ORGANIZATIONAL FACTORS FOR THE IMPLEMENTATION OF KNOWLEDGE MANAGEMENT IN FRANCHISE PRESCHOOL EDUCATIONAL INSTITUITION

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DECLARATION

We hereby declare that:

(1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Equal contribution has been made by each group member in completing the research project.

(4) The word count of this research report is 24,065 .

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This dissertation is dedicated to:

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Mr Gopalan a/l Raman

Who guide us throughout the completion of this research study.

Tertiary educational institution,

For giving us the opportunity to conduct this research project.

Families and friends,

For your love.

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LIST OF ABBREVIATIONS

ANOVA   Analysis of Variance

C&OS   Culture and Organizational Structure

CSFs   Critical Success Factors (CSFs)

DV   Dependent Variable

HC   Human Capital

IV   Independent Variable

IT   Information Technology

ICT   Information and Communications Technology

LE   Leadership

KM   Knowledge Management

KMI   Knowledge Management Implementation

MSC   Multimedia Super Corridor

SMEs   Small and Medium Enterprises

SPSS   Statistical Package for Social Science

TI   Technology Infrastructure

PREFACE

Knowledge management is increasingly important toward all types of organization in this globalization era. However, small and medium enterprises (SMEs) in Malaysia are still lease aware about the importance of knowledge toward their company. Yet, critical factors for implementing Knowledge Management in small and medium enterprises especially educational institutions have not been systematically investigated. Existing studies have derived their critical factors from large companies' perspectives and have not considered the needs of smaller businesses.

In these contexts, the research was aimed to focus on the factors in determine the implementation of Knowledge Management among franchise preschool educational institutions in Malaysia. Such factors are focus on those organizational enablers within an organization which may affect the implementation of knowledge management.

The research may serve as a comprehensive reference for those franchise preschool educational institutions as well as SME in the process of Knowledge Management implementation. Through this research, practitioners and managers would be well brief on those factors where need to be emphasis. Moreover, get the organization fully equip with those fundamental requirement for implementation of Knowledge Management within the organization.

ABSTRACT

In this knowledge based era, evolving information and knowledge has impacted all organizations, including franchise preschool educational institutions. The success of franchise preschool education institution is no longer lies on products offered but also the systematic flow of information and knowledge (intangible resources) among the franchisor and franchisees. This is particularly pertinent because franchisor and franchisees are independent entities linked together in a contractual relationship. This has made knowledge management become important. As refer to this, researchers have initiated the need to perform a research study on organizational factors namely leadership, knowledge process, culture and organizational structure, technology infrastructure and human capital for the implementation of Knowledge Management (KM) in franchise preschool educational institutions. The core purpose of this research is to obtain better understanding of how some factors are critical for the successful implementation of knowledge management. The study done was based on J.D. Pemberton, G.H. Stonehouse and M.S. Francis (2002); Wong and Aspinwall (2005) and Chong, S.C (2005) knowledge management implementation model. A questionnaire survey was done on one of the franchise preschool educational institution (3Q MRC Junior) in Malaysia, which involved 103 respondents. In the case of 3Q MRC Junior, the most significance organizational factor affecting the implementation of knowledge management is leadership, followed by knowledge process, culture and organizational structure and human capital. However, the research findings indicate that technology infrastructure is not significantly influence the implementation of Knowledge Management. As the finalist of the research study, discussion on major findings, limitation as well as recommendation for future research will be discussed in detail. It is hoped that this research study provide the basis for the future research on organizational enablers for the implementation of knowledge management.

CHAPTER 1: INTRODUCTION

1.0   Introduction

This study is about the organizational factors for the implementation of knowledge management in franchise preschool educational institution.

Chapter one is made up of eight sections. Section 1.1 highlights the background of the study. Section 1.2 describes the problem statement and section 1.3 depicts the research objectives to be achieved. Section 1.4 mentions the research questions of the study followed by section 1.5 which describes the hypotheses of the study. Section 1.6 explains the importance and contributions of the study and section 1.7 clearly depicts the organization of the research project followed by section 1.8 which is the conclusion of this chapter.

1.1   Research Background

In the present era, the world economy is experiencing the paradigm shift towards knowledge based economy due to globalization. The emergence of knowledge based economy has directly influenced the entire business world. In order to survive in this competitive and continuously changing business environment, many business organizations over the world are moving towards becoming knowledge based organization. Today, knowledge has becoming the primary source of competitive advantage and the key to success for organizations in the knowledge economy (MacKinnon, D., Cumbers, A. & Chapman, K., 2002; Patriotta, 2003). Organizations have begun to realize the importance of knowledge as a productive resource and a potential way of developing competitive advantage.

Knowledge management seems to be an answer for the organizations that wish to become more competitive. Indeed, knowledge management can lead an organization to have better performance, increase profit level and gain competitive advantage. This is mainly because a well-implemented knowledge management can lead to reduce operating cost, faster new products development cycle, and better customer service (Shariq, 1997; KPMG Consulting, 2000; Liebowitz, 2000; Levett and Guenov, 2000). Besides improving the external performance of an organization, knowledge management also helps to improve the managerial performance. Knowledge management techniques and software applications allow companies to design dynamic operational processes and make effective use of their human resources by providing the right information, to the right people, and at the right time (Malhotra, 1997).

In Malaysia, the country has realized the importance of knowledge based economy towards citizens, government and the entire country economic as a whole. Malaysia thus started to build the foundation for the Knowledge-economy in the year-1990s by launching the Multimedia Super Corridor (MSC) that offers an excellent and conducive information and communications technology (ICT) services. However, small, medium and large enterprises in Malaysia are still less aware about the importance of knowledge towards their company performances and competitive advantages gain from knowledge assets. Based on the research conducted by (Rahman, 2004), only 36% of small and medium enterprises (SMEs) in Malaysia have practiced formal knowledge management while the remaining 64% of SMEs still do not have any formal approach towards knowledge management practices.

Generally, knowledge management in Malaysia is still in its newborn stage. Very few Malaysian companies have initiated any knowledge management programs. Moreover, the successfulness and utilization of knowledge management in those companies still remain uncertain. However, the increasing importance of knowledge in the modern and globalized organization has initiated a need among business organizations, especially pre-school educational institution to focus on managing knowledge as an

organizational competitive asset (Sveiby, 1996; Davenport, De Long and Beer, 1998; Gupta and McDaniel, 2002). It is critical to maintain continuous generation, sharing and implementation of knowledge in order to guarantee the quality of education in educating future professionals and leaders of the country.

Franchise preschool educational institution has become a booming and highly competitive business in Malaysia since government increased their attention on pre-schools education in the early 1990s. There has been increasing participation by the private sectors in education at all levels with an increase in private schools enrollment at both the pre-schools and primary levels (Role of Private Sector, 2005). The quality of the educational staffs, teaching materials and consistency of teaching styles are the main concern in creating a better study environment for all children. In Malaysia, kindergarten teachers are still having various ranges of educational levels, from those who had completed elementary school to graduates of secondary education.

In order to meet educational needs, franchise preschool education institution, as knowledge based organization, should develop and implement knowledge management effectively. Both large and small firms, require continuous generation, sharing and implementation of knowledge in order to maximize their competitiveness and survival chances in the modern informative society (Nunes, Annansingh and Eaglestone, 2006; Pillania, 2008b). Knowledge management had played an important role in interlinking the franchise preschool educational institution besides providing competitive advantages to the educational institution. In order to gain competitive advantages, companies must know how to acquire, organize, sustain, apply, share and renew both the tacit and explicit knowledge of employees effectively and efficiently.

1.2 Problem Statement

Nowadays, there are getting more franchise preschool educational institutions in this industry. Quality of the preschool teachers has become the main concern in order to gain competitive advantage and survive in this industry. According to Kamogawa Akiko (2007), in Malaysia, kindergarten teachers have various educational levels and range from those who have completed elementary school to graduates of secondary education. While observing the above classes, bachelor degree holders who are willing to work as pre-school teachers are still rare and uncommon in Malaysia (Kamogawa Akiko, 2007). This issue not only affects the quality of education in preschool institutions seriously, teachers are not motivated due to unsynchronized working environments, making them not dedicated enough towards their jobs.

