The greatest utility of the systems thinking approach is its strength in dealing with complexity with particular emphasis on defining problems and formulating effective and enduring solutions. The tools utilized enable the identification of root causes of problems and allows one to anticipate multiple consequences from interventions (Goodman et al, 1997).

It is for this reason that systems thinking tools (Flood & Jackson, 1991) have been utilized during the problem formulation phase of this dissertation. The principles of Systems Thinking were utilized in this work to incorporate multiple stakeholder perspectives in the identification of the practical problem in Co. X. The core issue was illuminated through consultation with both management and sales staff in informal interviews. The variables identified were then deconstructed and related by using an Interrelationship Diagraph.

Thereafter, a Causal Loop was utilized to formulate the causal relationships and driving forces of the Co. X. system of concern.

The Interrelationships Diagraph and Causal Loop Diagram are two systems tools used in the identification of variables and mapping of the relationships between them. An Interrelationship Diagraph (ID) enables individuals to organize concepts through multi-directional thinking, as opposed to the more traditional, and restrictive, linear thinking. Key issues and priorities emerge naturally during the process used to create an ID because of the manner by which it facilitates reflective thought. This establishment of relationships between all the variables then allows the most dominant drivers of the system to emerge.

The relationships formed from the Interrelationships diagraph are further put into perspective by refining the diagram into a Causal Loop. A Causal Loop Diagram (CLD) is an analytical tool that displays cyclical systems of causality derived from the ID. It is a graphical representation of the causal drivers of variables within a system. In this form, points of intervention become more readily recognizable for the purpose of intervening in and altering patterns by anticipating outcomes.

4.3. Methodology:

In devising the appropriate manner of investigating the problem at hand, Grounded Theory was utilized as the overarching research methodology. Grounded Theory was connected with the identification and categorization of concepts, and enabled the emergence of theories.

4.3.1. Grounded Theory:

Grounded theory, within the realm of qualitative research, is based upon the premise that theory is emergent from the data collection and analysis process. This is in contrast to the traditional perspective that the research process is intended to test and prove a hypothesis (Strauss & Corbin, 1990). An explanation of the processes and systems within a particular social setting is derived from analysis of empirical data (Hutchinson, 1993, in Struebert & Carpenter, 1999).

The manner of research using Grounded Theory is that of discovering an initial area of concern, and allowing the data to inform and direct sequential research activities and analysis through inductive reasoning. Pandit (1997) purports that Grounded Theory comprises three components, namely: Concepts; Categories; and Propositions. The Conceptualization component is the aspect of the research in which data is deconstructed and assigned conceptual labels. These concepts are further delineated according to their specific properties and dimensions. Thereafter the concepts are compared and contrasted according to their similarities and differences respectively, and allocated to particular categories. Only by comparing incidents and naming like phenomena with the same terms can the theorist accumulate the basic units for theory (Pandit, 1997). These categories are further analysed to determine causal and conditional relationships. Relationships between categories form the basis of foundation of a theory about the phenomena under investigation. The above process is facilitated through open, axial and selective coding techniques, which shall be detailed in the paragraphs to follow.

The Grounded Theory procedures, as applied in this dissertation, are detailed in the paragraphs to follow.

The loose structure of this process comprises 4 phases:

- Data collection
- Open coding
- Axial coding
- Selective coding

During the open and axial coding phase of the analysis, each response within the interviews was numbered for reference purposes. The data collected from observation and the interviews was then deconstructed by examining each event (or utterance in the interview transcripts). Particular information was included in each Open Code for the purposes of easy reference. The respondent, from which the event was elicited, is denoted by the inclusion of their initial, and the number of the chronological code note. Each event was named according to the phenomena to which they referred. The particular phrase of interest and its relevant reference line number were included. The utterance was then assessed according to the general context and story conveyed in the interview to describe the phenomena (What), establish its purpose or outcome (Why), and to reveal possible reasons for its occurrence (How). The event or concept was then investigated further for indicators of possible properties and dimensions by reviewing the complete response or set of responses.

Table 4.1. Example of Open Code:

J Interview: Open Code 52 – Concept: Knowledge and skill	
J2: "Competence is how you use what you know"	
What: Capacity to reason and act effectively based upon contextualization of information	
Why: To develop "Best Practice"	
How: Through socialization – assimilated through a role-model.	
Properties:	**Dimensions:**
Knowledge	Surface --> Deep
Skill	Explicit --> Tacit
Effectiveness	Moderate --> Substantial

Upon completion of the open codes, axial coding was used to group the concepts into categories according to their concept names and or content. In the instances where the concept description and context were more similar to those from other concept names, the code notes were re-named and grouped accordingly. Once the concept groups were formed, they were re-named to more accurately reflect the overall content contained. One aspect of axial coding is that the categories are continually examined for subcategories through the comparison of categories against the data collected. Another aspect of axial coding is the expansion of the density of each category, through the listing and assessment of properties and dimensions. Finally, variations of the phenomena are explored.

Table 4.2. Example of Category Code:

CATEGORY: KNOWLEDGE AND SKILL	
Defined by / Dimensions of:	**Achieved through (Sources/Activities)**
Depth of Technical and functional product knowledge	Explicit documents / Interactive feedback
Relationship building (Client and colleague)	Formal: Role-playing / Informal: Socialization (Peers, clients, role-models)
Communication and persuasion skills	As above
Effective application (Decision-making & problem-solving)	Trial & Error / Knowledge assimilation through various training exercises
Broad and deep understanding	Education; Experience; Job-rotation; Digital Knowledge sources - web
Correct execution of instructions	Personal attributes such as: Motivation, focus and attentiveness
Relevant and detailed information-gathering skills	Socialization; Trial & Error;
Breadth of industry-specific knowledge	Discourse; Explicit knowledge sources
Capacity for continuous learning; Flexibility	Personal attributes such as: Interest, goal-orientation; level of experience
Responsiveness; Speed; Efficiency	Personal attributes; Company motivation initiatives; Vision articulated
Operational and procedural knowledge	Induction; Job-rotation; Trial & Error; Purpose-specific information-seeking
Confidence, Professionalism; Accountability	Motivation; Personal attributes; Deep understanding (Education & experience
Conditions to optimize level of competence:	
Frequency of learning activities and exposure to role-models	
Accuracy and comprehensiveness of explicit documents	
Organizational culture (Encourage learning / reduce barriers to learning)	
Clear explication of organizational strategies and goals	
Accessibility of information sources and support channels	

As a result of the theoretical sensitivity gained through multiple reiterations of data collection and analysis, the core categories emerged. This is the desired outcome as identified in chapter 2. Strauss and Corbin (1998) cited the following as criteria for selecting core categories:

- The concept should be a central theme, i.e. all major categories should be related to it.
- Frequent indicators of this category should be present in the data set.

- Relationships and conditions should evolve naturally and logically.
- The concept should allow for depth in theory generation.
- It should be able to account for variations as well as the common state of the phenomena.

Once the core variable had been selected, the other categories were related to it. These categories formed the causal conditions, strategies, contextual conditions and consequences of the core category (Moghaddam, 2006) This is referred to as selective coding (Strauss & Corbin, 1998). In order to establish the conditions that gave rise to these core variables, the axial codes were contextualized. Contextualization, as referred to here, means that the particular set of intervening conditions, causes and consequences of each variable was assessed in relation to the core variables' (Pandit, 1996). In order to establish the relationships between the variables, the category code notes were examined in juxtaposition. The right columns, i.e. sources/activities, were examined to establish the direction of the causal relationships, and the bottom of the category codes, i.e. conditions, were utilized to establish the conditions under which the influence occurs and the strength of impact. This allowed for the construction of a "causal and conditional matrix" (Moghaddam, 2006) which informed the narrative of the phenomena under investigation. After all the relationships were established, it was apparent how each individual variable impacted the desired outcome of sales consultant competence, either directly, or indirectly. The Grounded Theory analysis summaries can be viewed in Appendix H and the results are represented in a CLD in Appendix G.

The emergent theory from the relationships between the variables was subsequently compared to the literature within the field of knowledge management, training and induction to assess reliability and validity. The conceptual propositions were compared to existing theory by means of a simple table checklist. An example of such a checklist is illustrated in table 4.3. The comparison highlighted the most prevalent means of instilling knowledge in new recruits and the optimal conditions for effectiveness.

Table 4.3. Sample of comparison between conceptual theory and literature

Propositions from literature	Variability of learning styles		
	Explicitly supported	Implicitly supported	Not referred to
Individuals fall into four different categories of learning dependant upon the type of conceptual knowledge they most easily acquire and the process through which it is acquired		X	
Common knowledge building activities include: formal education, formal training, reading, assimilation, peer information transfer, and multi-media	X		
A good learning context is one in which there is: A structured means of communication, supporting documentation, and hierarchal presentation of knowledge		X	

4.4. Data collection techniques and tools

4.4.1. Participant Observation

Participant observation is a data gathering technique utilized within ethnographic research. The intention behind the process is that through active engagement with the participant group, the researcher is able to gain an in-depth understanding of phenomena through direct experience of them. As a participant observer, the researcher was involved in all the aspects of training and induction through presence at all meetings, training sessions and job-rotation and shadowing events. The nature of this fieldwork was highly generative in terms of social conditions, content and process. The results of this fieldwork allowed the researcher to establish the current conditions within Co. X.

4.4.2. Interviews

Interviews were utilized in this work to gather qualitative data in order to capture the experiences of sales personnel during induction and training. Interviews are useful in obtaining rich descriptions of the respondent's perceived reality and enable the researcher to develop a greater perspective of the phenomena under investigation through the eyes of the various stakeholders. Two rounds of interviews were conducted in the form of structured interviews, and further research was conducted by using semi-structured interviews to gain a deeper understanding of the variables derived from the initial survey. A purposive, full

sample set of all the sales consultants and business unit personnel was obtained to gain a comprehensive and exhaustive response set.

4.4.2.1. Structured interviews

Structured interviews were utilized because the researcher sought to obtain a set of fixed set of responses that would elucidate the dominant themes for further research. The first interviews were conducted with all seven sales consultants, to assess their collective perspective on determinants of corporate learning. Questions were directed at how the sales person acquires, assimilates and utilizes information. Insights were also sought regarding what activities and processes would optimize the value gained therein.

All of the sales reps within Co. X. were posed the same set of four questions:

(1) List everything that you can remember from this morning's meeting
(2) Have you applied any of the listed items? If so, what?
(3) What factors influence what you remember?
(4) What would help you remember and apply more?

The responses were hand-recorded and later compiled into a comprehensive list of all factors that would aid effective understanding, retention and utility of knowledge. (Refer to Appendix F)

4.4.2.2 Semi-structured / conversational interviews

Semi-structured interviews are a means of imposing a certain direction of inquiry into the interview, whilst allowing for the exploration into related concepts and broad perspectives. The themes generated from the structured interviews formed the broad realm of inquiry for the semi-structured interviews. A list of questions was compiled to address the general themes and targeted issues as derived from the structured interviews. (Refer to Appendix G) A purposive sample of six respondents was selected based upon their seniority and experience within the sales department. They were also selected based upon their availability and willingness to participate, as well as management consent to be included in the research. Interviews were tape recorded for ease of reference and allowed the researcher to gather rich data seamlessly, without the imposition of pauses related to note-taking. The six interviews

were transcribed equally by two parties, and the transcripts were cross-checked against the audio tapes for accuracy in terms of content and meaning. The data derived from the semi-structured interviews brought clarity on existing learning conditions and further address strengths and weaknesses for the learning system's improvement. These concepts were explored using grounded theory and the categories that arose were then analysed and related to devise the causal relationships as detailed in the causal loop in chapter five.

4.5. Conclusion

This chapter served to illustrate how the researcher's assumptions about the nature of human reality have guided the design and implementation of research framework. The theoretical perspective developed in the previous chapter implied the use of a qualitative research framework, and more specifically the use of the Grounded Theory Methodology in developing a theory specific to Co. X. The data collection techniques (i.e. participant observation and structured and semi-structured interviews) were selected based upon their relevance and utility within the Grounded Theory process. The results obtained through this process shall be detailed in the chapter that follows.

CHAPTER 5: FINDINGS AND DISCUSSION FROM PRIMARY RESEARCH

5.0. Introduction

In this chapter, the data gathered (as reflected in the previous chapter) through participant observation and the interviews yielded detail rich categories, which were further analysed using Grounded Theory to establish relationships. A thorough examination of the existing KMS at Co. X was conducted, the details of which are included to enlighten the reader on the current processes and outcomes of training. This shall illuminate the current shortcomings of the existing system, with the purpose of devising a new optimized training and induction system for the newly recruited employees. The application and results of the research methods as detailed in chapter 4 has been described in this chapter.

5.1. Ethnographic description

Learning situations can be segmented into formal and informal interaction. As an informal learning situation, sales meetings were observed in order to assess the determinants of information transfer and the dominant mode of communication. There were a few noteworthy observations from sitting in on the sales meetings. A large portion of the meeting was devoted to directives from the regional manager. Directives include target setting, and policy and procedure reinforcement. Many of the directives were presented in a listing manner, as there is usually a great deal of content to convey in a limited time period. The branch manager further directed product managers to begin recording all information disseminated during the morning meetings on the product file on the intranet.

As a formal learning interaction, training activities observed yielded data on aspects of training and induction. Co. X utilizes multiple methods of developing sales consultant competence that span across the Nonaka and Takeuchi (2004) SECI cycle as described in the literature survey (p.32). The specific tacit knowledge that would be valuable to the organization in transfer, is the tacit knowledge held by senior staff within Co. X. This includes:

- Selling techniques - Including the ability to identify relevant product features.
- Selling language – Including: Tone; jargon; descriptive language

- Knowledge on consumer needs – specifically the nature of Information Technology resellers
- Ability to extract pertinent information i.e. market scanning – competitor & client

Explicit knowledge of value to the organization would include:

- PowerPoint presentations
- Product brochures
- Manuals and documents
- Co. X application and CRM applications

Training is segmented into: new employee induction and training; and existing employee development. New employee induction and training comprises 5 elements, namely:
Job Rotation; Job Shadowing; Sales Simulation; Product and Market Training; and Provision of Materials.

As part of the trainee's **job rotation** phase, the trainee works in all departments within the company for variable amounts of time and variable exposure to key staff members. **Job shadowing** entails allocating a mentor to the trainee, in that he/she must share that individual's work space and observe every aspect of that individual's work function, such as the visual observation of the use of Co. X's application and other tools utilized in performing the sales function, as well as the mentor's selling technique. The mentor is also available to answer any queries that the observer may have. During the **Sales Simulation** Phase, the new sales consultant's autonomous behaviour is encouraged, in that he/she is encouraged to practice on, explore, and browse the company's application and resources. Initially, he/she is given an administrative task to complete, such as performing customer care courtesy calls, and updating client contact details.

Training is conducted by the regional manager, product managers and HR on:

- Products
- Company culture
- Policies and Procedures
- Industry and competitors
- Operations and systems training

These **face-to-face training** sessions define behavioural and knowledge standards that are expected from the new employee in the execution of his job function.

Materials presented to new sales staff to learn:

- Co. X's Catalogue
- Co. X's Pricelist
- Vendor Catalogues
- PPT presentations and PDF documents

During the training, the new sales staff are given short tests to write in order to evaluate their progress in terms of information retention, as well as identify information gaps for further training in the necessary areas of focus. At the end of the training period, newcomers are required to write a final entrance exam, the results of which would determine their continued employment in the organization. The results of this exam are a reflection of that individual's capacity to perform the role of a Co. X sales consultant, according to the standards determined by the branch manager. In addition to the training program, trainee sales staff are required to attend all general sales meetings and training sessions with the existing sales staff. These competence activities include: **Formal Presentations**; and **Informal Discussions**.