On the other hand, it has been pointed out that one of the crucial mistakes in knowledge management process is that knowledge is kept in the upper level managers' hands. This is supported by (Fullan, 2002), which states that despite the business organizations, is poor knowledge sharers. In other words, knowledge sharing does not involve the entire franchise organization as a whole. This meant that, the franchise organization does not systematically manage the flow of knowledge and information between franchisor and franchisee. However, according to Audhesh K. Paswan & C. Michael Wittmann (2009), successful franchisors do not just sell products and services. Thus, franchise organization should develop an environment and systems to foster knowledge creation and transfer between franchisor and franchisees, across franchised units, franchisor and company-owned units, and among all members in the network such as suppliers, customers and other organizations (Augier, Shariq, & Vendelo, 2001).

Children represent a dominant element that determines future success of a country. According to Ong L.C., Chandran V., Lim, Y.Y., Chen, A.H., & Poh B.K. (2010), in Malaysia, 14% of children had poor academic achievement after one year in primary school. It has been shown that preschool education institution can be a major input

into a child's formal education. A number of studies link preschool education institution to increases in school readiness for primary school, and it has been shown that school readiness is an important predictor of early school achievement (Forget, Dubois, N., J. Lemelin, M. Boivin, G. Dionne, J. Seguin, F. Vitaro, & R. Tremblay. 2007). In other words, preschool education institution seeks to prepare young children before enrolling to schools with formal education. Furthermore, one review of 36 studies of preschool education institution-finds "overwhelming evidence that preschool education institution can produce sizable improvements in school success" (Barnett, 1995).

According to Peter Drucker (1993), "The basic economic resource—the means of production—is no longer capital, nor natural resources, nor labor. It is and will be knowledge." Top management in organizations over the world need to understand the various factors including leadership, organizational culture and structure, processes, explicit and implicit knowledge, knowledge repositories, market leverage, knowledge measure and finally human and technology infrastructure that enable the implementation of knowledge management (Skyrme, 1999). The statement figured out that, there is a need for franchise preschool educational institution to realize the organizational factors for the implementation of knowledge management in order to fully utilize the most valuable assets of the organization-knowledge. Besides that, understanding the organizational factors for implementation of knowledge management is important for a better knowledge management practice and eventually it helps to solve research problems as presented above.

1.3 Research Objectives

1.3.1 General Objective

Generally, this research strives to identify and examine the organizational factors that support the implementation of knowledge management in the franchise preschool educational institution.

1.3.2 Specific Objectives

1) To examine the relationship between leadership and implementation of knowledge management.
2) To examine the relationship between knowledge process and implementation of knowledge management.
3) To examine the relationship between technology infrastructure and implementation of knowledge management.
4) To examine the relationship between culture and organizational structure and implementation of knowledge management.
5) To examine the relationship between human capital and implementation of knowledge management.

1.4 Research Questions

The main research questions of this study are:

1) Is there any relationship between leadership and knowledge management implementation?

2) Is there any relationship between knowledge process and knowledge management implementation?

3) Is there any relationship between technology infrastructure and knowledge management implementation?

4) Is there any relationship between culture and organizational structure and knowledge management implementation?

5) Is there any relationship between human capital and knowledge management implementation?

1.5 Hypotheses of Study

H_0: There is no significant relationship between leadership and knowledge management implementation.

H_1: There is significant relationship between leadership and knowledge management implementation.

H_0: There is no significant relationship between knowledge processes and knowledge management implementation.

H_1: There is significant relationship between knowledge processes and knowledge management implementation.

H_0: There is no significant relationship between technology infrastructure and knowledge management implementation.

H_1: There is significant relationship between technology infrastructure and knowledge management implementation.

H_0: There is no significant relationship between culture and organizational structure and knowledge management implementation.

H_1: There is significant relationship between culture and organizational structure and knowledge management implementation.

H_0: There is no significant relationship between human capital and knowledge management implementation.

H_1: There is significant relationship between human capital and knowledge management implementation.

H_0: The five independent variables are not significant in explaining the variance in knowledge management implementation.

H_1: The five independent variables are significant in explaining the variance in knowledge management implementation.

1.6 Significance of the Study

For practitioners, findings from this study may provide some useful information and basic guideline to establish a successful knowledge management. Knowledge management in Malaysia is still in its newborn stage and there are lots of organizations that struggle to introduce knowledge management. Through this research project, organizations can understand which organizational factors are important to knowledge management and how those factors can increase organizational performance.

From the industry perspective, a study of organizational factors for implementing knowledge management can help the company to have a better understanding on how to implement knowledge management effectively. It can help companies in this industry in developing an organizational context that facilitates knowledge creation, transfer sharing and management (Pemberton J, Stonehouse G and Francis M, 2002). Besides that, a well implemented knowledge management also maximizes the organization's use of available collective wisdom, experience, and the brain-power of human capital assets. This can, in turn increase industry profitability.

From the government perspective, this study could help the domestic organizations to gain competitive advantages by implementing knowledge management therefore to boost up the country economy. A well implemented knowledge management in domestic organizations could also help the country to keep professionals or experts in country, helping the country to develop. This is especially important in developing country such as in Malaysia. Children are seen as valuable asset for a country. Understanding the organizational factors that are critical for implementation of knowledge management could produce capable future leader of the country. As a result, country is able to better prepare for and anticipate the future.

From the social perspective, as this study emphasize on pre-school industry, a well implemented knowledge management in this industry can improve the level and quality of the pre-schools education. Hence, this can help to increase the civilization and attainment of the whole society. Besides, literacy rate could increase through the effort of knowledge management implementation. Children will be well-equip with better knowledge source and thus increase quality of life in the future.

1.7 Chapter Layout

Chapter one is the introduction of the thesis. It has covered background of this study, statement of the problem, objectives of the study, hypothesis of the study, significance of the study.

Chapter Two shows the related literature review that provides the foundation for developing the theoretical framework to proceed with further investigation and hypotheses testing.

Chapter Three presents the research methodology used to test the research questions.

Chapter Four presents the research results and the analysis of the results which are relevant to the research questions and hypotheses.

Chapter Five is the summarizing chapter that discusses the overall findings followed by the conclusion. Finally, this chapter outlines the recommendations for future researches.

1.8 Conclusion

This chapter has acknowledged the problem statement, research objectives, research questions, hypothesis of the study, and the significance of the study followed by the organization of the research project. All of this presents the readers a clear picture of what the study is about. In the following chapters, it will be the study about the literature review of all factors or variables.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The previous chapter has underlined the significance of this study. This chapter will cover the literature of the study. Literature reviews are secondary sources get from available work such as journals, books, thesis, and other reports.

This chapter consists of five sections. Section 2.1 is the review of the literature. Section 2.2 reviews the relevant theoretical models. Section 2.3 shows the proposed theoretical conceptual framework. Section 2.4 is the hypotheses development. Lastly, section 2.5 summarizes this chapter.

2.1 Review of the Literature

2.1.1 Knowledge

Over the years, the knowledge has become more and more accounted in business world. It has become a trend that, a shift to knowledge economy has occurred in all highly developed countries (Abbasi, Belhadjali, Hollman, 2009). In Malaysia, there are 107,324 applications of patent for both domestic and foreign usage in year 2010, which has increased 17.2% compared to 10 years ago (Intellectual Property Statistics). This shows that knowledge (intellectual property) has become the concern of different businesses. By having knowledge, companies are able to coordinate and combine their traditional resources and capabilities in new and distinctive ways to provide more value for their customers than what their competitors can provide.

In the unified model of dynamic knowledge creation proposed by Nonaka, Reinmoeller & Senoo (2000), knowledge is described as dynamic, since it is created in social interactions amongst individuals and organizations. Information becomes knowledge when it is interpreted by individuals and given a context and anchored in the beliefs and commitments of individuals (Nonaka et al., 2000). Without being put into context, it is just information, not knowledge. According to Badruddin (2004), knowledge is the insights, understanding and practical know-how that the individuals possess has two basic definitions of interest. The first is about the body of information, which might consist of facts, opinion, ideas, theories, principles and models. This could be referred to a person's state of being with respect to somebody of information. The second is about knowledge as a major factor that make personal, organization and societal intelligent behavior possible. Knowledge is regarding the full utilization of information and data, combined with people's and the ability and wisdom to use a pool of information in a way that achieve the objective of the individual and organization (Tan, 2000).

Based on the extant literature, knowledge can be classified into explicit knowledge and tacit knowledge (Polanyi, 1966; Nonaka, 1994; Augier, Shariq & Vendelo, 2001; Bock, 2001) - and both of them work interdependently and in turn lead the organization to the path of success. Explicit knowledge as what can be embodied in a code or a language and as a result it can be verbalized and communicated, processed, transmitted and stored relatively easily (Nonaka et al., 2000; Augier et al.,2001; Kikoski and Kikoski; 2004). It is public and most widely known and the conventional form of knowledge which can be found in books, journals, and mass media. It can be shared in the form of data, scientific formulas, manuals and such like. Patents are an example of explicit in business context. Whereas, tacit knowledge is something gained through experience so it is difficult to be documented or categorized and is non-financially tangible that is highly personal, hard to formalize, difficult to communicate or share with others. Besides, according to

Polanyi (1969), founding father who identified the significance of the concept of tacit knowledge, tacit knowledge is something that "we know more than we can tell". It is something rooted in an individual's actions that are not easily visible and expressible, like experiences, ideas or values (Nonaka, 1994).

Furthermore, many researchers (Allee, 1997; Bellinger, Castro & Mills, 1997; Tuomi, 1999; Barquin, 2000; Beller, 2001) have addresses the distinction among data, information and knowledge. According to Suurla, Markkula and Mustajarvi (2002), "data refers to codes, signs and signals that do not necessarily have any significance as such". Furthermore, Dreske 1981; Machlup 1983; Vance 1997 indicated that data is raw number and facts, information are processed data, and knowledge is authenticated information. However, there is a different view who thinks that knowledge must exist before information can be formulated and before data can be measured to form information. Tuomi (1999) argues that knowledge exists which, when articulated, verbalized, and structured, becomes information which, when assigned a fixed representation and standard interpretation, becomes data.

2.1.2 Knowledge Management

Since years ago, the field of knowledge management has emerged as an area of interest in the academic and organizational practice. There are quite a number of definitions which carry similar characteristics to certain extent. Knowledge management consists of activities of identifying, acquiring, creating, storing, sharing and utilization of knowledge by individuals and groups in the organization (Heisig, 2009; Soliman and Spooner, 2000; Zheng, Yang & McLean, 2009). Meanwhile, Snowden has an identical view on knowledge management. He described it as the identification, optimization and active management of intellectual assets, either in explicit knowledge held in artifacts or as tacit knowledge possessed by individuals or communities

(Snowden, 1998). Thus, knowledge management is largely regarded as a process involving various activities despite of different researcher uses different terms to define it.

However, broadly speaking, Robinson, Carrillo, Anumba & Al-Ghassani, (2005) and Lytras, Pouloudi & Poulymenakou (2002) depict knowledge management as method or mean rather than process or activity. Robinson et al. (2005) defined knowledge management as a method of exploiting, or transforming knowledge as an asset for organizational use to facilitate continuous improvement. Lytras et al. (2002), in addition, described knowledge management as "the mean of formalization and access to experience, knowledge and expertise that create new capabilities, enable superior performance, encourage innovation and enhance customer value".

Some definitions are predicated to information technology (IT). It emphasizes the integral importance of technology for knowledge management. For instance, according to Malhotra (2000), knowledge management embodies organizational processes that seek combination of data and information processing capacity of IT, as well as the creative and innovative capacity of human beings in manipulating knowledge. Additionally, Malhotra also mentioned that knowledge management requires re-consideration of everything in the organization and caters to the critical issues of organizational adaptation, survival and competence.

There is also researcher that emphasizes the importance of intellectual capital and views knowledge management as management of the intellectual capital controlled by the company (Martensson, 2000). Gottschalk (2000) has further expanded it to provide clearer picture by added that knowledge management is "unlocking and leveraging the knowledge of individuals so that this knowledge becomes available as an organizational resource that is not dependent on those same individuals". Moreover, Beijerse (1999) focuses on

the value of intangible assets and defines knowledge management as "the art of creating value from an organization's intangible assets".

Clarke and Rollo (2001) touches about "knowledge management initiatives", which involves a company's commitment to developing the production and flow of knowledge, and the dissemination and use of knowledge to create economic value. A knowledge management "initiative" denotes a holistic approach to managing knowledge. "Knowledge management initiative" is being view as an organization's approach to managing its knowledge that includes both human (soft) and system (hard) components.

All in all, despite the differences in knowledge management definitions, it seems that there is one common parameter: knowledge management is seen as the "tool" for organizational effectiveness and competitiveness.

2.1.3 Leadership

According to Robbins & Judge (2007), leadership is the ability to influence a group toward the achievement of a vision or set of goals. Researches show that top management leadership and their commitment are the most critical factor for successful knowledge management initiatives, particularly in knowledge creating and culture sharing activities (Parag Sanghani, 2009; Chong, 2005; Salleh & Goh, 2002; Ryan & Prybutok, 2001; Civi, 2000; Davenport and Prusak, 1998). It has been reported that more than 40 percent of Fortune 1000 companies (Chong, 2005) and 25 percent of Fortune 500 companies (Nick, 2002) have chief knowledge officers that responsible for managing intellectual capital and the knowledge management practices in an organization.

According to Kautto- Koivula (1998) and Jarrar (2002), leaders' supports towards knowledge management strategy are critical to ensure that knowledge is viewed as a critical resource rather than merely a fad. The type of supports needed including encourage trust and sharing atmosphere in an organization (Sallis & Jones, 2002), provide adequate fund and facilities for knowledge management implementation and sending messages on knowledge management, which is critical to the organization's success.

Kermally (2002) mentioned that leadership ought to be looked at as a holistic concept. Leadership's attribute such as values, credibility, power, integrity, ability to see the whole picture and ability to motivate staffs must be focused. An effective leader must be able to share the same values, belief and expectation and build a strong relationship with their subordinates so that they can freely communicate in order to transfer knowledge that reside on them. According to Peter Druker (1994), the collective knowledge residing in the minds of the people within the organization is the most vital resource to the organization's economic growth. Moreover, leaders should motivate their subordinates to take leadership roles, so that important knowledge can be transmitted from multiple sources (Debowski, 2006).

In addition, according to Jarrar (2002) and Sallis and Jones (2002), the leadership style that creates culture that supports innovation, learning and knowledge is required to ensure the successful implementation of knowledge management. Bollinger & Smith (2001), Martensson (2000) and Stonehouse & Pemberton (1999) echoed the same sentiments when suggesting that leaders need to focus on creating and maintaining an organizational culture of learning in which leaders must attach a high value to knowledge, encourage questioning and experimentation through empowerment and facilitate experiential learning of tacit knowledge.

In addition, according to Skyrme & Amidon (1997) and Debowski (2006), successful knowledge leaders are someone who are challenging, visionary and inspiring, clear communicators, involved, leader by example and learners. They help to achieve organizational succeed by exploiting both tacit and explicit knowledge. Thus, in present era, successful organizations need knowledge leader throughout the organization and it should operate at all hierarchical levels. In other words, the general beliefs of the 1980s and 1990s that organizations need only one knowledge leader to make the process works successfully is erroneous in the context of present business world.

Top management leadership is important in knowledge management implementation and must be sustained throughout the entire knowledge management project. In fact, poor leadership quality has been identified as a threat to successful implementation of knowledge management and any lack of support from top management can hinder the success of knowledge management implementation.

2.1.4 Knowledge Processes

According to Johannssen (2000), knowledge processes refer to an interconnected and intertwined set of activities that can be done with the knowledge in the organization and thus are used to facilitate the knowledge flows. These processes should lead to changes in behavior, practices and policies and the development of new ideas, practices, processes and policies (Bender and Fish, 2000). The basic processes of knowledge management are shown at Figure 2.1 below.