Formal (Presentations)

- Biannual growth camps (External consultant, product managers and business managers)
- Quarterly sales training (External consultant – Custom Relationship Management (CRM) and dealer base management)
- Vendor training (E.g. Intel, Xerox and HP)
- New product launches (E.g. Zyxel)

Informal (Discussions)

- Morning meetings and weekly training
- Product descriptions
- Role-playing / Scenario sketching for sales techniques and sales language modification
- Weekly tests (Memo contents, products, target items, general information.)

These discursive activities are supplemented by Co. X's existing internal knowledge base. The Co. X software application has a search string function, but it is not as comprehensive as the previous application, as it does not allow one to search by description or category. (Sales Consultants have to know the code) Product information is sourced through various means, including:

- The Internet (e.g. Google or the Vendor websites)
- Intranet file server – products stored by category
- Email – product updates and "cheat sheets" (Competitor pricelists mailed to seniors only)
- Catalogues, e.g. catalogue for consumables, and Co. X's product guide.

5.2. Grounded Theory core variables involved in the training and induction process

Four categories arose as a product of using grounded theory analysis on the data gathered from the interview transcripts. These categories include: *Level of competence; Degree of information-sharing; Depth of knowledge and skill; and Quality of information resources.* Quality of information resources and Degree of information-sharing emerged as the core categories, based on the frequency and emphasis of comments from respondents on concepts that formed these categories.

5.2.1. Quality of information resources

There are two dimensions to the category of information resources. Resources can refer to either technical sources or human sources. Technical resources include all tangible forms of explicit information, including: The Co. X. software application; internet; intranet (product information folder); manuals and other published materials; excel reports (logistics notifications); and presentation templates. Human resources are necessary in both direct and indirect information transfer to individuals. Various individuals fulfilling various roles within the organization should be made available to the newcomer for general development of knowledge, as well as purpose-specific knowledge transfer. Newcomers are socialized into their positions through exposure and interaction with clients, peers, colleagues from other departments, supervisors, trainers/mentors, external consultants and vendors. Certain individuals also act indirectly as information resources because they are responsible for maintaining the knowledge base by keeping explicit knowledge current and accurate.

The quality of information resources is dependant upon the degree of work knowledge workers put into the preparation of learning materials and activities. Preparation, as it is referred to here, also includes the ability of senior management to properly equip trainers and mentors for their teaching roles. Comprehensive resources can only be achieved if the responsible parties are suitably motivated to frequently update resources and develop their own training capacity. Motivation is generally in the form of promotions and status, as well as limited monetary gains. Motivation is also applied in the form of negative reinforcement. Quality checks are performed by senior management and the knowledge workers are given poor performance citations if the resources are not meeting standards..

5.2.1.1. Amount of motivation

Motivation encompasses all forces that drive desirable behaviours and / or phenomenon, whether they are self-generated by the individual, or instilled by the organization. Individual motivation is defined as the innate driving forces dependant upon the individual's personal attributes, wants and needs, and environmental circumstances. Individual motive examples include: Personal satisfaction; Pride; Affiliation or identification with role model. Organizational motivation includes the previously mentioned positive and negative motivation mechanisms, i.e. Behaviour-based and Outcome-based.

There is a particular context that defines quality resources specifically for Co. X. All presentations should contain the most up-to-date information on products, services and processes. Additionally, the information should be presented in a manner that would convey multiple aspects, all of which would be necessary for the effective sale of the product. The information should build technical knowledge, as well as convey the unique selling propositions and functional features of the product, so as to appeal to buyer preferences.

Co. X. currently utilizes a few strategies in maintaining the quality of the information resources. Firstly, knowledge workers are required to update information on the Co. X application as soon as they receive updates from head office and from Vendors. Additionally, information gathered from the market is integrated into skills training to tailor the trainees behaviour specifically for the buyer's mindset at that point in time. These strategies are however restricted according to the ability of senior management in interpreting and selecting relevant market data, and disseminating information quickly.

Dependant upon the degree of success in maintaining quality resources, newcomers are able to develop deeper conceptual knowledge and practical skills in performing their job functions. Greater knowledge and sales skills allow newcomers to perpetuate their own development, as well as responsive in problem-solving situations.

5.2.2. Degree of information-sharing

Information-sharing, as defined by the researcher refers to both formal and informal information transmission. Informal information-sharing occurs in an adhoc manner when individuals either actively seek out purpose-specific information, e.g. to answer a specific client query, or assimilate information through general conversation. Informal information-sharing occurs as a result of interaction between newcomers and clients, intra- and interdepartmental interaction. This information is transferred through direct interaction or through digital modes of communication, such as Microsoft Instant Messenger or Electronic Mail. Formal information-sharing occurs through the same mediums of communication, however, they are usually broad over-arching directives transmitted through top-down information channels, which convey organizational strategy, or direct group behaviour, as opposed to purpose-specific goals. Training is also considered to be a formal mode of information-sharing.

Motivation is also a causal condition for information-sharing, however, it refers to motivation applied to both the newcomers and the knowledge workers. In the case of the knowledge workers, motivation refers to either positive or negative reinforcement of information dissemination activities. For example, trainers will either be rewarded with status or monetary gains for engaging juniors in learning activities, or they will be punished chastised for not being accessible or prepared to assist trainees. Motivation, as it is applied to the trainees, is generally purpose-specific. Sales trainees generally only seek out information when they are presented with a problem that they do not have the knowledge or skill to resolve at the time. They therefore approach colleagues and supervisors for information and assistance to achieve a particular goal and not for general advancement. Barriers to learning moderate the degree of information-sharing.

5.2.2.1 Barriers to learning

Barriers to learning are a product of individual resistance to learning, as well as organizational influences. Individual barriers to learning revolve around defensiveness. Individuals have an innate compulsion to resist change in an effort to protect their self-identity. Any learning activities directed at disconfirming the individual's existing beliefs, would evoke defensiveness. With regards to organizational barriers to learning, one should consider whether the organization has a culture that fosters learning. It is often the case that organizational culture is not tolerant of individuals seeking assistance, and individuals may fear reprisal. Intolerance and lack of support deter individuals from enacting trial-and-error behaviour. Additionally, highly bureaucratic organizations have rigid channels of communication, which may discourage information-seeking behaviour. Finally, environmental influences dictate the amount of time available for learning activities, which prevents the required time for repetition of information for easy assimilation. With regards to organizational barriers, Co. X tends to discourage autonomous behaviour and any learning activities and knowledge content that deviates from the prescribed. Additionally, trainees often feel intimidated by the manner in which knowledge workers answer their questions, which discourages them from asking questions. Trainees also have general difficulty in assimilating new knowledge and skills because often they are foreign to their normal behaviour and thought processes. Individuals find this change stressful and few are able to adapt quickly and with little anxiety. The anxiety that most trainees feels impacts how receptive they are to instruction.

Beyond barriers to learning, knowledge transfer is highly dependant upon social interaction. Knowledge workers and seniors are considered to be highly approachable because they are fun, friendly and demographically similar to trainees in many respects. However, due to the fast pace of the industry, seniors are not often available to trainees and when they do have time to interact, there are severe time constraints that restrict the depth of explanations.

The organization has a few institutionalized activities that are intended for the optimization of information-sharing. Job-shadowing allows trainees to observe mentors perform the job function. In this way, trainees are able contextualize information in the absence of face-to-face discussion. Additionally, interaction is encouraged during meetings and training sessions so that trainees can learn from each other, as well as from knowledge workers. These

strategies are dependant on both the levels of experience of the information sender, as well as his / her capacity to effectively convey tacit knowledge. Successful optimization, however, leads to greater knowledge and skill development in trainees, which would in turn accelerate their competence development to become fully integrated and productive organizational members.

5.2.3. Depth of knowledge and skill

This category refers to all knowledge and skill that needs to be assimilated by the newcomer in the induction and training process, i.e. Training content. Firstly, the newcomer is made aware of the scope of his / her functional role in the organization. Secondly, product knowledge is conveyed in a form that accommodates all existing knowledge levels and allows for the new knowledge to be easily assimilated. However, product knowledge is not presented in a structured hierarchical manner. Additionally, all industry specific language and jargon is explicated. Other knowledge that is not currently assimilated includes: Industry history, existing nature and future trends; client segmentation and niche descriptions; and competitor information. Newcomers are made aware of the operational and systemic processes associated with his / her functional role to some degree, as well as institutionalized modes of communication and interaction within the company. This is not comprehensively covered and as a result is partially ineffective. Finally, the particular sales skills and techniques are made explicit for easy assimilation by newcomers.

The trainee's development of knowledge and skill is highly dependant upon the quality of the training materials, as well as the availability of knowledge workers. Resources are generally kept up to date, however, their utility is not explained to trainees, so they are not aware of how to navigate and fully utilize. These resources vary in their effect on developing knowledge and skill because they contain too much information and it is difficult for trainees to highlight relevant and current information to attend to.

Knowledge and skills, as it is referred to here, is that which is specific to an IT context. Co. X has certain knowledge standards and criteria that a sales trainee must meet in order to be considered effective in his role. The strategies for improving these levels knowledge and skill are detailed in sections 5.2.1., and 5.2.2 (effectiveness of learning enablers), however, there are a few factors that determine the success of these initiatives. Firstly it should be noted that

individuals will have varying degrees of development based upon their personal learning efforts. Some individuals have particular personality characteristics that motivate them to be more committed to their own progress. Management at Co. X believe that despite standardized application of motivation and training, certain individuals will just respond better. Also, trainees with prior knowledge in the same field will likely be able to assimilate new information faster and with greater ease.

Over time, trainees who develop the required knowledge and skills naturally become more proficient in the execution of management instructions and achieving objectives.

5.2.4. Level of competence

In order to be considered a highly competent sales consultant, the newcomer must achieve great proficiency in all aspects of his / her functional role, which would include the attainment of both conceptual and practical knowledge to facilitate effective decision-making and problem-solving abilities, as well as high proficiency in sales skills / techniques. The newcomer should have developed a great amount of product knowledge in both technical and functional dimensions that would allow for suitable product positioning and client service. The newcomer should also develop a broad understanding of the industry and market place that would guide relevant information gathering and feedback to management, which can only be achieved once the individual has acquired suitable industry language that would aid communication and persuasion initiatives. A highly competent sales consultant would also have to be able to develop sound client and colleague relationships. Other characteristics of a competent sales consultant would include: A capacity for continuous learning; Strong operational and procedural knowledge; Responsiveness and correct execution of instructions; and personal attributes of professionalism and accountability. This is the context within which to interpret levels of competence.

Co. X considers trainees to be competent when they have developed the ability to develop relationships with clients and provide them with service that exceeds their expectations. The company has established that this ability is causally dependant upon the breadth and depth of knowledge and skill that the trainee develops. For example, the trainee is considered to be competent if he / she is able to assist clients on any query or request, whether the information is held or known how to source. The depth of the trainees knowledge is rarely

developed immediately after training, and it requires the resourcefulness of the individual in seeking out information. This is currently not occurring at Co. X and the trainees rely on seniors to assist often.

The intervening conditions for developing competence include the individual's learning styles and learning capacity, as well as the techniques and tools used to transfer knowledge.

5.2.4.1. Variability of Learning Styles

Individuals can be classed according to four different learning styles. These learning styles determine how the individual assimilates information, what type of knowledge is most easily acquired, and the type of learning behaviours the individual adopts. The individual's learning style also governs what motivation mechanisms would be the most influential. Despite an individual's dominant learning style, an organization can induce learning of all knowledge dimensions in varying degrees, based upon the method of teaching. Knowledge workers at Co. X have noticed that each trainee seems to respond to different methods of teaching better. It is often the case, however, that they are more engaged in the training, when it was an interactive session and visual aids are used in the process.

5.2.4.2. Breadth of learning capacity

A person's learning capacity refers to individual attributes that makes one open to learning. Co. X first takes into account the newcomer's level of experience, which would determine what information would be easily interpreted and assimilated. The newcomer's personal dominant learning style also plays a role in determining what type of knowledge is most easily assimilated and how its is utilized. Personal characteristics also define how easily an individual adapts to change. Newcomers that are highly adaptable and have little resistance to change, hence little defensive reasoning, are also more open to learning initiatives. Learning capacity also refers to the amount of individual effort the individual exerts in learning initiatives. This refers to the level of accountability the newcomer takes for their rate of development. This is evident by the amount of information-seeking behaviour they display. Trainees that show evidence of improvement in competence are those people who have a noted assimilation of knowledge and endeavour to expand upon their existing abilities.

5.2.4.2. Effectiveness of learning enablers

Learning enablers refer to all human and technical processes that facilitate learning. These include learning activities and knowledge dissemination tools. Learning activities refer to all formal training activities, which includes workshops, role-playing, job-shadowing/mentoring, job-rotation and presentations. Knowledge dissemination tools refer to the explicit sources from which newcomers can draw knowledge. For example, the visual component of presentations and the tangible engagement with products stimulate better knowledge assimilation and retention for application. The Internet, Intranet and Co. X Application are tools to disseminate information. They make information easily accessible for special-purpose learning initiatives. The effectiveness of these tools are evident by how easily the trainee applies the theory in practical application in their job functions.

As a result of the training and accruing experiential knowledge, the sales people become more confident in their roles and more autonomous in their actions. They resolve problems and execute management directive with decreasing assistance or guidance from management.

5.3. Discussion of findings

From the observation and grounded theory analysis on the interviews, a theory on newcomer induction and training as it currently exists at Co. X emerged.

If one attends to the formal and informal learning activities as described in section 5.1, one could induce that there are various behavioural motivation mechanisms that the branch manager utilizes in developing trainee competence. The directives issued by the regional manager, including target setting, and policy and procedure reinforcement, were emphasized by using negative reinforcement. This was an attempt to motivate the desired performance of the sales consultants, e.g. Sales staff were forewarned that should the regional manager not be content with their performance, they would be sent to assist the receiving department in booking in media as punishment. Furthermore, the branch manager attempts to instil some internal competitiveness to motivate sales to reach their targets. This is achieved through mentioning each person's sales figures, which either motivates them to avoid anxiety or embarrassment, or strive to impress and gain recognition from the branch manager and colleagues. There are numerous other influences that may impact the degree of

organizational learning within Co. X, some of which include: The level of bureaucracy of the company; the type of performance measurement system in place (e.g. out-come based); the manner in which management influences the sales staff; the degree of innovativeness of the company; and the effectiveness of the intelligent workspaces.

The four formal training activities, i.e. job rotation, job-shadow, sales simulation and face-to-face training, also impart varying levels of conceptual knowledge.

Job rotation gives the new employee an opportunity to meet all the stakeholders in the operations so that he/she may establish good interpersonal relations, as well as identify who occupies which role and their responsibilities. It also allows the new employees to increase their knowledge of the systems in place, so that they might be better able to identify when processes step out of their normal/acceptable limits (e.g. problem identification). More importantly, they would be better enabled to assimilate sales specific information. This process is arguably the best means of optimizing socialization so that the employee can become fully integrated into the company culture. It also allows individuals who favour pragmatic knowledge and active learning to assimilate knowledge easily.