Figure 2.1: The Basic Processes of Knowledge Management
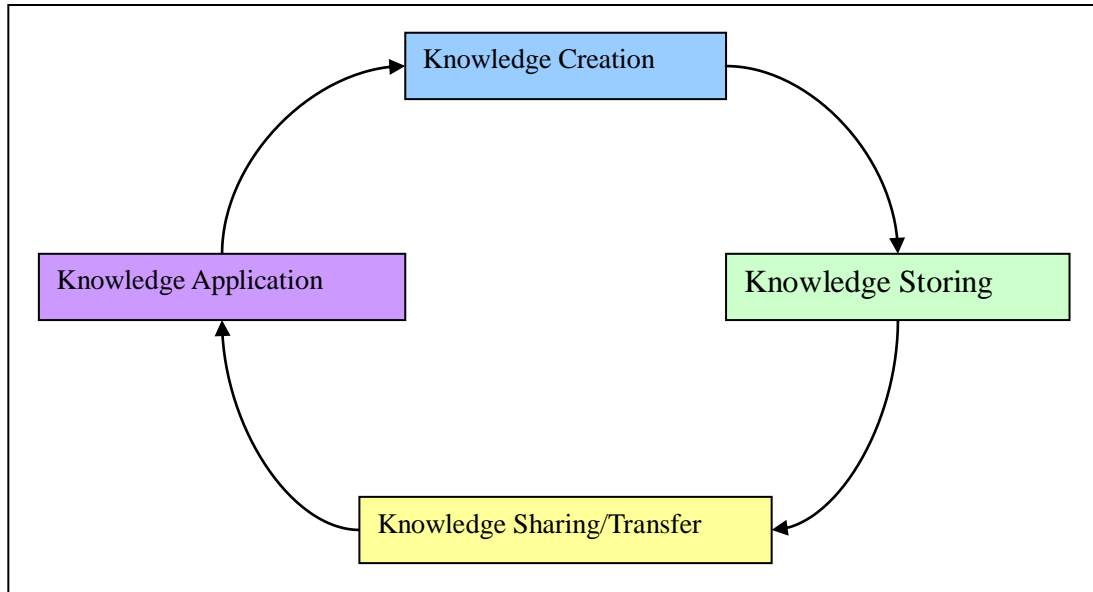
Source: Martensson, M. (2000). A Critical Review of Knowledge Management as a Management Tools. *Journal of Knowledge Management*, 204.

Based on the framework above, knowledge management consists of four sets of knowledge processes which include (1) creation, (2) storage and (3) sharing and (4) application of the knowledge (Holzner and Marx, 1979; Pentland, 1995; Alavi & Leidner, 2001; Martensson, 2002).

2.1.4.1 Knowledge Creation

Knowledge creation process has become the most important source of sustainable competitive advantage in the knowledge economy (Barney, 1991; Boisot, 1995; Spender, 1996; Boisot, 1999; Shapiro and Varian, 1999; Teece, 2000; Barney & Hesterly, 2006). According to Vlatka Hlupic (2000), knowledge creation involves the process of generating new ideas, recognition of new patterns, the synthesis of separate disciplines and the development of new processes in the organization. In addition, Nonaka conceptualize organizational knowledge creation

as the process of converting individual knowledge to a socially constructed understanding (Nonaka, 1994; Nonaka and Takeuchi, 1995; Nonaka and Konno, 1998; Nonaka et al., 2000). They further elaborated tacit and explicit knowledge expands in both quality and quantity through knowledge creation process.

According to the knowledge creation model proposed by Ikujiro Nonaka, Ryoko Toyama and Noboru Konno in year 2000, knowledge creation consists of three elements including (i) the SECI process, knowledge creation through the conversion of tacit and explicit knowledge (also known as knowledge conversion process); (ii) `ba', the shared context for knowledge creation; and (iii) knowledge assets, the inputs, outputs and of the knowledge-creating process. This model indicates that an organization creates new knowledge through the SECI process in 'ba' by using its existing knowledge assets.

According to Nonaka and Takeuchi (1995) and Nonaka et al. (2000), there are four modes of knowledge conversion which are socialization, externalization, internalization and combination. They further indicated that these four modes of knowledge conversion form a spiral, the SECI process (see Figure 2.2).

Figure 2.2: SECI Process
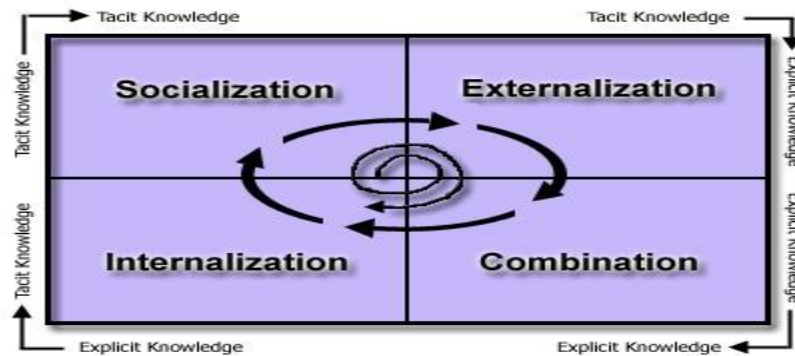
Socialization refers to conversion of tacit knowledge to a new tacit knowledge by sharing the knowledge with others. This can be done by social interactions and experience sharing among organizational members (Nonaka, 1994). Combination mode refers to the creation of new explicit knowledge by combining, merging, categorizing existing explicit knowledge into a new one (Nonaka, 1994; Nonaka, 1991). Externalization mode refers to the conversion of tacit knowledge into new explicit knowledge so that we can share the tacit knowledge with others. It is easier to keep, replicate and transmit the tacit knowledge through knowledge repositories by using the externalization conversion process (Nonaka, 1994; Nonaka and Takeuchi, 1995).Internalization mode refers to the use of explicit knowledge to broaden, extend and re-frame the existing tacit knowledge (Nonaka, 1991).

'Ba' refers to the place or environment for creating new knowledge and it serves as the provider of energy, quality and place to perform the conversion of knowledge. There are four types of 'ba' used in the conversion of tacit knowledge and explicit knowledge: (1) originating

ba, (2) interacting ba, (3) cyber ba and (4) exercising ba (Ikujiro Nonaka, 2000).

Originating ba involves the conversion of tacit knowledge to a new tacit knowledge through socialization process and it serves as the ba from which the knowledge creation process begins. It is the place where individuals share their experiences, feelings, emotions and mental models through face- to- face interactions. Interacting ba corresponds to the externalization mode of knowledge creation. It is a common place where individual's tacit knowledge are shared, and articulated as concepts through the interaction among organizational members (Ikujiro Nonaka, 2000).

Cyber ba is associated with the combination mode of knowledge creation and refers to a place where existing explicit knowledge is converted to a new explicit knowledge. Exercising ba offers a context for the conversion of explicit knowledge to tacit knowledge through internalization mode of knowledge creation.

2.1.4.2 Knowledge Storing

Empirical studies have shown that while organizations create knowledge and learn, they also forget (Argote, Beckman & Epple, 1990; Darr, Argote, & Epple, 1995). In addition, there is memory loss problem when the knowledge is stored in an individual's memory such as the knowledge is gone once they retire or fired. "The memory loss problem is compound by another deficiency in the organizational brain- the brain drain wherein valuable knowledge resources are lost with employees leaving the organization. It happens when management frills to capture the tacit knowledge of its employees by

transferring it to explicit knowledge". The points above indicate that knowledge storing is a vital aspect in knowledge management process. Thus, the storage, organization, and retrieval of knowledge in organizational level are referred as organizational memory (Stein, & Zwass, 1995; Walsh & Ungson, 1991). According to Robson Quinello (2006), organizational memory is a generic concept that describes storage, representation and sharing of knowledge, culture, power, practices and policy within an organization.

2.1.4.3 Knowledge Sharing/ Transfer

Figure 2.3 Sharing Cycle
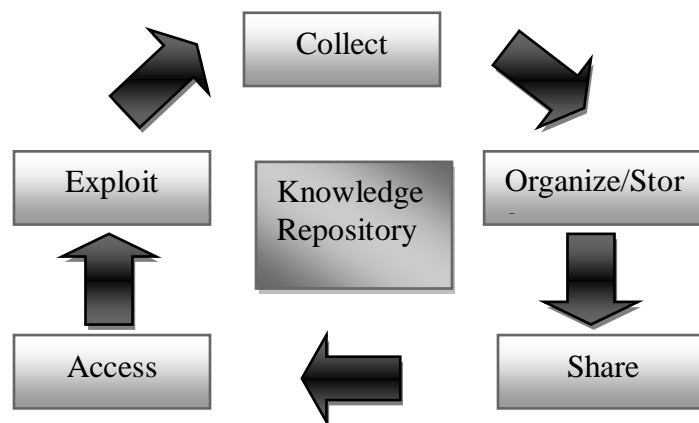
Source: Skyrme, D.J. (1999). *Knowledge Networking: Creating the Collaborative Enterprise*. Butterworth- Heinemann: Oxford

Knowledge sharing is one of the critical elements of knowledge management and it is particularly crucial for the successful leveraging of knowledge resources. According to Dobni (2006), "Knowledge only becomes powerful if it is shared among those who possess common goals. Organizations are comprised of individuals who accumulate knowledge, and the degree to which this knowledge is shared

determines the outcomes of decisions."

The knowledge sharing cycle shown on figure 2.4 shows the processes associated with gathering and disseminating existing knowledge, having knowledge   repositories as its focal point and it is developed based on the idea "knowing what you know" which means better awareness, sharing and application of existing knowledge (Skyrme, 1999).

The whole sharing cycle consists of five processes: (1) gather the existing knowledge, (2) organize, classify and store the knowledge by using organization or industry specific classification outline to make the subsequent retrieval easier, (3) share the information to those users who need it, (4) people who are known to be interested in the information can access to the database to get the information needed, and lastly (5) knowledge is applied to the work process. The cycle repeats itself when there is additional knowledge created through the use of the existing knowledge.

Knowledge transfer means forwarding of knowledge between individuals, departments and organizations (Vlatka Hlupic, 2002). It is an important knowledge management process where useful knowledge can be transferred to the locations where it is needed. According to Berryman (2005), knowledge transfer (KT), can be viewed as a communications model consists of four major components: message (knowledge), source (source of knowledge), receiver (recipient of knowledge), and channel (organizational context).

2.1.4.4 Knowledge Application

Knowledge application is the last stage of knowledge management process where the source of competitive advantage resides in. According to Bhatt (2001), knowledge application means making knowledge more attractive and relevant for the firm in creating value. In other words, organizations need to apply the knowledge obtained effectively and efficiently to their products and services in order to create value and competitive advantages.

Basically, there are three primary mechanisms for the integration of knowledge to create organizational capability: (1) directives, (2) organizational routines and (3) self- contained task teams (Grant, 1996).

Directives refer to the specific set of rules, standards, procedures, and instructions developed through the conversion of specialists' tacit knowledge to explicit and integrated knowledge for efficient communication to non-specialists (Demsetz, 1991).

However, organizational routines refer to the development of task performance and coordination patterns, interaction protocols, and process specifications that allow individuals to apply and integrate their specialized knowledge without the need to articulate and communicate what they know to others.

On the other hand, the third knowledge integration mechanism is the creation of self- contained task teams. Self- contained task teams are used in situations such as task uncertainties and complexity to prevent the specification of directives and organizational routines.

2.1.5 Technology Infrastructure

Technology infrastructure is an important enabler knowledge management implementation. Although information technology does not address all of the issues about knowledge management, it can support knowledge management in various ways.

According to Laudon & Laudon (1999), knowledge management technology infrastructure can be divided into four groups including (1) tools that support knowledge sharing (e.g. groupware, intranets and the internet); (2) tools that support knowledge distribution (e.g. electronic calendars, desktop databases and desktop publishing); (3) tools that support knowledge capture and codification (e.g. expert systems, neural networks and intelligent agents); and (4) tools that support knowledge creation (e.g. investment workstation, CAD and virtual reality).

According to Luan & Serban (2002) technology infrastructure can be grouped into following categories such as business intelligence, knowledge base, collaboration, content and document management, portals, customer relationship management, data mining, workflow, search, and e-learning. Important factors that need to be considered in the development of a knowledge management system include simplicity of technology, ease of use, suitability to users' needs, and relevancy of knowledge content.

Information technology (IT) is often mentioned as one of the anchors for knowledge management activities. (Alavi and Leidner, 2001; Nonaka & Takeuchi, 1995). Theories of information systems state that technology infrastructure within organizations can, on the one hand serve to "automate" organizational tasks such as transaction, storing and processing of data and information. On the other hand, IT can serve to "informate"; provide information to support organizational decision making and the exchange of

ideas (Sanders, 2008). Based on Van Den Brink (2003), an effective technology infrastructure is considered to demand a combination of two related dimensions: the convergent dimension and the divergent dimension. Both dimensions are described in Table 2.1.

Table 2.1: Dimensions of Technology Infrastructure

IT Dimensions	Role and Importance	Tools
Convergent IT	↓ Connect people to people ↓ Improve coordination communication and collaboration between people ↓ Point people to special expertise ↓ Create collaboration platforms	↓ Groupware ↓ E-mail ↓ Collaborative virtual environments ↓ Video conferencing systems ↓ Electronic discussion systems
Divergent IT	↓ Connect people to explicit knowledge ↓ Have information and explicit knowledge components online ↓ Easy access and retrieval of knowledge ↓ Point people to documents that describe or store knowledge ↓ Create knowledge repositories	↓ Office applications ↓ Integrated document management ↓ Decision support systems ↓ Data warehouse ↓ Internet, intranet ↓ Electronic libraries

Source: Van Den Brink, P. (2003). Social, organizational and technological conditions that enable knowledge sharing.Unpublished doctoral thesis, Technische Universiteit Delft, Amsterdam.

2.1.6 Culture and Organizational Structure

In the context of knowledge management, culture is considered a complex collection of values, beliefs, behaviors and symbols that influences knowledge management in organizations (Ho, 2009). Therefore, a knowledge-friendly culture is regarded as one of the most important factors impacting knowledge management and the outcomes from its use (Alavi, Kayworth & Leidner, 2005-2006; Davenport, Long & Beers, 1998; Ho, 2009). Many published papers and people in the field, believe organizational culture is the key influence on KM or the effectiveness of knowledge sharing (Holsapple, and Joshi, 2000). Goh (2002) asserted that a collaborative culture is an important condition for knowledge transfer to happen between individuals and groups. The implementation of knowledge management requires individuals to interact, share ideas and knowledge.

According to Hofstede (1991, 1997), culture is the "software of the mind". He defined culture as "mental coding", which every member of a society, organization or group experiences and according to which everyone can act coherently. There are four different impact depths in the research of Hofstede, which are symbols, heroes, rituals, and values (Hofstede & Hofstede, 2005) which shown in figure 2.4 – the cultural onion. The centre of the onion is formed by values. They are learnt from the beginning of life and they are the most stable element – resistant against changes over time. Hofstede's cultural onion model sinks from the core to the periphery of the onion. New rituals can be learnt over time, heroes established quickly and symbols installed in organizations. Hofstede also emphasizes that practices are concerned with all part of the model.

Figure 2.4: Hofstede's Cultural Onion Model
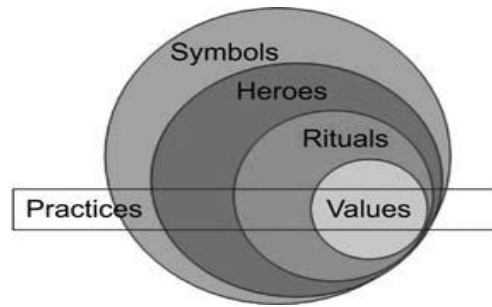
Changes in corporate culture are regarded as necessary for implementing knowledge management programs (Bhatt, 2001). Positive changes in culture are expected to impact organizational performance and add momentum to other improvements taking place elsewhere in the organization (Richert, 1999). "A major problem is how to convince, coerce, direct, or otherwise get people within organizations to share their information" (Gupta, Lyer & Aronson, 2000). The changes of culture include getting senior management commitment, knowledge owner's participation, employees to use system, and technology support. Managers are required to create an atmosphere of trust, team spirit, and learning environment for improving contributor's productivity. One of the ways to encourage this behavior is an implementation of a fair and equitable reward system (Smith, 2001). By understanding the Hofstede cultural onion model, an organization can modify organization culture more efficiently and effectively.