Through job shadowing, the new employee is exposed to events; e.g. how to handle a cancelled order; and how to obtain purchase orders for special orders/assembly orders. This is invaluable experiential learning in that it puts the sales function in context in interdepartmental correspondence and **collaboration.**

During the sales simulation phase, the new sales consultant performs tasks, such as performing customer care courtesy calls, and updating client contact details. This increases the new employee's opportunity to experience previously unknown situations and activities and broaden their understanding and perspective.

The **face-to-face training** sessions define behavioural and knowledge standards that are expected from the new employee in the execution of his job function.

All of the above training components are largely informal and information is always unilaterally transmitted from top-down to the learner. A great deal of the information is interpreted differently than the sender had intended because of the different underlying

mental models and the lack of a shared language. This is mitigated by the opportunity to question and ask for clarification. One of the barriers to questioning, however, comes in the form of political aversion and organizational defence mechanisms (E.g. fear and embarrassment.)

The learning activities detailed in 5.1.. represent all four of the learning mechanisms, and their associated "**ba**", in the SECI Cycle.

Within the learning mechanism category of externalization (tacit to explicit), Co. X provides face-to-face training from external consultants, product managers, HR personnel, and the branch manager comprising product information, operational systems, client relationship management and policies and procedures. Employees gain further knowledge through job rotation and job shadowing existing staff members, where they make their actions explicit to enable knowledge and skill transfer. Tacit knowledge is further explicated through the construction and dissemination of manuals and memos. The "internalising Ba" (Nonaka & Takeuchi, 2004) associated with externalization specific to Co. X includes: boardrooms and conference centres; visual presentation through PowerPoint presentations; face-to-face mentoring in formal work spaces; and Internet and intranet facilitated digital document transfer, e.g. shared files on server and email transmissions.

Within the learning mechanism category of socialization (tacit to tacit), employees are exposed to knowledge through informal sharing of existing staff experiences in the form of product, client and process anecdotes. E.g. sales staff share work-related problems and solutions such as handling client complaints. Additionally, Co. X facilitates role-playing and scenario-sketching sessions where employees are able to internalize sales pitch methods and mannerisms. Co. X's "originating Ba" (Nonaka & Takeuchi, 2004) specific to socialization learning mechanisms encompass all areas where informal conversations are held, such as common rooms, parking lots and social environments outside of working hours. In these environments, employees and co-workers are able to share experiences and develop a more intimate rapport with lessened organizational politics and power influence. Role-playing and scenario-sketching are facilitated separately, and within a working environment, around a circular table to increase multiple interactions and therefore broader perspective.

The combination (explicit to explicit) learning mechanisms within Co. X involve the condensation and conversion of existing complex documents into a simplistic form. For

example, a presentation on a particular product that highlights that product's selling features and important technical specifications. The form of knowledge within this learning mechanism include: emails; rate-of-exchange notifications; documents from vendors; product brochures; information generated by the Co. X application; and information received from clients. "cyber 'Ba', which is associated with the combination learning mechanism, consists mainly of digital aids to learning, such as documents produced in Microsoft office applications. For example, pricelists are compiled in excel and product presentations used for training are compiled in PowerPoint. Emails and instant messages (MSN) are also utilized greatly to enable fast information transfer with the intent of immediate action by the recipients of the information. Essentially, the computer is the interface through which all pertinent information is stored for special-purpose retrieval and use.

Of the four learning mechanisms, internalization (Explicit to tacit) is perhaps the most relevant and necessary, because the sales function is highly dependant upon the automated and natural execution of the knowledge they have gained in training. Co. X facilitates a number of activities that would ensure the internalisation of knowledge gained. These activities include: sales simulation; familiarization with systems, processes and computer applications; role-playing; and scenario sketching. Through activities such as sales simulation and role-playing, new sales staff are able to internalize techniques and sales language that they have been exposed to through performing them. The "exercising 'Ba'" associated with Internalization for Co. X comprises activities which require physical application, such as writing tests, practice in using the Co. X application, and participating in role-playing activities.

Co. X. has an existing perspective on sales staff motivation. There is a common phrase cited within the company that Co. X. utilizes a "carrot and stick" (Interview transcript 20076, Respondent R) approach. This refers to the company's practices in punishing poor performance and rewarding good performance. As per Piercy et al's (1998) theory on organizational motivation mechanisms, Co. X was assessed according to the specific motivation mechanisms that they utilize. These motivation mechanisms are either behaviour-based or outcome-based.

Behaviour-based motivation mechanisms refer to the types of motivation used by companies to promote the repetition of desirable behaviours. For example, organizations would favour individuals for continuous learning and development. They would also encourage individuals

to engage in coaching and information-sharing activities. These activities do not directly benefit the individual, but the behaviours have indirect outcomes that are of value to the organization. Outcome-based motivation mechanisms, however, only reward results regardless of the manner in which they are achieved. For example, individuals and groups would be rewarded based upon the quality of a deliverable, or target achieved, such as turnover or gross profit figures.

These motivation mechanisms can either be directed at individuals or groups. The first driver of motivation that was recognized during participant observation was the group behaviour-based mechanism. There do not appear to be any intermediary reward mechanisms for group effort in knowledge creation or transfer. E.g. there are no group brainstorming sessions, nor are there meetings in which "best practices" (Interview transcript 2006, Respondent BR) are shared. There is always the possibility that the culture that senior management endorse, creates environments that are not conducive to this type of activity. Information is always transmitted unilaterally from top down. There are, however, a few activities that management use punishment to enforce, e.g. group knowledge dissemination to clients through mail shots.

The second motivation driver is an individual behaviour-based mechanism. Individual initiative visible to management puts that sales consultant in favour with management. Efforts to assimilate retrieve and action information receives praise, e.g. High marks on the weekly tests receive congratulations by email which is transparent to all. Those that do not exhibit learning behaviour, i.e. not taking notes or asking questions in meetings and presentations are looked upon unfavourably and will evoke management scrutiny. Product Managers are remunerated through a higher basic salary for their knowledge sharing activities (i.e. product training and performance assessments.)

Group outcome-based motivation is used infrequently, although it is present. During formal training, groups are rewarded with dinner and drinks and social events paid for by the company. Invitation is considered a reward in itself, in that there is a certain stature in attending these conferences. Additionally, as appreciation for the continued hard work and good performance, the entire company is treated to the occasional staff party or social activity, e.g. ten-pin bowling. One of the major incentives for sales is that should the branch

reach R20million in one month, the company will sponsor a week in Mauritius for the entire sales team.

Finally, individual outcome-based mechanisms are utilized most extensively. Individual commission is based on turnover. Individual monthly bonuses are paid on improvements to turnover, gross profit (GP) and gross profit percentage (GP %). Incentives are provided by vendors, e.g. Intel targets for shopping vouchers. Performance over an extended period open possibilities to an increased salary, added responsibility and increased status.

As Piercy et al (1998) stated that individual outcome-based motivation is correlated with a high degree of inter-employee competitiveness. In order to achieve the above-mentioned rewards, sales staff tends to hoard information/knowledge in order to place them at a competitive advantage. This is evident by the individual contributions to market information transfer to management via direct email or private meetings. Sales staff do not discuss their findings with each other either by email communication or group meetings. This may not necessarily be an intentional and malicious behaviour, but it is certainly one that is promoted by the mechanisms in place, i.e. a great deal of effort would be required in imparting such knowledge to peers. Moreover, this effort would not be rewarded because sales staff would incur more cost than benefit in terms of time and remuneration. The only situation in which an individual is rewarded for sharing knowledge is when the behaviour is an expected component of one's functional role, e.g. product manager's (PM) additional remuneration for conducting training sessions.

5.3.1. Relationships between training and induction variables

Analysis offered insight into the training and induction context at Co. X. in terms of how to achieve the desired outcome of newcomer competence. In order to broaden the newcomer's knowledge and skill set, it requires emphasis on the social aspects of learning. Appropriate motivation, adequate information-sharing and improved quality of information resources should be provided to the newcomer to accelerate their development.

The core variables, both indirectly and directly, of newcomer competence are the quality of information resources and the degree of information-sharing. The quality of information resources and degree of information-sharing are in an indirectly reciprocal relationship with

the amount of motivation that is applied to or exists within the newcomer. Motivation influences the frequency and quality of information transfer. An improvement in each of these variables necessarily reduces some of the organizational barriers to learning inflicted upon the individual, which in turn increases the amount of individual motivation the newcomer feels.

5.3.1.1. Motivation applied to individuals and trainers

As identified in observation, and acknowledged in the semi-structured interviews, motivation applied at Co. X is largely outcome-based in that only results are rewarded and errors are punished. It was stated that the sales staff are not "paid enough for that type of commitment" (Interview transcript 2006, Respondent BR), which indicates that sales staff have little monetary incentive to share information or drive their own learning. Learning initiatives would naturally develop their ability to sell and increase their turnover, however, the sales targets have large gaps in between, which means that the rate of improvement is not significant enough to achieve monetary gains. Therefore, the only manner in which sales consultants perceive monetary gain is through acquiring more clients from other sales consultants to bolster their turnover. Their energies are thus directed at acquiring clients rather than self-improvement to generate more from existing clients. Furthermore, sharing of knowledge would not occur because sales consultants would not assist colleagues in retaining their clients. Similarly, those people who assume roles of knowledge disseminators need to be adequately rewarded for the development of the newcomers. This can be achieved through monetary incentive, but more importantly by the provision of executive recognition, higher organizational status, and the lure of promotion opportunities. This would be a means of instilling behaviour-based motivation, in that their knowledge sharing activities would be justified immediately. This would also apply to their responsibility of maintaining the Knowledge Base by recording accurate information frequently to support sales learning. Co. X. does, however, have a culture that conveys behaviour-based punishment. The tests issued also motivate sales staff to continue to put effort into individual learning initiatives. Good performance in the tests usually gains favour in the eyes of management and poor performance is publicized to evoke embarrassment as punishment. In the role-playing sessions during meetings, individuals are chastised for incorrect or incomplete "answers" (Interview transcript 2006, Respondent J), which instils a feeling of fear in participating in these activities because they want to avoid embarrassment. By not

engaging in these activities, the individuals inhibit their learning potential. Additionally, the penalties in making errors in executing responsibilities are high. For example, individuals are responsible for disassembly fees if they make a careless error in executing the order. From the above it can be seen that the organization requires a cultural shift so as to encourage learning by reducing organizational learning barriers. One means of motivating learning and information-sharing would be to institutionalize a generic behaviour-based motivation mechanism that would be appeal to all individuals and learning styles from which the individual can derive personal satisfaction. Organizations should also take care to explicate its goals and strategies, so that individuals have a shared understanding, and aligned commitment. This would facilitate goal-oriented learning initiatives.

5.3.1.2. Facilitation of information-sharing

As previously mentioned, motivation is one of the key elements that drive information-sharing. If suitable motivation is applied to the intended information senders, then information-sharing would increase in frequency and depth. For example, if behaviour-based motivation mechanisms were applied to those individuals responsible for constructing presentations, notifications and reports, they would be more accommodating. Similarly, peers would be more likely to share their experiences and "discoveries" in meetings and by electronic mail. This information-sharing is imperative to counter the "re-inventing the wheel" (Interview transcript 2006, Respondent J) phenomenon because newcomers are more likely to assimilate this type of information from people in similar positions as theirs, and not repeat their errors. The degree of information-sharing, although fuelled by motivation, is subject to certain conditions that facilitate its occurrence. Sufficient time must be available, and the mode of communication must be suitable for the intended purposes. In order to convey the organization's support of information-sharing, regular meetings and workshops should be scheduled so that individuals can realize the importance of this activity. Additionally, the information should be transmitted using suitable modes of communication. For example, sales consultants expressed that they often glance over emails or miss certain emails because of the volume of messages they receive. In order to distinguish important information, the company should utilize a special mail format to emphasis that it should be attended to. It should further be noted that certain difficulties arise in this area. One such difficulty relates to the quality control of the information transmitted. The challenge exists for the organization to monitor and moderate the content that is conveyed. For this, a

quality filter should be applied. Senior employees with expansive knowledge should be privy to the information before or during transfer, so as to intervene if necessary. In doing so, the organization can also ensure standardization and prevent duplication of content.

5.2.1.3. Resources available for training and induction

Motivation is also a key element that drives the quality of the information resources. Product managers and the relevant personnel across the departments should be incentivized to keep the knowledge base (e.g. data captured on the Co. X. software application) up to date. Additionally, there should be a strategic match between the type of explicit knowledge source, the manner in which it is conveyed and the type of knowledge and skill intended to be developed. Moreover, it is imperative that a newcomer is instructed on the various means of gathering information within the company. Early in the training and induction period, the newcomer should be made aware of the appropriate channels of communication, the various resources and tools available, as well as the most effective ways of utilizing the tools. It would also be beneficial to provide situational examples that would broaden understanding of the resources utility. In training, material should be presented to newcomers in a cumulative manner, i.e. increasing complexity. For example, basic hardware should be followed by more detailed specification, followed by the technical application thereof. As cited by the sales staff in the semi-structured interviews, there are certain qualities a knowledge worker should possess to be effective knowledge disseminators. Learners would be more responsive to trainers if they were approachable and encouraged information-seeking. They should also be able to adequately articulate their tacit knowledge by qualifying their messages with in-depth examples. As newcomers' perceptions are still narrow, they would not know in which areas they require attention. It therefore stands to reason that trainers should be vigilant in this regard, and pay particular attention to areas of concern. Finally, trainers should be recognizable experts within the company. This status would motivate newcomers to attend closely to his / her instructions.

It is also the case that Co. X does not utilize dedicated trainers. The branch manager and product and business managers are required to train new recruits as a secondary function to their main roles and responsibilities. Owing to the fact that there is little routine in the daily execution of their work, the trainers are unable to commit to a training schedule, which further exasperates the issue of standardization and contributes to a low level of reliability.

Although this dual-function keeps the trainers current with the functional expertise that they can convey to newcomers, it also reduces their accessibility, which discourages information-seeking on the newcomers part. The training programme should be structured in such a manner that explicit knowledge resources enable self-generated learning as a foundation, thereafter a trainer should be removed from his / her main function for a short but intense period for training.

5.3.1.4. Barriers to individual learning

Both information-sharing and information resources determine the number and strength of the barriers of learning within the organization. Should the knowledge base be kept current, it would require less effort, and therefore less time, to maintain. This would allow for greater time to share knowledge with newcomers. Accessibility would greatly reduce the barriers to information-seeking behaviour. Additionally, if the culture of the organization was modified to encourage greater knowledge sharing, defensiveness would dramatically dissipate because individuals would feel greater confidence in exploring the knowledge domain without fear of reprisal. As the barriers of learning begin to diminish, particularly as a result of a culture that encourages learning, the individual would begin to feel more confident and free to individual aspirations. Through this self-generated motivation, and the behaviour-based motivation mechanisms implemented by the organization, the individual adopts a more aggressive learning strategy.

5.3.1.5. The impact of learning styles on training

As mentioned in the literature review, there are four different learning styles, each of which determining a specific type of information acquired and through what means. As one respondent indicated, they "might learn like a parrot, and then forget the next day" (Interview transcript 2006, Respondent R). Another responded that they "learn through trial-and-error... curiosity... I want to know why it happened, how it happened. Nobody showed me, I played with it myself" (Interview transcript 2006, Respondent J). These refer to Analytical and Common Sense learners respectively. Despite each individual favouring one particular learning style, if Co. X. implements the appropriate behaviour-based motivation mechanisms, the newcomers would engage in activities that disseminate all knowledge concepts. These varying methods of instruction will accommodate particular learning styles

and affect retention and understanding. For example, through mentoring the individual is actively interacting and assimilating his / her role models sales behaviour, whilst reading books and other documents would assist in deepening his / her understanding to facilitate general decision-making and problem-solving abilities. From the above information, as well as the theory presented by Wiig (1993), it is clear that Co. X. should match its training content and methods appropriately. (The detail of which shall be put forth in the Knowledge Management System in Chapter six that follows.)