Organizational structure comprises the organizational hierarchy, rules and regulations, and reporting relationships (Herath, 2007). Knowledge management theorists largely conclude that changes in an organization's structure, such as moving from hierarchical to flatter networked forms, are essential for the effective transfer and creation of knowledge in the

organization (Beveren, 2003; Gold, Malhotra & Segars, 2001; Grant, 1996; Nonaka and Takeuchi, 1995). Successful organizations of the future will be characterized by their simple and flexible design, the successful balance of organizing work and behavior around processes instead of tasks or functions, and emphasis on teams as their key performance units (Beveren, 2003). A modern company must be ready for permanent change, putting knowledge to work, which requires a high decentralization level so that decisions can be made quickly (Enrique, Patrocino & Eva, 2007). Organization constraints that create barriers to successful KM implementation should be removed either. Apart from that, sharing knowledge should be made from the top until the bottom, and across the organization structure. Getting senior management commitment to KM is critical, without this commitment, employees will not see KM as a business necessary and not contribute to it (Ray, 2008).

2.1.8 Human Capital

Human capital refers to skills of an employee that help meet the task at hand. It is the combined knowledge, skill, innovativeness and ability of the company's individuals (Bontis, 2001). The involvement and commitment of employees is crucial toward the knowledge management. It is people who create and share the knowledge, and therefore, it is crucial to manage those who are willing to create and share their knowledge (O'Dell and Grayson, 1999). Another study by Hatch & Dyer (2004) also stated that effective management of certain human capital has direct and significant impact on organizational learning and knowledge management capability.

Base on the study of (Becker, 1964), training and education is important in managing human capital that might enhance individual and organizational knowledge. In the Human Capital Theory concept that proposed by (Becker, 1964), education or training raises the productivity of workers by imparting

useful knowledge and skill. The skills and competences of knowledge workers need to be continuously developed in order for them to produce valuable contributions to a company for effective knowledge management implementation (Migdadi, 2009). David J. Skyme, 1999 also suggested that continuous learning is a key component of a knowledge-based organization. Through learning processes employees tend to acquired new knowledge for personal development and organizational needs. Besides, through proper training and learning process, employees will have a better understanding of the concept of Knowledge Management and frame of a common language and perception of how they define and think about knowledge (Migdadi, 2009).

Furthermore, Human Resource Management function served as an important toolkit in managing human capital within organization. While Miller (1987) suggests that HRM include those decisions and actions which concern the management of employees at all levels in the business and which are related to the implementation of strategies directed towards creating and sustaining competitive advantage. A knowledge worker is view as an asset of the company as they are mastering the knowledge and competences that an organization need. Through effective recruitment, such knowledge worker is being identify and brought into the organization. Retention involves compensation and incentives to stimulate and reinforce the positive behaviors and culture needed for effective knowledge management practices (Davenport, Prusak & Wilson, 2003). Equally important, is by offering a conducive working environment that stimulate employees job performance and satisfaction.

2.1.9 Franchise Preschool Educational Institution

Nowadays, franchising has become a popular business strategy in many industries around the world (Inma, 2005; Sorenson and Sorensen, 2001; Dant & Kaufmann, 2003). According to Lawrence and Oakley (2005), franchising is a system for expanding a business and distributing goods or services and an opportunity to operate a business under a recognized brand name. A franchise occurs when franchisor (business) licenses its business idea or concept to franchisee (person or group who agrees to operate the business) according to the franchise agreement and pays loyalty to the franchisor (Inma, 2005).

For instance, there are two types of franchising: (1) business format and (2) product or trade name. According to Lawrence et al. (2005), business format franchises not only sell the franchisor's product or service, with the franchisor's trademark, but also run the business according to the system provided by the franchisor. However, according to Audhesh & Michael (2009), successful franchisors do not just sell products and services. They should perfect a business system and then sell their know-how (skills and procedures) and benefits of the business system to prospective franchisees and subsequently to customers.

One of the major challenges faced by franchisors in knowledge based economy is the effective implementation of knowledge management (Sorenson, 2001; Watson, Stanworth, Healeas, Purdyb & Stanworth, 2005; Paswan & Witmann, 2009). Knowledge is the most valuable resource to create and sustain competitive advantage (McFayden & Canella, 2004; Morgan & Hunt, 1997), to enable franchise units to become more efficient (Darr et al., 1995), and it is vital for new product development and success (Van der Bij, Song, & Weggeman, 2003).Moreover, according to Watson et al. (2005), a franchisor is no longer principally concerned with selling goods, but rather, information and knowledge. Thus, managing the knowledge effectively within

and across the organization is important to ensure franchise system success.

In other words, to ensure its success, franchise preschool educational institutions should develop an environment which is suitable for knowledge management implementation. In this context, the environment should allow fostering knowledge creation, storage, transfer and application between franchisor and franchisees, across franchised units, franchisor and company-owned units, and among all members in the network such as suppliers, customers and other organizations (Augier et al., 2001).

2.2 Review of Relevant Theoretical Models

2.2.1 Article: KM Critical Success Factors- A Comparison of Perceived Importance versus Implementation in Malaysian ICT Companies
Author: Siong Choy Chong

Note:
FOC – Friendly Organizational Culture; SMLaC - Senior Management Leadership & Commitment; EI - Employee Involvement; ET- Employee Training; TT - Trustworthy Teamwork; EE - Employee Empowerment; ISI - Information Systems Infrastructure; PM - Performance Measurement; B – Benchmarking; KS – Knowledge Structure; EoOC - Elimination of Organization Constraint
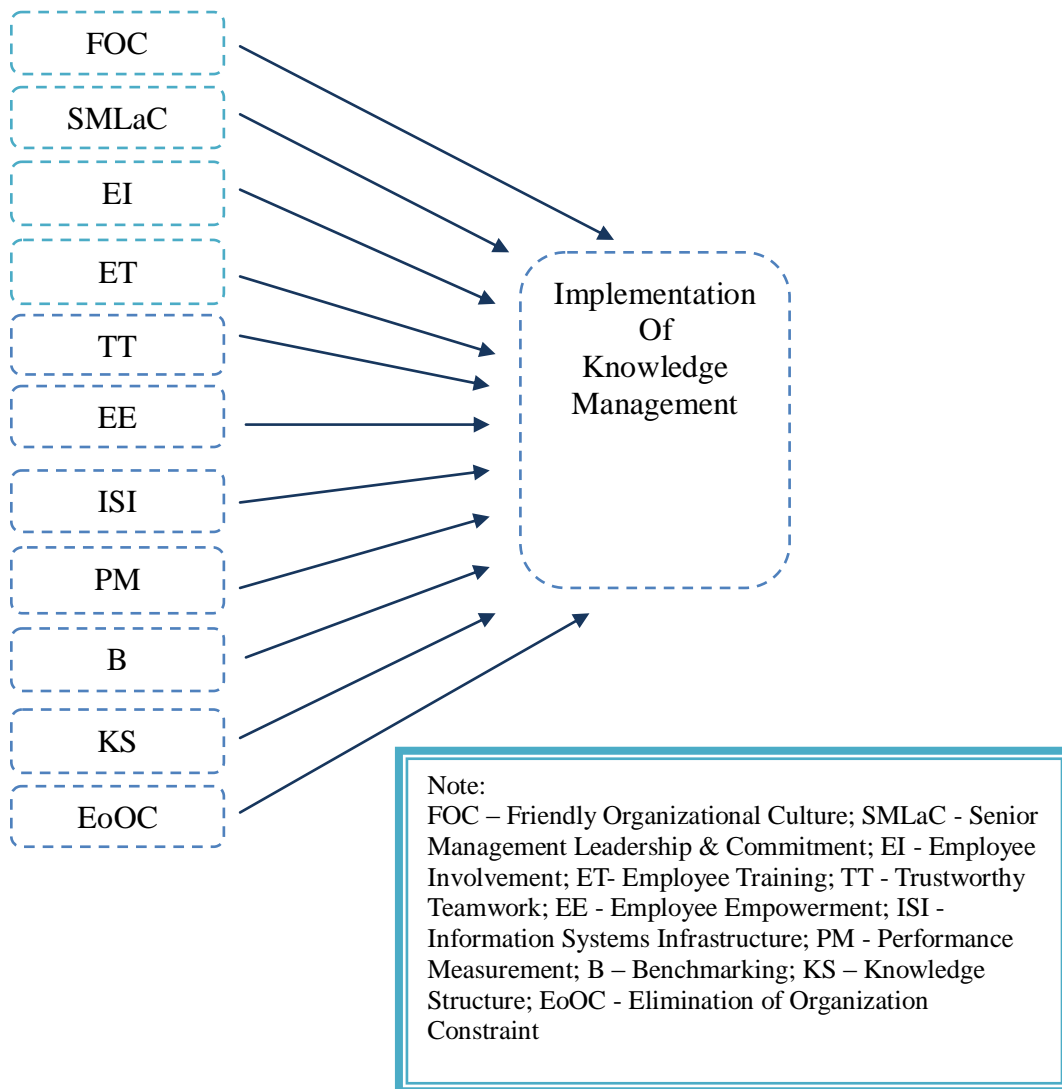
Source: Chu Chee Howe, Lim Xi Shun, Lim Xtn Yi, See Chia Hui, Yeoh Boon Pien