By enacting these various learning styles, the individual broadens their own capacity for learning. Adaptability, as encouraged in different learning processes, enables the individual to develop the capacity to assimilate all necessary knowledge and skills involved in his / her functional role. "Sales person needs to adapt to consistent training and learning," (Interview transcript 2006, Respondent T) as one respondent indicated, the individual should have the capacity to continuously challenge one's knowledge and grow. As this is a product of individual motivation and personal attributes, the company has little impact upon the individual's learning capacity. However, Co. X. can accommodate it by fostering an encouraging environment that builds confidence and thus building the capacity for information-seeking behaviour. "Ties in with confidence I'd say... If you have a low self-esteem, you're not going to go around asking questions" (Interview transcript 2006, Respondent R). Related to the issue of confidence, is the newcomer's ability to forge relationships with peers, and more importantly clients. Additionally, the newcomer should feel a certain amount of autonomy, and it should be explicitly expressed that the newcomer will "be their own business manager" (Interview transcript 2006, Respondent BR) because each dealer base is considered a separate entity run by the sales consultant. Finally, Co. X. should focus on generating excitement for the products. Should Co. X. succeed in instilling this excitement, the newcomer's interest would drive information-seeking behaviour such as reading published articles, books and review, which would further build their knowledge.

5.3.1.6. Impact of individual capacity on rate and type of learning

A broad learning capacity would ensure an optimized learning experience for each newcomer across the various training and development activities undertaken. Specific skills and knowledge are developed according to the aforementioned learning activities and the tools used to assist information transfer in chapter four. This includes role-playing, job-shadowing,

job-rotation and product presentations, to name a few. Despite the inclusion of dense content across numerous learning enablers, it appears that the training program is conducted in a haphazard manner in that there is a lack of standardization in content, process, and delivery. New recruits join the company at different points in the training programs because Co. X's recruitment policies, and as a result do not obtain a comprehensive understanding. Therefore, their abilities are hampered in fully assimilating the necessary skills and knowledge requirements for their roles. Furthermore, they are not able to develop a concrete understanding of the organization's culture and business strategy and this prohibits them from fully integrating into the organization's strategy of purposeful action. It appears from observation and data collected in the interviews, that the current learning enablers being utilized are the appropriate methods of knowledge dissemination in that they represent all methods of teaching across the learning styles. A mere re-organization and re-structuring of content and scheduling would aid efficient assimilation of knowledge. Additionally, as mentoring is considered one of the best means of disseminating both explicit and tacit knowledge, it should receive considerably more focus. The mentor would necessarily have to be removed from part of his functional role in order to accommodate greater interaction.

5.3.1.7. Training content and structure

The effectiveness of the learning activities and tools of information dissemination would necessarily improve the depth of knowledge and skill of the newcomer. Despite having a small component of the training program that is constant, i.e. Policies and procedures, and the Co. X culture, there appears to be no fixed content in terms of knowledge requirements and skill development. This is a result of frequent internal restructuring and strategy change. Co. X requires sales staff to have developed deep systematic and pragmatic knowledge for all knowledge components of the functional role. Ainscough et al (1996) made mention of creating a knowledge base for sales consultants. This knowledge base could comprise: selling scripts, product information; procedural information; and selling tools and aids. Co. X currently has a limited knowledge base which contains only product information. There could be a number of possible reasons for the limited scope of the existing knowledge base. One explanation could be that there is little emphasis placed on documenting new knowledge or best practices. Another could be that there is currently a perception that this information could not be successfully recorded, i.e. the nature of the selling script eludes capture of the necessary tone and variable content. Management rely on sales' initiative to

construct their own sales pitches. This level of autonomy in guiding one's own sales behaviour would only be achieved if the relevant systematic knowledge had been entrenched to guide further knowledge assimilation and use. (Sales would be better enabled to distinguish between various contextual behaviours)

Newcomer competence is highly dependant upon the development of systematic and pragmatic knowledge and skills. The greater the knowledge and skill set achieved by the newcomer, the more competent he / she shall be in executing his / her functional role. As one respondent mentioned, "Competence is how you use what you know" (Interview transcript 2006, Respondent J). This indicates that a highly competent person is one who can identify different means of utilizing the same knowledge and skill set for different specific ends. The sales staff would be more capable of seeing "the bigger picture" (Interview transcript 2006, Respondent BR) and therefore actions would be directed accordingly. Additionally, a thorough systemic and procedural knowledge would enable the individual to utilize the information resources fully to aid effective decision-making and problem-solving. Thereafter, the increasing levels of competence and broadened experience further and allow the individual to assimilate new information more easily, i.e. their capacity to learn would be ever-widening.

5.4. Conclusion

Co. X's existing training system encompasses a broad spectrum of both technical and general content information, however the manner in which the information is presented is haphazard and as a result does not provide a standardized and comprehensive means of developing competence in the neophytes. The current learning enablers and information resources adequately accommodate the different learning styles, yet greater systematic and pragmatic knowledge could be achieved through improvement to mechanisms that would facilitate information-sharing and training resource development activities. The system as described in chapter 5 enabled the development for a customized knowledge management system that would suit Co. X's desired outcomes whilst considering the system constraints. This customized KMS is developed fully in chapter 6.

CHAPTER 6: DEVELOPMENT OF A CUSTOMIZED KNOWLEDGE MANAGEMENT SYSTEM

6.0. Introduction

In the previous chapter, the current training and induction system as utilized by Co. X was described. Having derived an understanding of the optimal conditions under which newcomers learn, and by assessing the current training structure, it was possible to modify the system to optimize the development of competence. In the development of this KMS model, Co. X's existing resources, training methods and constraints were taken into consideration. The structure and content of this KMS model are detailed in the paragraphs that follow, which addresses the second research question i.e. "what aspect of training during induction would facilitate the desired competence within the relevant time parameters?" as stated in chapter 2.

6.1. KMS Model

A knowledge management model was devised that would enable deep knowledge and skill development in newcomers that would accommodate all individual learning styles, whilst taking the organizational constraints into account.

As the first 6 weeks of the newcomer's period of employment is the most crucial in forming their attitudes and perceptions of the organization, it is a period that should obtain the greatest focus. The knowledge management model has been segmented into 3 bi-weekly segments, based on Robbins' (2002) premise that the first 6 weeks of the employee's introduction to the company is the most crucial in forming his / her attitudes, morale and motivates learning (Refer to Figures 6.1., 6.2., and 6.3 - KMS Model on page. 74-75 and in Appendix H). Each week should have the relevant training materials prepared in advance and issued as the model necessitates (Training materials, once prepared, form part of the organization's knowledge base, which prevents the repetition of work. Furthermore, documents could be easily modified according to new knowledge acquired.). It should be noted here, that in order to maintain the integrity of the KMS model, new employees can only be hired to begin on the first day of every second month because this would allows for more precise execution of the training schedule. At the outset, the employee should be given

a schedule detailing the programme as well as a learning and development guide, so that the employee may be properly prepared, and aware of the activities that will follow in the coming weeks. Additionally, a pricelist and product catalogue should be provided for the newcomer to review nightly in preparation for the training beginning in week 3 of the KMS model.

6.1.1. Orientation

The first segment is devoted to the orientation of the newcomer. The week would begin with a guided tour of the company and introduction to all personnel. Knowledge of the personnel and their specific roles in the organization would allow the newcomer to develop greater intuition on whom to contact under which circumstances. (An employee list should be provided at this point, including a list of all extension numbers, email addresses and msn details.) The departmental supervisors would be responsible for guiding the individual in their departments. Thereafter a policies and procedures presentation should be made by the branch manager. Frequent contact with these particular staff members, i.e. senior staff whom exhibit the traits desirable to the organization, would facilitate optimal conditions for the socialization process, particularly in the realm of tacit knowledge (Filstad, 2004).

During the presentation by the branch manager, all rules of behaviour should be conveyed, as well as specific detail on the newcomer's role, responsibilities, functional requirements, remuneration structure, benefits and entitlements. This activity addresses the common error of organizations (cited by Argyris, 1999) in failing to define learning with the purpose of achieving goals. (A Policies and Procedures manual, and employee handbook of this information should be provided for reference and revision.) For the remaining 9 days the newcomer is to be rotated through each of the departments, (excluding the sales department.) There is great emphasis placed upon job-rotation because it facilitates the internalisation of knowledge through execution of each job task.

During this period, the newcomer's learning is to be guided by a departmental workbook of sorts. This workbook would act as a checklist to ensure that the employee has learnt and performed each of the designated activities within each department, through interaction with the individuals responsible for those activities, and as such, control the manner in which knowledge is assimilated. This is based on the premise that knowledge is best assimilated in a

hierarchal manner in that information is more easily assimilated if related and built upon existing knowledge.

Before moving on to the next department (after completing the section in the workbook), the newcomer would sit with the department head for an interactive discussion session. This would allow for broader understanding of the integrated system design and purpose of each department within the organization. Moreover, the repetition of the information in a different form, i.e. observation vs. interaction, consolidates knowledge because it accommodates individual learning styles. This would also be a session during which the department head could reiterate the relevant personnel and communication channels utilized for resolving various queries that involve that department.

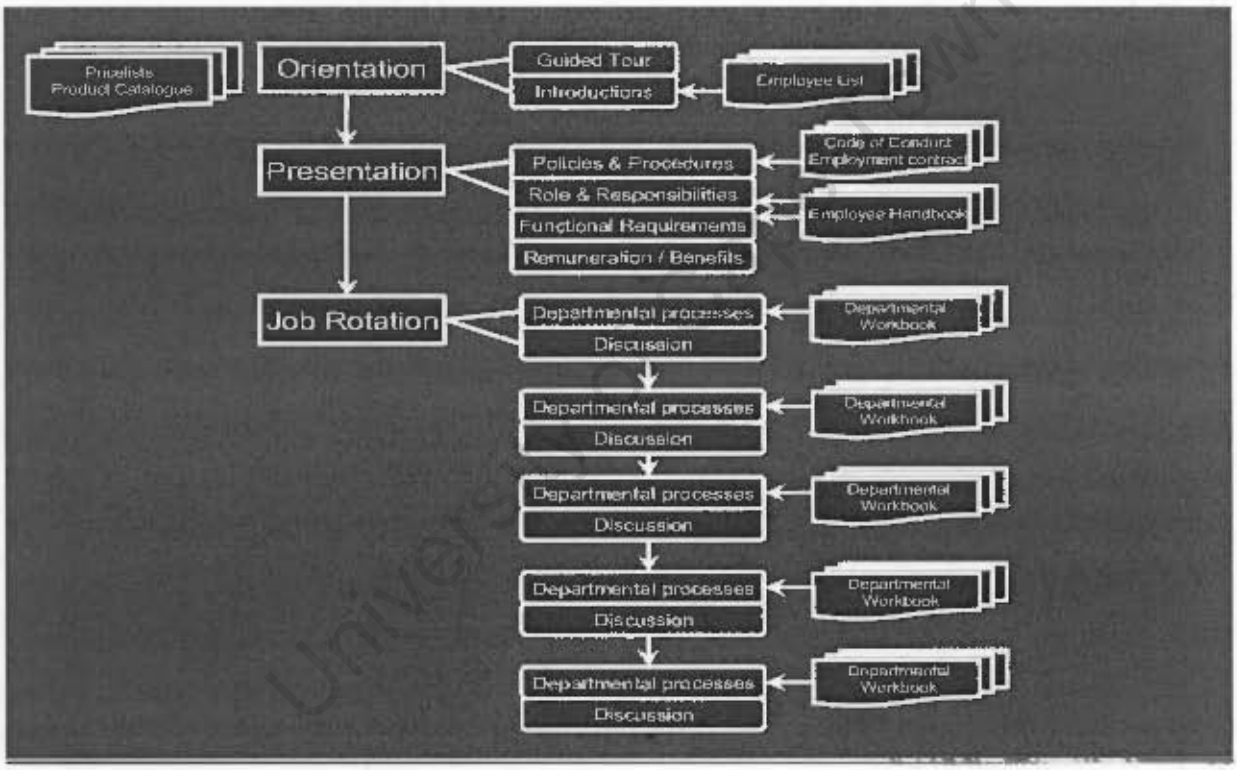


Figure 6.1. KMS Model – segment 1

6.1.2. Technical Competence

The second segment of the KMS model is devoted to developing the newcomer's product knowledge. At the outset of this segment, the newcomer should be presented with a product workbook. Workbooks should be designed to address multiple levels of base knowledge. The newcomer is to review the workbook and indicate which level of experience believed to be held, and pending the relevant product test, product training can be structured

accordingly. For example, if an individual has no prior knowledge of computer hardware, that individual shall have to have basic component training by the branch manager, before more in-depth product training and product/brand presentations can be done. During initial product training, the newcomer shall be exposed to the physical products, and would therefore be moving between the warehouse, technical workshop and training room and shall be accompanied by the relevant expert, i.e. the Product Manager responsible for that specific product / brand. Thereafter, product presentations (fixed content) shall be presented in a fixed sequence. Tests shall be issued at the end of every day, dependant upon the newcomer's existing experience, and progress within the programme. The process of training new employees on products, as described above, addresses the most pertinent factors in a training context. Firstly, it allows information to be presented in a structured manner. Secondly, the depth of knowledge is more easily assimilated because of the guidance provided by the workbook content. Thirdly, the utilization of various methods of instruction, i.e. presentations, discussions, role-play, and physical observation and application, accommodates individual learning styles, so that the individual's knowledge development is optimized according to whether they are a passive or active learner. Finally, the structure and delivery of this manner of training promotes learning across all four knowledge dimensions, i.e. idealistic, systematic, pragmatic and automatic (Wiig, 1993).

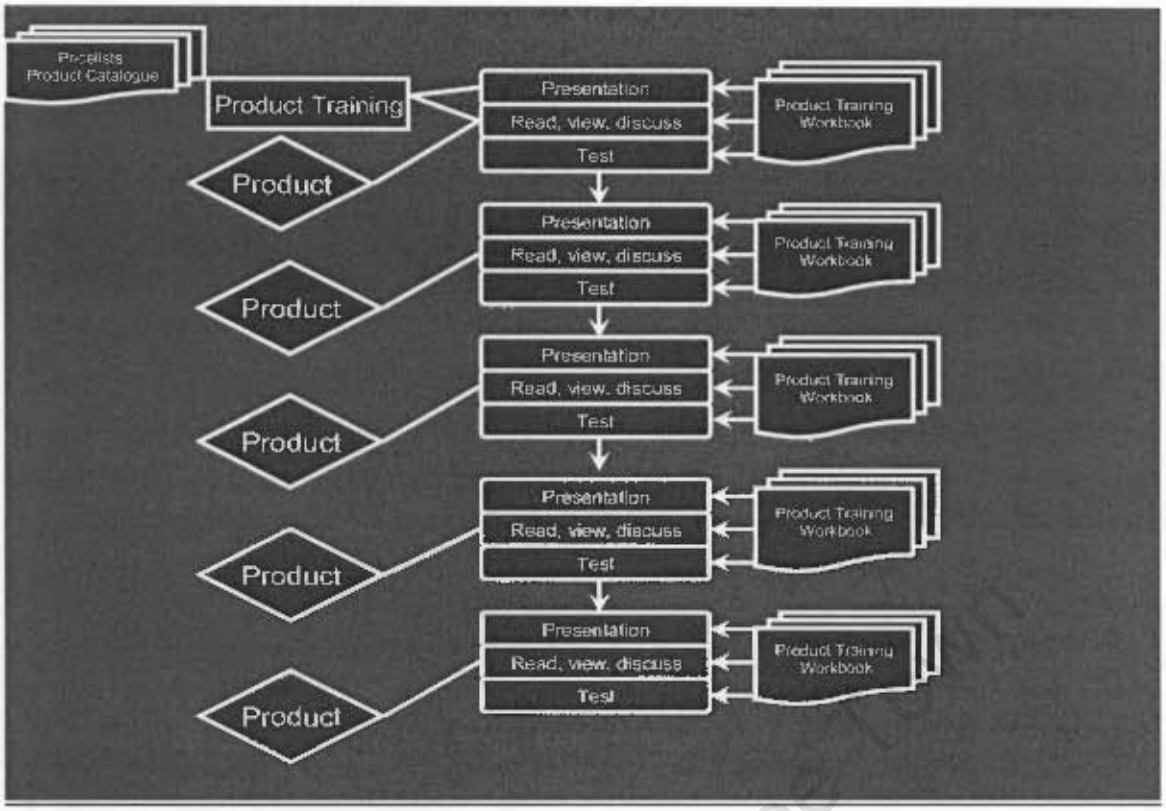


Figure 6.2. KMS Model – segment

6.1.3. Role development

The third segment is devoted to the familiarization with the sales department and the sales function. During this period, the newcomer is assigned a mentor and a workstation. The newcomer shall shadow the mentor for a week, and the mentor shall monitor the newcomer at his / her station for the following week. Assigning a mentor in this manner allows for the tacit assimilation of the mentor's accumulated knowledge. Additionally, mentoring is the best means of exposing the newcomer to pragmatic knowledge. At the end of each day, the pair should sit and discuss issues or questions that arise during the day. This repetition and clarification of information is essential for the consolidation of knowledge.

At the outset of this segment, the newcomer is presented with a sales operations workbook. This workbook would contain information regarding the execution of all sales functions, including detailed information on how to:

- Search for information
- Construct quotations

- Place orders
- Construct and manage the client dealer base
- Execute Co. X. methods of customer relationship management
- Avoid common errors (compiled collectively by sales staff and management)
- Gather market information (compiled collectively by sales staff and management)

The content of this workbook further explicates the newcomer's roles, responsibilities and value-outcomes, so that the individual would more easily recognize why he / she is required to know certain things.

During the final three days of this period, the branch manager shall spend intermittent periods with the newcomer to assess his / her development according to the standards defined in the workbook, and provide guidance and feedback on further development.

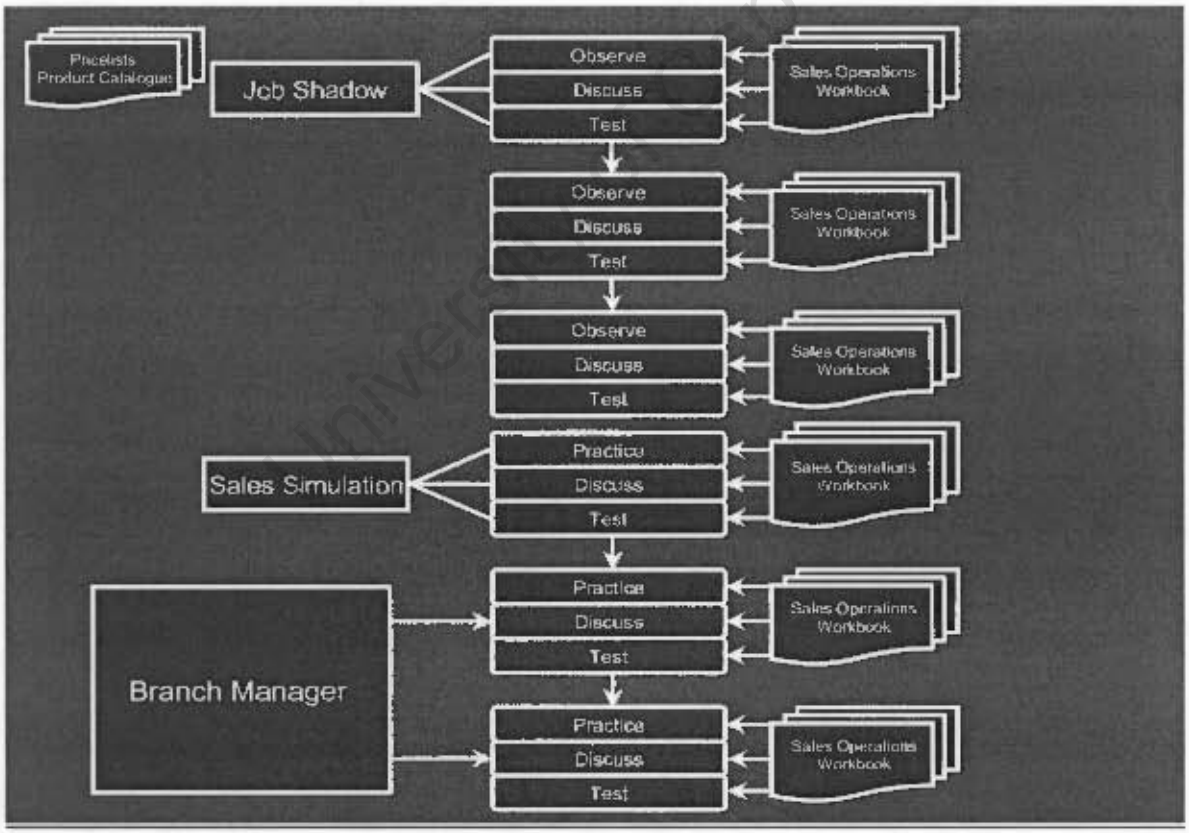


Figure 6.3. KMS Model – segment 3

6.2. Implementation constraints

The successful implementation of this KMS model is dependant upon the quality and depth of the documents prepared for this programme. The relevant personnel need to be commissioned to compile these documents, as well as ensure that the existing Knowledge Base is adequately accessible, systematized and completed. Additionally, the newcomer needs to ensure that they have prepared for the programme as instructed and motivated by the Branch Manager. Should the newcomer not adhere to the instructions, the effectiveness of the learning programme would be challenged.

6.3. Conclusion

The KMS model suggests that the optimal means of developing knowledge in a systematic and hierarchal manner would be to segment the training process into three distinct focal areas, i.e. orientation, technical competence, and role development. Furthermore, the model design takes into account the various learning styles, as well as the optimal conditions and supporting factors in the training process. This process optimizes learning because it addresses each component of the SECI cycle (Nonaka & Takeuchi, 1995). Although the model assumes the dedication of the new recruit in the learning process, it is highly dependant upon the strict adherence of trainers and supervisors. Their roles in the process are integral to the development of the desired level of competence, as well as the effective socialization of the new recruit. Additionally, it is necessary to monitor and amend supporting documents and materials at regular intervals, so as to sustain the quality and comprehensiveness to match company objectives.

CHAPTER 7: EVALUATION

7.0. Introduction

In any qualitative research study, there are numerous internal and external factors which impact the research study in terms of the manner in which it is conducted, as well as the outcomes achieved. In order to establish the degree of impact on the study's reliability and validity, these factors must be made explicit. Limiting factors (barriers and constraints) and the researcher's practice should have particular consideration. Moreover, the researcher's process should be evaluated to determine its impact upon the findings. One must also consider the impact upon the participant group and how the study has impacted their realities. These factors and others have been explored in this chapter.

7.1. Barriers and Constraints

A variety of constraints were encountered in the execution of this research. These constraints impacted the researcher's process, as well as the boundaries of influence. The variations of constraints are described in the paragraphs that follow.

7.1.1. Time constraints and availability of respondents

The impact that time constraint had on this research was three-fold. Firstly, the researcher had restricted access to respondents owing to their functional requirements, which impacted the depth of content elicited from them. Secondly, time constraints influenced the intervention design, because of the organizational structure in terms of available time for each knowledge worker to implement the model. Finally, over the two years during which this research was conducted, both the organization and researcher circumstances altered, which impacted the strategic needs and outcomes, as well as the nature of the study. For example, the researcher's role within the organization changed during the research period and she no longer had influence within the sales department to implement changes. Additionally, the company altered the recruitment criteria and training content during the research period as a result of changing business activities.

Owing to the high incidence of staff turnover, the respondent group was rather unstable, which restricted the possibility of gathering information over an extended period of time, to establish whether there would be perceptual or attitudinal changes over time. Additionally, due to organizational time pressure and individual constraints, the newcomer perspectives were only available for the exploratory interviews, and the researcher did not have access to them for in-depth interviews. Therefore, only middle-level employees and management perspectives were available during the analysis and design phase of this research.

The organizational structure in terms of human resources also impacted the KMS model. The "knowledge workers" responsible for the training and induction of new employees did so as a secondary function. The design of the model had to accommodate the scheduling requirements of the knowledge workers primary functional roles, despite the limiting effect it may have on the acceleration of newcomer development.

Finally, the organizational strategy changed over the course of the study, which influenced the newcomer competence requirements. The requirements changed in terms of content and form, which necessitated the design of a more generic model that would adapt to changing content. This factor impacted upon the researcher's ability to monitor the outcomes of the research over time because of limited time period for which she had access to the participant group. This necessarily changed the purpose and role of this research from that of Action Research, to one of a more descriptive and suggestive design.

7.1.2. Scope constraints

The researcher's access was restricted to the sales department of Co. X's Western Cape branch. This had implications for the adjustment of interdepartmental structures that impacted the sales department. Moreover, the existing information systems were not amenable for change, which restricted the researcher's modification of these systems for training and induction purposes. The manner in which the systems were being utilized by sales was however available to alter and refine. Additionally, organizational resources and researcher influence limited the scope of implementation, because a complete overhaul of existing structures was deemed to be impractical and costly. Whilst the company does wish to employ competent people, the general attitude amongst senior/executive management is that a very large percentage of the staff will leave, and they do not wish to invest too much

time, money and effort into their development, as they will be taking their knowledge and skill and utilizing it in another company – perhaps even at a direct competitor.

7.1.3. Researcher constraints

There were a number of points of intervention identified in both the problem formulation phase, as well as the solution design phase. However, owing to the inflexibility of existing HR policies, e.g. remuneration structures, the researcher was limited to fewer points of inflection. Furthermore, the researcher's authority to implement any form of change was limited because of resistance from Head Office, in that the implementation thereof would require research participants to deviate from the rigid, mechanistic function structure that is imposed throughout the company. This was also likely a result of mistrust, in that the organization did not recognize the researcher as an authority in this functional area, and was sceptical of any results obtained. Moreover, all national practices are implemented from Head Office, and the branches have to conform to their project scope.

7.2. Research Assessment

7.2.1. Evaluation of practice

One of the key elements of the research process was to implement performance improvements to the defined standards set by all stakeholders. In conducting the research, one of the aims was to gather as much data as possible in the natural setting without being disruptive to the normal business functioning. Silent observation succeeded in obtaining the required data without detracting from normal interactions between employees. As previously mentioned, the research processes enabled individuals to reflect upon their own current practices, which would facilitate new learning cycles. The impact of this was not measurable, however, due to the lack of time to monitor the system for changes.

7.2.2. Researcher development

At the outset of this research, the field of knowledge was foreign to the researcher's individual experience and knowledge set. As a product of the research process, she became theoretically sensitive to the theory, as well as the practical implications thereof. Moreover,

through the iterative nature of the research process, the researcher was able to provide greater rigour to the study. As a result of this work, the researcher developed practical competence in the field of study, which would allow for intuitive and relevant future actions.

7.2.3. Impact on organization

Despite not having the training and induction model developed in this research implemented, the research process raised awareness within the organization of the current barriers and constraints upon newcomer development. Through identification of these influences, the stakeholders became more reflective upon their individual roles and practices for the purposes of refinement.

7.3. Relevance

The relevance of this study is a measure of the significance of the identified problem in the broader organizational system. The problem, as identified by the stakeholders, was implied to be one of great concern, in that it is a recurrent and persistent issue that has a high cost component attached. Stakeholders collectively agree that the problem identified has a direct impact on customer satisfaction, which is the ultimate goal of this research initiative. Therefore, employee training and induction is a pertinent issue in the current context.

7.4. Utility

The utility of the outcomes of this research is dependant upon whether the conclusions are appropriate for the problem-solution in the current organizational context. The initial problem was formulated according to the input from the various stakeholders, and as a result, the research topic appropriately addresses the stakeholder-identified issues. The conclusions, therefore, adequately address the issue at hand. Implementation of the KMS model designed herein would be a measure of improvement upon the currently sub-functioning system.

7.5. Validity and reliability

Strauss & Corbin (1990) assert that four criteria must be met to achieve reliability in Grounded Research, i.e. **Fit; understanding; generality; and control. Fit** shall necessarily occur if the theory if the researcher follows a precise inductive process that addresses the substantive area. **Understanding** is gauged by the representations that the researcher makes regarding the data. In other words, the results of the analysis should not only reflect the research participant's true meaning, attitudes and behaviour, (without the researcher's interpretations being imposed upon them), but it should also be understandable and relevant to the audience. Although it has been acknowledged that qualitative research is highly dependant upon context, **generality** would be possible to a limited degree. This is to say that, if the data has been comprehensively analyzed and precisely described in relation to its particular conditions, it would be possible for the findings to be applied to a variety of contexts, under similar conditions, pertaining to that phenomenon.

7.6. Ethics

The question of ethics refers to both the manner in which the research was conducted, as well as the impact of the research findings upon the respondents and broader group of concern. There were numerous measures undertaken to ensure the ethical conduct of this research.

Firstly, consent was obtained for the researcher to conduct the study on the organization in question. Secondly, the strictest of confidentiality has been maintained so as not to divulge any information that may be deemed embarrassing or harmful to individual respondents. As a result, all references to individuals occur through pseudonyms. Additionally, in conducting the interviews, respondents were briefed about the broad subject of interest, and consent was obtained to record the interviews for later transcription processes. Furthermore, the individuals were encouraged to ask any questions or voice any concerns that they may have. Finally, each interview respondent was mailed a copy of their transcript as a means of debriefing, and they were further encouraged to offer feedback and corrections in the even of any misrepresentations on the researcher's behalf. This maintains the individual's integrity and researcher ethics.

7.7. Researcher bias

The researcher was a member of Co. X, and had previously experienced the induction and training process first-hand. Additionally, the researcher was a member of the organization for 4 years, 2 of which in senior management, which exposed her to much discussion in the field of concern. This deep systemic knowledge of the area of concern allowed for more concise problem definitions, and precise data gathering and interpretation. However, the depth in understanding also had the potential of restricting the researcher's perceptual field and therefore inflicting some level of bias on the interpretation of the data. In an effort to reduce researcher bias, an external consultant was approached to review raw data and offer a different perspective on findings. This perspective was incorporated into the analysis and interpretation of the data.

7.8. Limitations of research

As in any research project, there are a number of limitations. Weaknesses in a study generally relate to the research methodology utilized, in this case, the limitations of ethnography and grounded theory.