The researcher, Chong S.C., adopted a comprehensive list of success factors for successful implementation of knowledge management presented by Chong and Choi (2005) after compared and reviewed several knowledge management models. The core objective of this study is to identify the enablers that would make knowledge management program works in an organization. This knowledge management model consists of 11 key components to successful knowledge management namely (1) a friendly organizational culture; (2) senior management leadership and commitment; (3) employee involvement; (4) employee training; (5) trustworthy teamwork; (6) employee empowerment; (7) information systems infrastructure; (8) performance measurement; (9) benchmarking ;(10) knowledge structure and (11) elimination of organization constraint. Such variables are the most common types of factor being studies by most of the researchers and the interrelationships of these variables and knowledge management have being comprehensively study and empirically tested by Chong and Choi (2005). This model tends to focus more on human-related variables and the author has place extra emphasis on it. Besides, this is a comprehensive model to analyze the factors for knowledge management implementation.

2.2.2 Article: Black and Decker – Towards a Knowledge-centric Organization

Authors: J. D. Pemberton, G. H. Stonehouse, M. S. Francis

Enablers

- L
- C&S

Levers

- P
- EK
- TK
- KR
- ML
- KM

Foundations

- HI
- TI

Knowledge Management Implementation

Note:
L - Leadership; C&S- Culture & Structure;
P - Process; EK - Explicit Knowledge; TK -
Tacit Knowledge; KR - Knowledge
Repositories; ML - Market Leverage; KM -
Knowledge Measures; HI - Human
Infrastructure; TI - Technology Infrastructure.
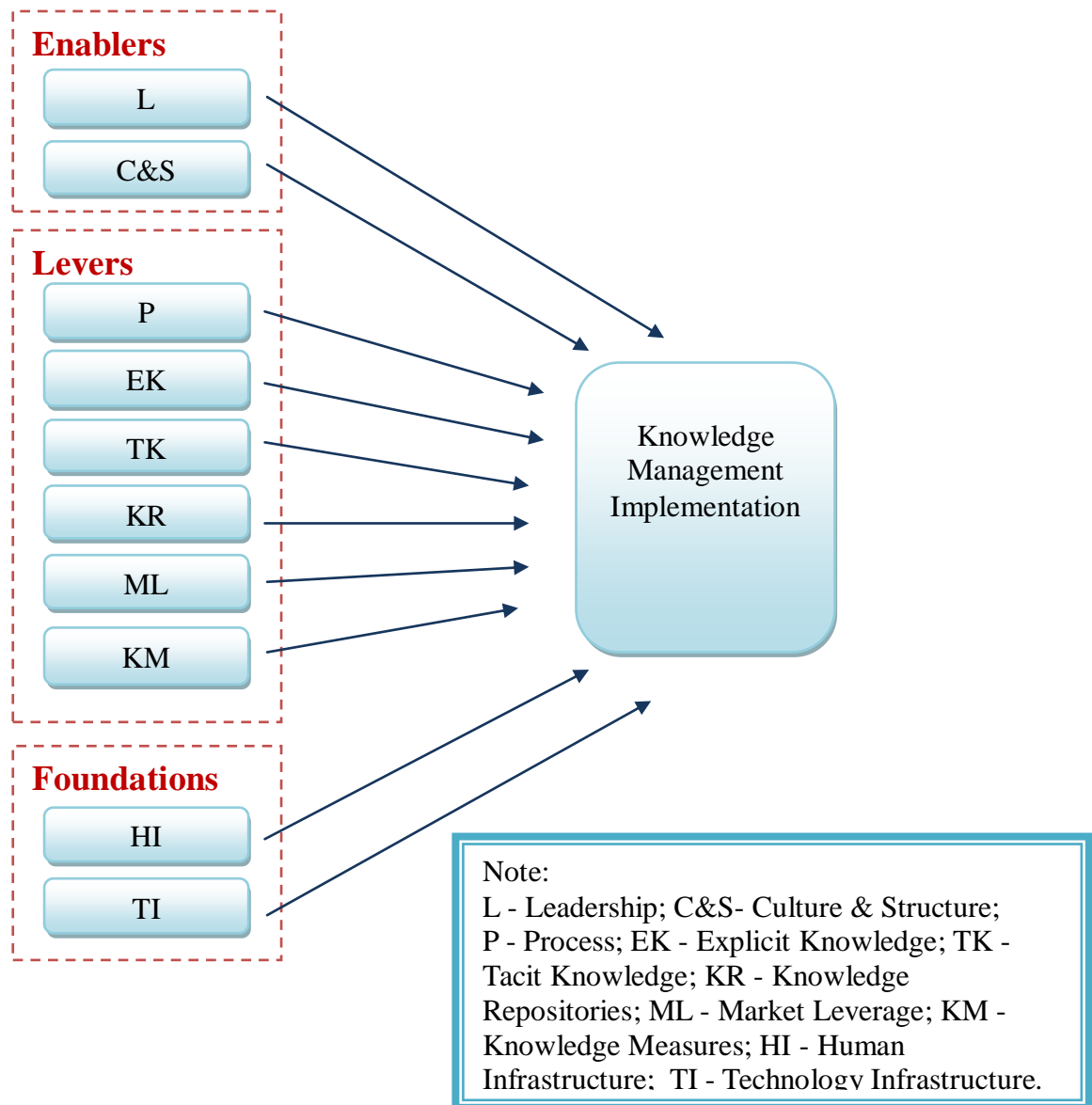
Source: Chu Chee Howe, Lim Xi Shun, Lim Xtn Yi, See Chia Hui, Yeoh Boon Pien

The approach adopted by J. D. Pemberton, G. H. Stonehouse, M. S. Francis (2002) in this research utilizes an action-focused framework by Skyrme (1999). The research has been conducted to investigating the environment factors for knowledge management, understanding barriers and gaps in current and desired performance, as well as identifies possible ways for improving future performance at its European Design Centre (EDC). Broadly speaking, this framework consists of ten themes classified under three layers. The highest level namely enablers is the essential prerequisites and is designed to encourage knowledge development and sharing. Such enablers relate directly to leadership and also culture & structure. Intermediate level namely amplifiers is a set of levers that increase the contribution of knowledge. In this level, processes that facilitate knowledge flows, and mechanisms that provide faster access to explicit knowledge and better ways of handling tacit knowledge, knowledge measure, market leverage and market repositories are indication of this level. Finally, a foundation layer provides the capacity and capability that embeds knowledge into the organization's infrastructure. It includes two complementary strands – a "hard" information and communication infrastructure that supports knowledge collaboration and a "soft" human and organizational infrastructure that develops knowledge enhancing roles, skills and behaviors. This is a complete model as it mentioned about the role of each variable in the implementation of knowledge management. Further, it strives for a balance between soft and hard components when analyze the factors for knowledge management implementation.