The main limitation of Ethnography is that it does not have much breath. Owing to the nature of the research, one is not able to derive broad findings because the study focuses on a specific context and one can not generalize the results and solutions are not transferable between contexts (Myers, 1999). This limitation can be overcome by further similar ethnographic studies. Parallels can be drawn across the studies to develop a more general theory.

Owing to the fact that ethnographic research is a time-consuming approach, it is often criticized for being unable to provide a conclusive and comprehensive account for the phenomena under investigation. Furthermore, there are often skewed perceptions on what type of information would emerge from the study, leading to false expectations on solution design.

With regards to Grounded Theory, it has been criticized for fracturing the data and separating the meaning from the story. However, the interpretative and developmental

nature of grounded theory allows for the fragments to be pieced together to identify the phenomena that underlies the real story.

Additionally, it proves to be an extremely complex and time-consuming method due to the tedious coding and memo writing. The long data collection and analysis associated with Grounded Theory has numerous drawbacks. One such outcome is that the researcher may not be able to sustain the environmental conditions, and the validity of the findings may be compromised because of the dynamic and rapidly evolving context.

Grounded Theory is also a highly subjective research process and relies heavily on the researcher's abilities to mitigate personally held biases. Owing to the fact that the researcher was a long-standing employee of Co. X, there are many deeply entrenched perceptions and attitudes towards the subject matter. This perceived knowledge was, however, moderated by the researcher's limited theoretical knowledge in the field of learning and development, and through the research, those assumptions and perceptions were challenged and reviewed.

Finally, Grounded Theory is also reliant upon the data collected from respondents. One difficulty that should be noted is that information gathered may not necessarily constitute the truth, but merely another limited perception of what the truth may constitute. This limitation is countered by collecting data from multiple respondents and triangulating the incidence of responses.

7.9. Recommendations for further research

The findings of this research represent a limited aspect of learning and development. The focus of this study is upon the optimization of knowledge content, structure and delivery mechanisms, as well as contextual adaptation to facilitate accelerated competence development. A number of potential dimensions of knowledge transfer could be investigated beyond the scope of this study. Two such avenues are suggested below.

7.9.1. Automation of knowledge transfer

Further to this research, the specific tools utilized to transfer information could be examined to determine their specific strengths and outcomes. One of the difficulties that arose within

training and induction was the considerable time commitments required of senior staff involved in the process. Further research could potentially identify what aspects of training could be automated by computer-aided training or other means, without compromising socialization of the new recruits.

7.9.2. Content design

Owing to the HR policies of Co. X it is often the case that there is great variability in the base level of experience and knowledge of the new recruits. These recruits have such distinct backgrounds that it is unlikely that they shall share the same interpretive language, perspectives and beliefs. There is potential benefit to be gained from the investigation into training content design to assess whether there is a means of aiding information interpretation for easier assimilation. A second dimension of such a study would be the assessment of trainer knowledge transfer skills, specifically communication.

7.10. Conclusion

The findings of this research may have significant impact on the manner in which the organization views and implements training programmes. Owing to these influences, there may be a change in perspective from all stakeholders and hence a change in attitudes and behaviour in involved parties. As has been evidenced in the above section, there are numerous environmental factors that limit the scope of this research. These factors include organizational activities, stakeholder buy-in, and researcher constraints. It has been illustrated that the conditions within which this study occurred have guided the scope of inquiry, and as a result of the research process, further research opportunities have been identified.

7.11. Conclusions of study

The present study, based upon ethnographic principles, where the application of grounded theory and systems thinking to Co. X's problem of accelerating newcomer competence, yielded the following. Considering Co. X's context, it has been identified with confidence that the key elements that effect the development of newcomers are the quality of information sources and the degree of information-sharing. These variables effect the execution of learning tools and activities by accommodating the various individual learning styles. The appropriate application of motivation to all stakeholders in the training process, facilitate the achievement of training goals.

The specific analysis of the drivers of knowledge and skill development allowed for the identification of pertinent content and structure for the solution KMS model. These factors were considered in the construction of the model, whilst taking into account the company's particular constraints.

The application of such a solution can only be assessed in the future, following acceptance of the thesis findings by Co. X. executive management, and the necessary consent obtained.

REFERENCES:

BOOKS:

Argyris, C. (1999) *On Organizational Learning* 2cnd Edition, United Kingdom, Blackwell Publishing.

Berger, P. & Luckmann, T. (1966) *The Social Construction of Reality*, London, Cox & Wyman Ltd.

Bulmer, M. (1984) *Sociological Research Methods: An Introduction* 2cnd Ed, London, Macmillan Press Ltd.

Checkland, P. & Howell, S. (1998) *Information, Systems and Information Systems – Making sense of the field*, West Sussex, England, John Wiley & Sons.

Davenport, T.H. & Prusak, L. (1998) *Working Knowledge: How Organizations Manage What They Know*, Harvard University Press, Boston MA.

Devine, F. & Heath, S. (1999) *Sociological Research Methods in Context*, London, Macmillan Press Ltd.

Dibella, A. & Nevis, E. (1998) *How Organizations Learn – An Integrated Strategy for Building Learning Capability*, San Francisco, Jossey-Bass Publishers.

Easterby-Smith, M, Thorpe, R. & Lowe, A. (1991) *Management Research: An Introduction*, London, Sage Publications

Flood & Jackson (1991) "Creative problem solving – Total Systems Intervention", John Wiley & Sons, Chichester

Goodman et al (1997) *Designing a Systems Thinking Intervention*, Cambridge, Pegasus Communications Inc.

Lewin, K. (1952) *Field Theory in Social Science: Selected Theoretical Papers*, Tavistock, London.

Mann, P. (1985) *Methods of Social Investigation*, 2cnd Ed, Oxford, Basil Blackwell Ltd.

Moustakas, C. (1994) *Phenomenological Research Methods*, California, USA, Sage Publications.

Neuman, W.L. (2000) *Social Research Methods: Qualitative and Quantitative Approaches*, USA, A Pearson Education Company.

Nonaka, I. & Takeuchi, H. (1995), *The Knowledge-creating Company*, Oxford University Press, New York. N.Y.

Nonaka, I. & Takeuchi, H. (2004) *Hitotsubasi on Knowledge Management*, Singapore, John Wiley & Sons.

Polanyi, M. (1996), *The Tacit Dimension*, Routledge & Kegan Paul, London

Prahalad, C.K. & Ramaswamy, V. (1994) *The Future of Competition – Co-Creating Unique Value with Customers*, Boston, Massachusetts, Harvard Business School Press.

Senge, P.M. (1990) *The Fifth Discipline – The Art and Practice of The Learning Organization*, New York, Doubleday.

Senge, P. et al (1994) *The Fifth Discipline Fieldbook – Strategies and Tools for Building a Learning Organization*, New York, Doubleday.

Shapiro, D. (1994) *The Limits of Ethnography: Combining social sciences for CSCW*, ACM Press, New York

Strauss, E. (1964) *Phenomenology: Pure and Applied* Pittsbugh, Penna, Duquesne University Press

Strauss, A. & Corbin. J. (1990), *Basics of qualitative research: Grounded Theory Procedures and Technique*, Sage Publications, California

Struebert, H.J., & Carpenter, D.R. (1999) *Qualitative Research in Nursing*, 4th Edition, Philadelphia, Lippincott Williams & Wilkins.

Thévenaz, P. (1962) *What is Phenomenology?* Chicago, Quadrangle Books.

Wiig, K.M (1990) *Expert Systems: A Manager's Guide*, International Labour Office, Geneva

Wiig, K.M (1993) *Knowledge Management Foundations. Thinking about thinking: How people create, represent and use knowledge.* Schema Press, Texas

JOURNALS:

Ainscough, T.L., De Carlo, T.E. and Leigh, T.W. (1996) "Building Expert Systems from the Selling Scripts of Multiple Experts", *Journal of Services Marketing*, Vol. 10 No. 4, pp. 6-17

Atkinson, W. (July, 2002), "Mentoring Programs Pick up Where Training Leaves Off" in *Purchasing*, Vol. 131 Issue 2, pp18-20

Barker, A.T. (1997) "Determinants of Salesforce Effectiveness: Perceptions of Field Managers Versus Senior Sales Executives" *Marketing Intelligence and Planning*, Vol. 15 No. 6, pp. 258-264

Bennet, R. (2001) "Ba as a determinant of sales force effectiveness: an empirical assessment of the applicability of the Nonaka-Takeuchi model to the management of the selling function", *Marketing Intelligence Planning*, Vol. 19 No.3, pp. 188-199

Brody, E.W., (1986) "PR Management: What Do You Do with a New Employee?" in *Public Relations Quarterly*, Vol. 22 Issue 5, pp25-26

Chancey, L. (May, 1968) "An Orientation System for New Employees" in *Training & Development Journal*, Vol. 22 Issue 5, pp52-56

Davenport, T.H. (1997) "Ten Principles of Knowledge Management and Four Case Studies", *Knowledge and Process Management*, Vol. 4 No. 3, pp. 187-208

Denova, C.C. (October, 1968) "The Hawthorne Effect" in *Training & /Development Journal*, Vol. 22 Issue 10, pp46-50

Edvinsson, L. (1996) "Developing a Model for Managing Intellectual Capital", *European Management Journal*, Vol. 14 No. 4, pp. 356-364

Filstad, C. (2004) "How newcomers use role models in organizational socialization", *The Journal of Workplace Learning*, Vol. 16 No. 7, pp. 396-409

Finestone, J.M. & McElroy, M.W. (2005) "Doing knowledge management", *The Learning Organization*, Vol. 12 No. 2, pp.189-212

France, D.R. & Jarvis, R.L. (October, 1996) "Quick Starts for New Employees" in *Training & Development*, Vol. 50 Issue 10, pp47-51

George, M.A. & Miller, K.D. (July, 1996) "Assimilating New Employees" in *Training & Development*, Vol. 50 Issue 7, pp49-51

Grant, R.M. (1997) "The Knowledge-based View of the Firm: Implications for Management Practice", *Long Range Planning*, Vol. 30, No. 4, pp 450-454
Hicks, S. (Editor) (April, 2000) "Successful Orientation Programs" in *Training & Development*, Vol. 54 Issue 4, pp59-61

Kanouse, D.N. & Warihay, P.I. (July, 1980) "A New Look at Employee Orientation" in *Training & Development Journal*, Vol. 34 Issue 7, pp34-38

Keillor, B.D., Brashar. R.E and Pettijohn, C.E. (1997) "Salesforce Automation Issues Prior to Implementation: The Relationship Between Attitudes to Technology, Experience and Productivity", *Journal of Business and Industrial Marketing*, Vol. 12 No. 3 / 4, pp. 209-219

Klein, H.J. & Weaver, N.A. (Spring, 2000) "The Effectiveness of an Organizational-Level Orientation Training Program in the Socialization of New Hires" in *Personal Psychology*, Vol. 53 Issue 1, p47-67

Klubnik, J.P. (April, 1987) "Orienting New Employees" in *Training & Development Journal*, Vol. 41 Issue 4, pp46-50

Leonard, D. & Swap, W. (2004) "Deep Smarts" in *Harvard Business Review*, Vol. 82 Issue 9, pp 88-97

McAdam, R. & McCready, S. (1998) "The Emerging Trend of Knowledge Management Within Organizations: A Critical Assessment of Both Theory and Practice", *Paper Presented at the 1998 Annual Conference of British Academy of Management* , University of Nottingham, 14th - 16th September

McClintock, M. Vanderplas, J. & Zick, D.C. (May, 1967) "Orienting the New Employee with Programmed Instruction" in *Training & Development Journal*, Vol. 21 Issue 5, pp18-23

Moghaddam, A. (2006) "Coding issues in grounded theory", *Issues in Educational Research*, Vol.16, www.iier.org.au/iier16/moghaddam.html

Myers, M. (1999) "Investigating Information Systems with Ethnographic research", *Communications of the Association for Information Systems*, Vol. 2 No. 23

Penzer, W. (July, 1973) "Employee Orientation: Does it Relieve Pain or Create It?" in *Management Review*, Vol. 62 Issue 7, pp17-25

Piercy. N.F., Cravens, D.W. & Morgan, N.A. (1998) "Salesforce Performance and Behaviour-based Management Processes in Business-to-Business Sales Organizations", *European Journal of Marketing*, Vol. 32 No. 1 / 2, pp.79-100

Reichers, A.E. & Wanous, J.P. (1994) "Design and Implementation Issues in Socializing (and Resocializing) Employees" in *Human Resource Planning*, Vol. 17 Issue 1, pp17-26

Robbins, R.L. (October, 2002) "Orientation: Necessity or Nightmare?" in *Supervision*, Vol. 63 Issue 10, pp8-10

Shutovich, C.A. (April, 2003) "How to Add a New Employee to your Team" in *Aftermarket Business*, Vol. 113 Issue 4, pp10-18

Smircich, L. (1980) "The Case for Qualitative Research", *Academy of Management Review*, Vol. 5 No. 4, pp. 491-500

Wanous, J.P. & Reichers, A.E. (Winter, 2000) " New Employee Orientation Programs" in *Human Resource Management Review*, Vol. 10 Issue 4, pp435-452

Wiig, K.M. (1997) "Knowledge Management: An Introduction and Perspective", *Journal of Knowledge Management*, Vol. 1 Issue 1, pp6-14.

Wiig, K.M. (2002) "Knowledge Management in Public Administration", *Journal of Knowledge Management*, Vol. 6 Issue 3, pp224-239.

WEBSITES:

Borgatti, S. (2007) "Introduction to Grounded Theory" www.analytictech.com/mb870/introtoGT.htm

Oatey, A. (April, 1999) "The Strengths and Limitations of Interviews as a Research Technique for Studying Television Viewers", http://wwwaber.ac.uk/media/Students/aeo9702. html.

Pandit, N.R. (December, 1996) "The Creation of Theory: A recent Application of the Grounded Theory Method", *The Qualitative Report*, Vol. 2 No.4, www.nova.edu/ssss/QR/QR2-4/pandit.html

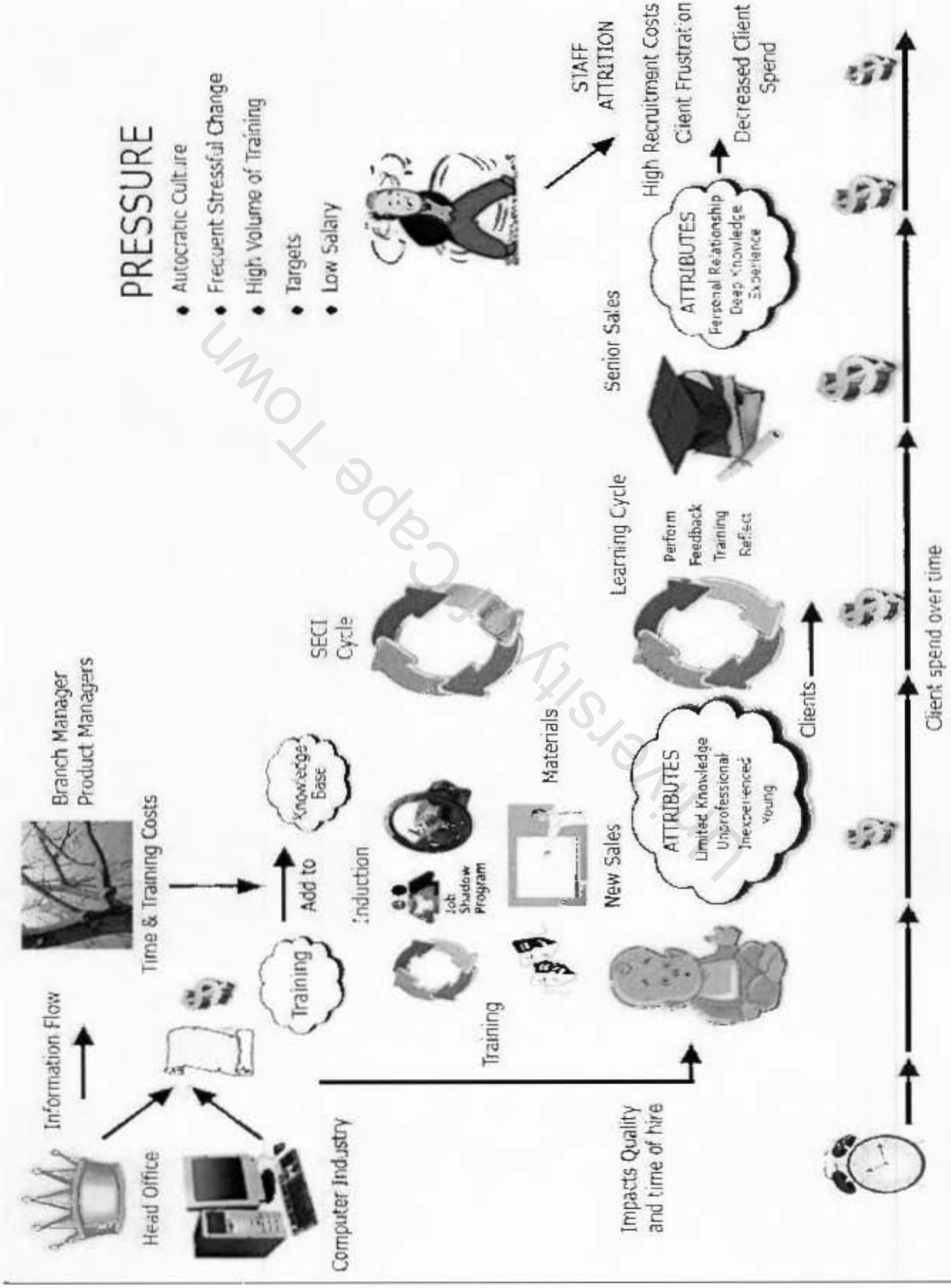
Sanjay, A. (2006) "Recruiting and Retention – A Strategic Guide to Managers" UMUC White Paper, www.projectperfect.com.au/downloads/Info/info_it_recruitment.

APPENDICES:

APPENDIX A: DATA ON SALES DEMOGRAPHICS

Initials	Surname	Birth date	Engagement Date	Status	Date Resigned
S	A	04/03/1982	17/11/2005	Resigned	17/02/2006
R	K	23/09/1971	01/09/1998	Retrenched	10/03/2006
SW	M	01/07/1967	01/01/1999	Retrenched	10/03/2006
RW	O	11/03/1983	02/03/2006	Resigned	29/05/2006
M	K	02/04/1980	13/03/2006	Resigned	08/06/2006
G	H	20/10/1983	03/01/2005	Resigned	09/06/2006
M	DB	22/12/1978	14/08/2006	Resigned	16/08/2006
MM	VDW	13/07/1983	10/02/2006	Dismissed	17/08/2006
C	C	22/04/1986	18/05/2006	Resigned	06/09/2006
R	L	10/04/1985	06/06/2006	Resigned	08/09/2006
M	V	17/11/1978	04/09/2006	Resigned	29/09/2006
BH	G	22/03/1981	05/12/2002	Current	date of analysis
LM	G	29/11/1979	01/07/2003	Current	date of analysis
S	J	26/04/1984	01/12/2004	Current	date of analysis
T	I	12/12/1984	04/07/2005	Current	date of analysis
F	K	14/07/1980	03/10/2005	Current	date of analysis
W	S	28/06/1986	06/02/2006	Current	date of analysis
A	V	17/06/1984	02/03/2006	Current	date of analysis
DM	W	13/07/1983	02/03/2006	Current	date of analysis
CF	H	07/03/1979	02/03/2006	Current	date of analysis
C	G	17/07/1986	22/05/2006	Current	date of analysis
I	M	30/04/1962	22/05/2006	Current	date of analysis
J	VH	14/6/1983	21/08/2006	Current	date of analysis
2cnd of January 2007 - date of analysis					
Total sales staff during 2006 (incl. existing and new)					
					23
Average number of Business Staff / sales staff at any point in time during 2006					
					10
Total employees hired during or in employee during 2006					
					15
Total Employees left during 2006					
					11
Average staff turnover during 2006 (Total left over avg. desired staff compliment, ie. 10)					
					110%

APPENDIX B: RICH PICTURE OF CO. X. SITUATION ANALYSIS



APPENDIX C: CONCEPTS COMPRISING VARIABLES IN PROBLEM FORMULATION

1. **Level of productivity and competence (Competitiveness)**
   - 1.1. New sales staff do not have the breadth of technical knowledge required to assist clients
   - 1.2. New sales staff are heavily reliant upon senior staff for assistance and information because under time pressure to find answers quickly.
   - 1.3. Ongoing training detracts from the time available to devote to their "main roles", which results in poor performance and little external focus on market.
   - 1.4. New sales staff have a limited understanding of the channels of communication and knowledge of all systems and processes. This impacts their ability to resolve situations efficiently and effectively.

2. **Level of client satisfaction and loyalty to company. (Profitability)**
   - 2.1. It takes time and experience in order to develop relationship with customers. An increase in staff turnover frustrates clients because they have to start a relationship from scratch.
   - 2.2. Only once a sales person is trusted, and their level of authority has been established, is the sales person better able to increase and/or influence client purchases.
   - 2.3. Clients want to deal with knowledgeable, competent and experienced sales people. Owing to increased staff turnover, clients expect new staff to be incompetent, which results in a decline in trust in the company.

3. **Effectiveness of motivation techniques applied to staff. (Motivation)**
   - 3.1. The nature of the industry and the company HR policy contribute to low remuneration of employees.
   - 3.2. There are a limited number of profitable clients within the Co. X dealer base in terms of expenditure. There is therefore a difficulty in growing the size of the sales team because there are limited monetary resources available to motivate staff.
   - 3.3. Performance is measured on a daily basis and there are numerous, and sometimes conflicting measures, i.e. number of calls, number of orders, turnover value and gross profit percentage, which contributes to staff stress levels.
   - 3.4. Targets are set too high, and not at a sliding scale, for sales to make high commissions within the constraints of their own productivity.
   - 3.5. Products and pricing are frequently changing and it is difficult to keep updated for the efficient use of sales staff.
   - 3.6. The volume of information and constant change requires perpetual training that impacts sales staff as fatigue sets in.
   - 3.7. There is little to no sharing of knowledge amongst sales staff because they are not incentivised to do so. There is therefore a greater amount of repetitions of costly errors.
   - 3.8. An authoritarian culture exists within Co. X which alienates many employees, who then leave the company.
   - 3.9. Frequent repetitions likely contribute to the senior staff impatience and intolerance of mistakes, because managers have to devote their time to repeatedly solve the same problem.

4. **Degree of staff turnover (Retained competence)**
   - 4.1. There is too much information to document adequately and information is thus retained largely on an individual basis, which impacts "organizational memory". When individuals leave, vital information and knowledge is lost to the company.
   - 4.2. New sales staff are not experienced in managing client expectations and resolving conflict arising from operating constraints.
   - 4.3. The nature of the position, as well as the low remuneration for the position, result in lower quality applicants submitting their CV's. (Recruitment problem.)
   - 4.4. The company HR policy results in the hiring of young, inexperienced sales staff.
   - 4.5. Young employees are naturally less committed to the organization, not motivated to perform and are more prone to high mobility, which contributes to high staff turnover.
   - 4.6. High staff turnover necessitates "fire-fighting" instead of strategic hiring and this results in the recruitment of sub-optimal candidates.
   - 4.7. Experiential learning is a strong component of staff development. Employees don't generally work in the company long enough to reach the desired level of competency (Refer table. Xxx)

5. **Frequency of training (Induction and support)**
   - 5.1. Training rotations are dependant upon the frequency of recruitment.
   - 5.2. The greater the staff turnover during the year, the greater the amount of time that needs to be set aside for training.
   - 5.3. A greater amount of time is required of senior staff during the first two months of the newcomer's employment.

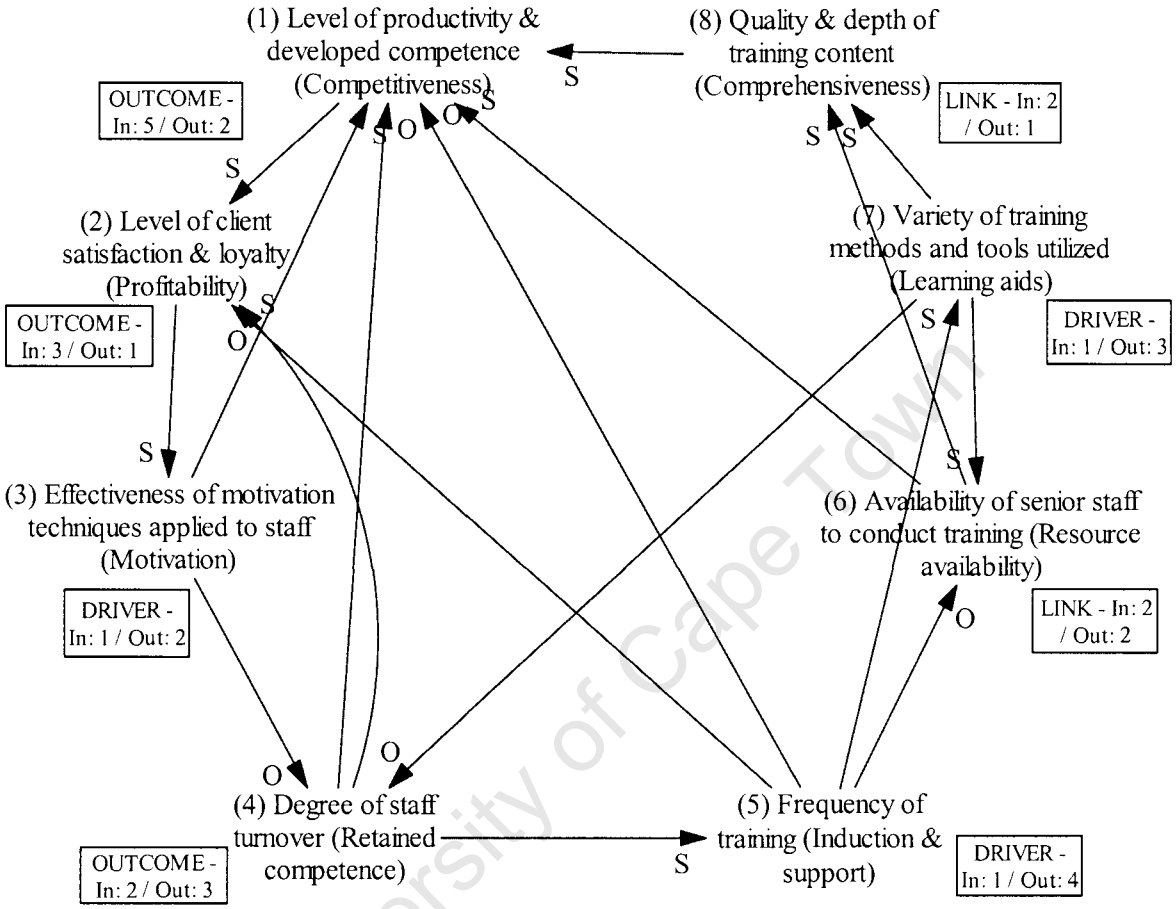
6. **Availability of senior staff to conduct training (Resource availability)**
   - 6.1. Continuous need for training requires a lot of senior staff time. This slows their own development, which creates boredom and stagnation.
   - 6.2. New sales staff are heavily reliant upon senior staff for assistance and information because under time pressure to find answers quickly.
   - 6.3. Frequent training prevents senior staff from devoting time to their "main roles", which results in poor performance and little external focus on market.
   - 6.4. Manager roles are not clearly defined and the range of responsibilities is too great. Senior staff are therefore frequently "fire-fighting" as apposed to implementing well thought out plans.
   - 6.5. There are often scheduling conflicts which results in delayed or cancelled training. This impacts the comprehensiveness of training.

7. **Variety of training methods and tools utilized (Learning aids)**
   - 7.1. New sales staff undergo non-standardized induction because of the "unstable environment." New recruits are differentially exposed due to the varying times, information, trainers and training processes during job rotation. This affects their level of understanding.
   - 7.2. New sales staff rely on senior staff for information because the knowledge base (e.g. intranet) is incomplete and difficult and time-consuming to navigate.
   - 7.3. Role-play and scenario sketching are used to establish context and broaden trainee perspective. The intention is for the trainees to develop reasoning capabilities inline with company goals and culture for purposeful action.

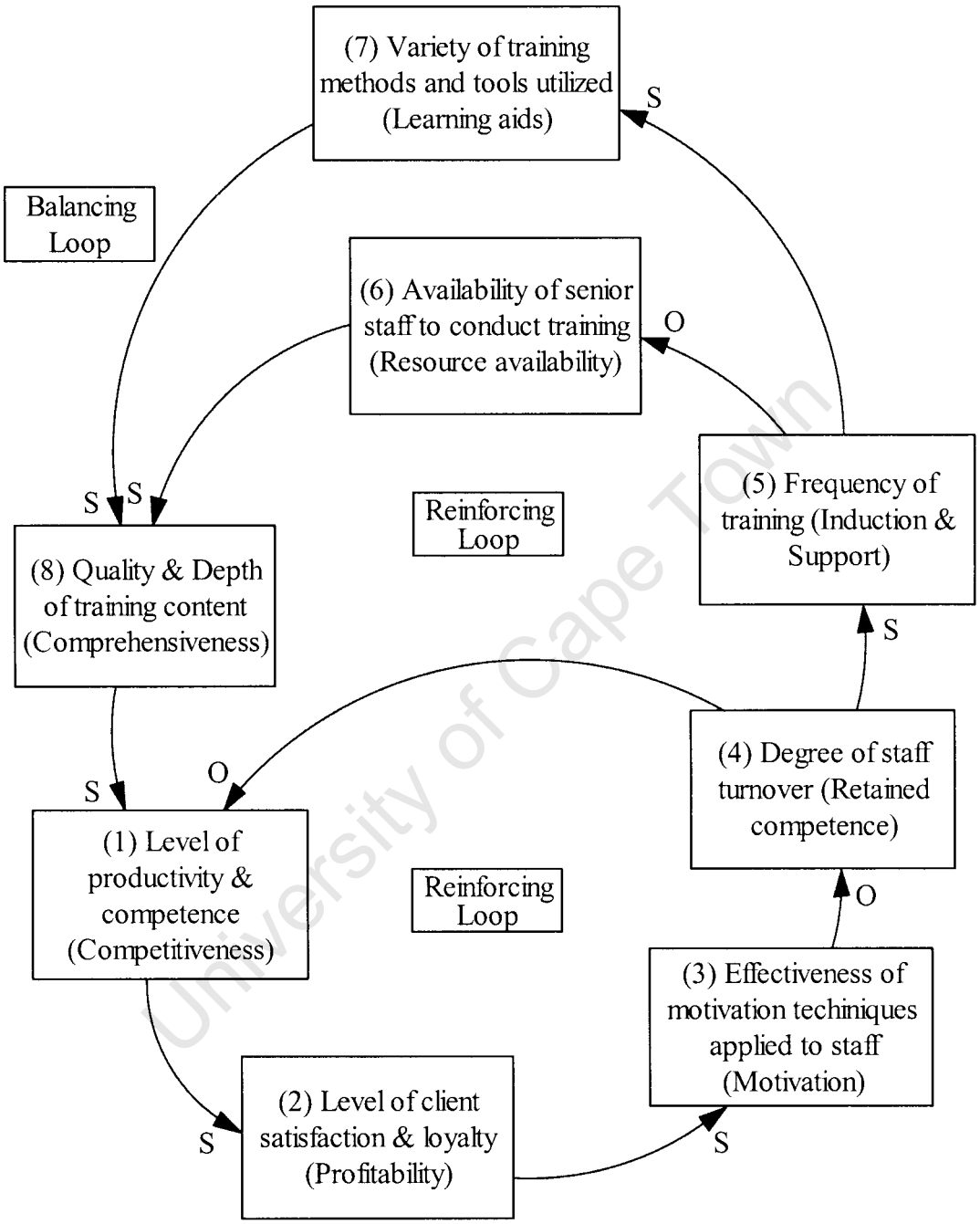
7.4. The means by which information is communicated is not always effective for all recipients because information is not always perceived and is often misunderstood or forgotten.
7.5. Training is done in an interactive manner (discourse), which the expressed purpose of facilitating better understanding and broadens perspective.
7.6. High staff turnover necessitates short and frequent recruitment, induction and training.
7.7. Training includes a testing component to assess knowledge acquired from pricelists and other company documents.
7.8. Pricelists are supplied as a "complete list" of basic specs, which is deemed to be the minimum technical knowledge required to perform in the sales role. Testing trainees on the pricelist is utilized to assess knowledge gaps for "customized training."
7.9. Trainers utilize PowerPoint presentations as visual stimuli to aid learning.
7.10. Frequent and unanticipated resignations prevent the hiring of "groups", which is an inefficient use of time.

8. **Quality and depth of content communicated in training. (Comprehensiveness)**
8.1. Co. X's business strategy is dynamic and not well communicated. The primacy of information influence what information is emphasized during training. This non-standardized content influences how the trainee perceives the company and their role within the organization, and usually results in differing understanding of goals.
8.2. Product information is vast and focus is fragmented.
8.3. New staff are unfamiliar with the proper communication channels, which results in miscommunication, decline in productivity and discipline for misconduct.
8.4. Sales policies and procedures communicated haphazardly. Much information is dispersed only once errors occur, at which point, management use as an example to all staff.

APPENDIX D: INTERRELATIONSHIP DIAGRAPH OF VARIABLES (PROBLEM FORMULATION)



APPENDIX E: CAUSAL LOOP DIAGRAM (PROBLEM FORMULATION)



APPENDIX F: DATA OBTAINED FROM FIRST SET OF INTERVIEWS

The following determinants of enhanced learning were cited by sales staff in response to the structured interview:

- Information is more likely to be attended to if it is furnished by an authority, e.g. Branch manager's statements would more likely be remembered as opposed to a colleague's.
- A more emphatic tone and physical manner would influence retention.
- A content summary and/or checklist that can be referred to influences application of information.
- The intranet and other methods of documented shared information assist greatly in fulfilling one's functions within a sales role.
- The perceived importance and relevance impart what information is recalled and applied, e.g. Product Managers are more likely to attend to only those products and related information that pertain directly to their roles and responsibilities.
- More time should be allowed to the recording of information and the discussion thereof.
- Product training would be "more effective" if it was mentioned what benefits would be derived from the features/specification.
- Visual images, e.g. PowerPoint or physical product demonstrations, assist information coding and storage.
- Increased sales consultant effort in order to avoid embarrassment or attain praise/status.
- Repetition of statements assists retention and recall
- Trial-and-error the most effective means of guiding behaviour.
- Role-play, discussion and scenario sketching assist in assimilating knowledge.
- Sales consultant less likely to act upon influences that oppose his/her personal comfort, e.g. not likely to sell a product that he/she does not have interest in. (Individual goals not aligned to organizational goals.)
- Reframing information through varying discourse.
- Implementation facilitates the committing of information to long-term memory.

APPENDIX G: GUIDING QUESTIONNAIRE FOR SEMI-STRUCTURED INTERVIEWS WITH CO. X STAFF

(a) From the Best of your knowledge, what Co. X's current goal(s), and what do you think the company requires from sales staff to achieve this/these?

(b) What are all the information resources available to you? (List and Describe)

(c) When and how do you use them? (Describe situation / circumstances)

(d) What activities and processes are there to aid knowledge development and decision-making?

(e) (Are they adequate? Could you think how they might be altered to be more helpful to you?)

(f) What do you think you have to know in order to make decisions and do your work?

(g) What do you do? How do you do it? Why do you do it?

(h) What need not be known off hand, but is readily accessible?

(i) Do you feel that you have all the information you need at all times? Explain

(j) Do you feel like you are provided with conflicting information, or have been provided with the same information as colleagues, but interpreted differently?

(k) How do you think you have developed during your tenure at the company?

(l) Are they any instances where information is available but inaccessible? Any instances of lost information?

(m) The following were the most commonly cited sales consultant attributes by clients: Sales consultants should have good product knowledge. (Technically competent)

- Share information – Keep client informed on pertinent industry information.
- They should be honest, reliable, courteous, consistent and efficient. (Attentive)
- Know or have means of determining stock arrival dates and quantities.
- Have reasonably frequent and extended contact (Relationship-building)
- Have some level of rapport (Determinants – Commonality, personality, professionalism)
- Advice should serve best interest of client – assist in giving client competitive advantage.
- Have reasonable knowledge of the client's business. (Relevant recommendations)
- Take ownership of problems and provide solutions (Accountability)

(m) Which of these stand out for you?

(n) Would you care to comment on some or all of the above? What resources are at your disposal

And/or that you make use of, in fulfilling these function

(o) What information / value do you get from your peers?

(p) How is it transferred? What, when, why... ?

(q) What are the required skills for the info sender? And for the receiver?

(r) What support structures are in place to aid sales consultants?

(s) What are the information costs, in terms of accessing storing and quality?

(t) What are the knowledge and performance standards in Co. X? Has anyone achieved them? If so, how?

(u) How do you think the company measures development?

(v) The following determinants of enhanced learning were cited by sales staff:

- Information is more likely to be attended to if it is furnished by an authority, e.g. Branch manager's statements would more likely be remembered as opposed to a colleague's.
- A more emphatic tone and physical manner would influence retention.
- A content summary and/or checklist that can be referred to influences application of information.
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- The *perceived importance* and *relevance* impart what information is recalled and applied, e.g. Product Managers are more likely to attend to only those products and related information that pertain directly to their roles and responsibilities.
- More time should be allowed to the recording of information and the discussion thereof.
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- Visual images, e.g. PowerPoint or physical product demonstrations, assist information coding and storage.
- Increased sales consultant effort in order to avoid embarrassment or attain praise/status.
- Repetition of statements assists retention and recall
- Trial-and-error the most effective means of guiding behaviour.
- Role-play, discussion and scenario sketching assist in assimilating knowledge.
- Sales consultant less likely to act upon influences that oppose his/her personal comfort, e.g. not likely to sell a product that he/she does not have interest in. (Individual goals not aligned to organizational goals.)
- Reframing information through varying discourse.
- Implementation facilitates the committing of information to long-term memory

(w) Having read the list, which factors are the most influential?

(x) When do they occur – prevalent through which activities?

(y) What are your personal goals and what are the company's goals?

(z) Please describe any motivating or deterring influences on learning.

APPENDIX H: GROUNDED THEORY ANALYSIS SUMMARIES

CATEGORY: Quality of information resources

CAUSAL CONDITIONS:
Equipping and motivating knowledge workers

Properties of causal conditions	**Dimensions of causal conditions**	
Experience of knowledge workers	Level	Novice
Type of motivation applied	Positive and negative	Moderate
Support from senior management	Frequency	Seldom

CATEGORY CONTEXT:
Quality relies on presenting comprehensive and up-to-date product information.
Resources should impart knowledge on a technical and behaviour scale

STRATEGIES FOR OPTIMIZING CATEGORY:
Define knowledge building activities and performance parameters
Greater skill in interpreting market information, and selecting relevant information
Timely dissemination of information

INTERVENING CONDITIONS:
Availability of senior management
Accuracy of information received
Knowledge worker competence

CONSEQUENCES:
Trainee knowledge and skill development
Confidence and increased performance capacity
Equipped to resolve increasing variety of problems

CATEGORY: Degree of information-sharing

CAUSAL CONDITIONS:
Motivation applied to trainees and knowledge workers

Properties of causal conditions	**Dimensions of causal conditions**	
Type of motivation applied	Frequency / Strength	Often / moderate
Goal-oriented	Effectiveness	High

CATEGORY CONTEXT:
Barriers to learning impact how receptive trainees are to new information
Trainees are able to identify easily with knowledge workers
Insufficient time to provide contextualized answers

STRATEGIES FOR OPTIMIZING CATEGORY:
Job-shadowing as a supporting activity to coaching
Multi-level learning from all organizational members, including other trainees

INTERVENING CONDITIONS:
Not all information-sharing is of value due to varying levels of experience
Knowledge workers will have varying capacities to convey tacit knowledge

CONSEQUENCES:
Accelerated knowledge and skill development
Fast integration with organization and increased productivity

CATEGORY: Depth of knowledge & skill

CAUSAL CONDITIONS:
Quality of training materials
Frequency and depth of socialization and information transfer

Properties of causal conditions	**Dimensions of causal conditions**	
Relevance and currency of information	Comprehensiveness	Exhaustive
Presentation of materials	Coherence	Little
Process in utilizing resources	Level of difficulty	Hard

CATEGORY CONTEXT:
Sales consultant knowledge comprises technical, behavioural, procedural and cultural knowledge. This knowledge is specific to the IT distribution industry and sometimes exclusively to Co. X. For this reason, even similar knowledge already held by the individual may change existing ideas and beliefs and behaviour

STRATEGIES FOR OPTIMIZING CATEGORY:
Formal and informal training activities

INTERVENING CONDITIONS:
Trainee personalities impact the degree of personal effort exerted in learning
Trainees have varying levels of knowledge and exposure within the industry
Existing knowledge allows for individuals to learn faster

CONSEQUENCES:
Trainees that develop greater knowledge and skill sets can more effectively and efficiently perform job tasks and resolve problem situations.
Efficient and effective execution of management instructions and objectives.

CATEGORY: Variability of learning styles

CAUSAL CONDITIONS:
Knowledge and skill development

Properties of causal conditions	**Dimensions of causal conditions**	
Product knowledge to span across range	Breadth	Moderate
Fairly autonomous in servicing requests	Depth	Moderate

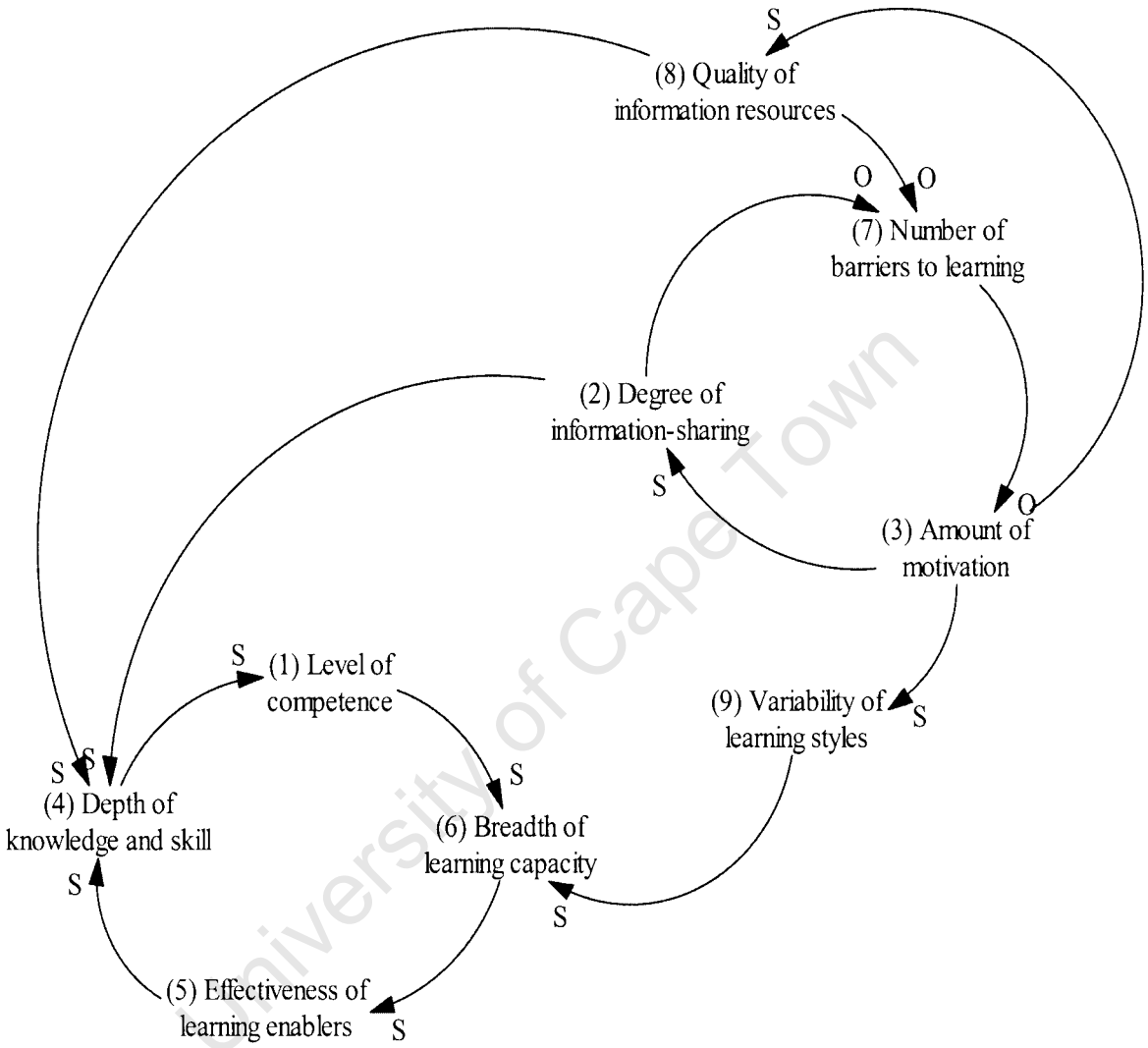
CATEGORY CONTEXT:
Daily problem-solving, adept at obtaining information, attainment of conceptual and practical knowledge, servicing clients whilst meeting company objectives

STRATEGIES FOR OPTIMIZING CATEGORY:
Training is the only current form of optimizing conditions for developing competence.
Co. X. assumes that situational learning and experience allows for the development of competence over
time

INTERVENING CONDITIONS:
Individual learning styles may not correspondend to Co. X training methods
Individual's learning capacity and desire to improve
Effectiveness of techniques and tools utilized by seniors to transfer knowledge

CONSEQUENCES:
Trainees become more resourceful and autonomous
Meet objectives and fulfill management directives with little guidance and assistance

APPENDIX I: CAUSAL LOOP DIAGRAM OF TRAINING AND INDUCTION VARIABLES



APPENDIX J: KNOWLEDGE MANAGEMENT MODEL