2.2.3 Article: Critical Success Factors for Implementing Knowledge Management in Small and Medium Enterprise Authors: Kuan Yew Wong

Note:
ML&S - Management Leadership and Support;
C - Culture; IT – Information Technology;
S&P -Strategy and Purpose; M - Measurement;
OI -Organizational Infrastructure; P&A -
Processes and Activities; MA - Motivational
Aids; R - Resources; T&E - Training and
Education; HRM - Human Resource
Management
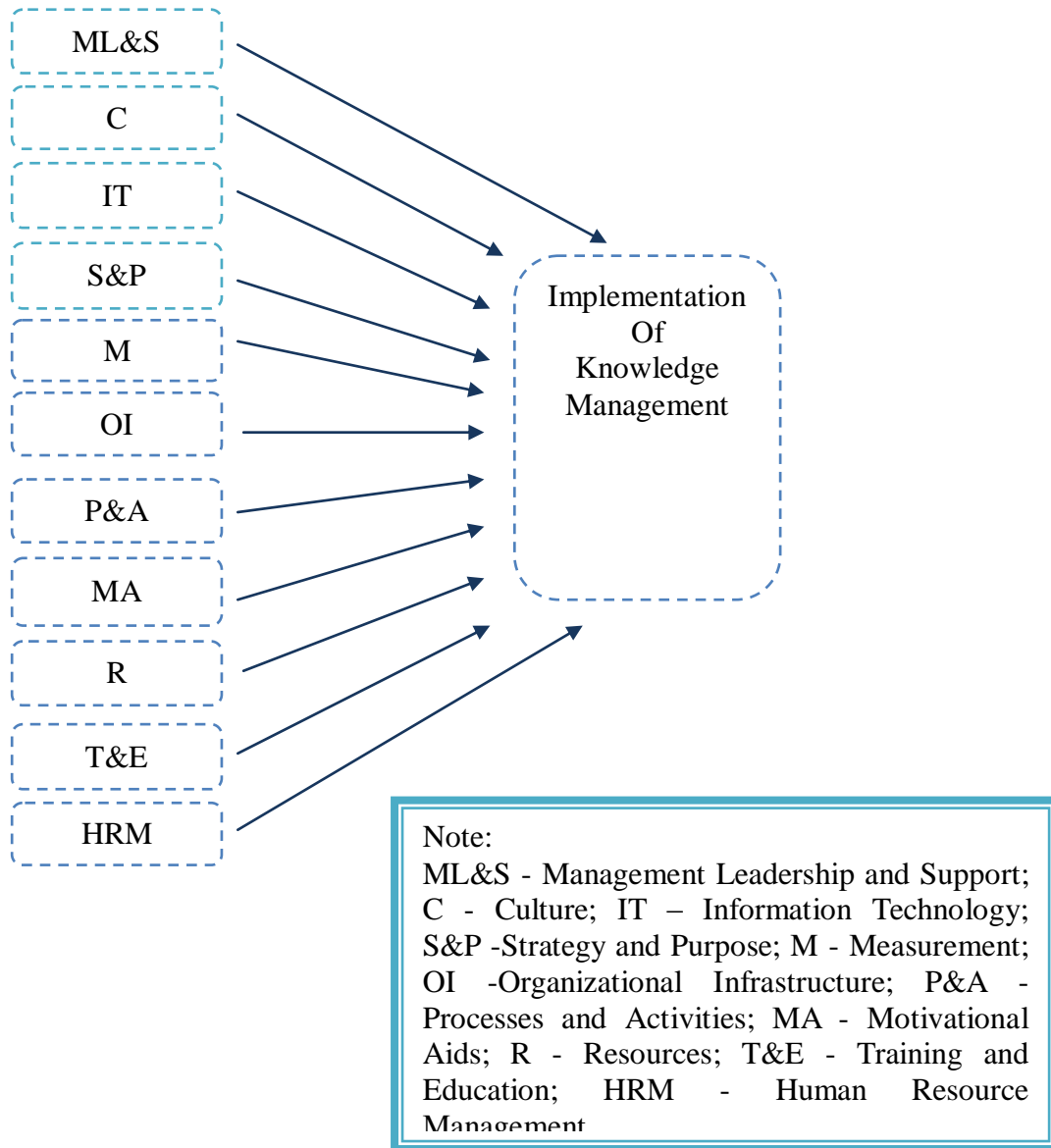
Source: Chu Chee Howe, Lim Xi Shun, Lim Xtn Yi, See Chia Hui, Yeoh Boon Pien

The researchers, Wong (2005) had compared and reviewed the existing critical success factors (CSFs) for knowledge management implementation proposed by various authors in the literature. After reviewing various research studies, the researchers had decided to adopt the a set of CSFs for knowledge management implementation proposed by Wong (2005) because the model is believed to be more appropriate for SMEs in implementation of knowledge management. The authors thus conduct research on CSFs for implementing Knowledge Management in UK SMEs The purpose of this study is to investigate the CSFs for adopting Knowledge Management in SMEs. The authors highlighted that, broad range of factors that can influence the success of KM implementation has been mentioned in their literature. These 11 CSFs proposed by Wong K.Y. in year 2005 including: (1) Management leadership and support; (2) Culture; (3) IT; (4) Strategy and purpose; (5) Measurement; (6) Organizational infrastructure; (7) Processes and activities; (8) Motivational aids; (9) Resources; (10) Training and education; and (11) Human resource management (HRM). As an overview, this is a comprehensive model because it covers a broad dimension of factors for successful knowledge management implementation. Besides, it includes motivational aids as variable that is always been neglected in past studies.

2.3 Proposed Theoretical/ Conceptual Framework

Figure 2.5: The Research Model
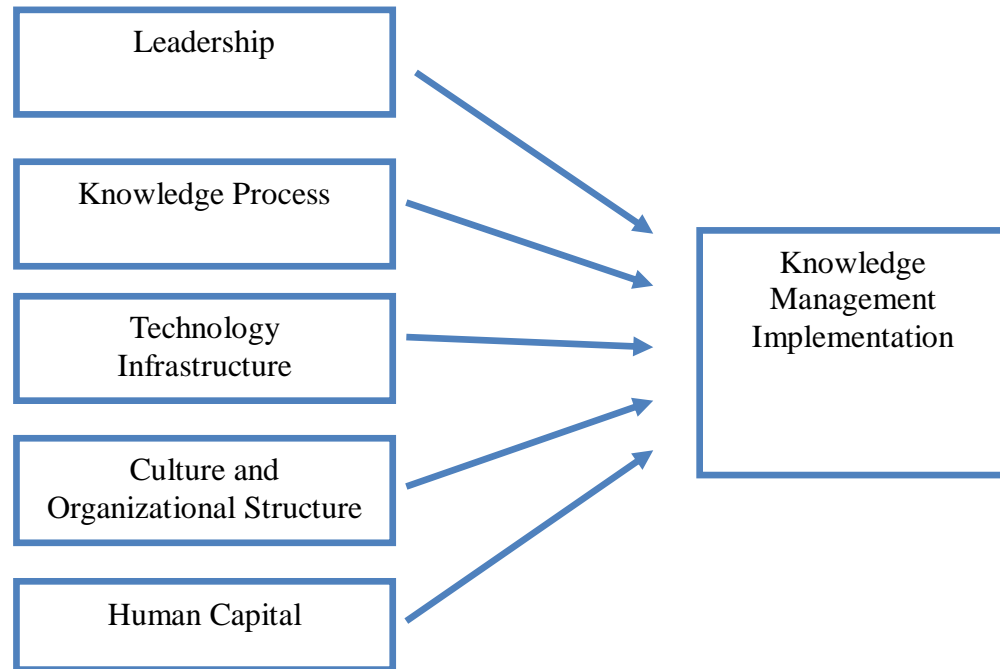
Source: Developed for the Research

Based on the literature review, a conceptual research model shown in Figure 2.5 has been developed. It comprises the organizational knowledge management enablers that are critical in supporting the implementation of knowledge management in franchised preschool institutions. In this study, the five independent variables are adopted from the study conducted by Chong, 2005; Wong, 2005 and Pemberton, Stonehouse & Francis, 2002. The five independent variables were chosen based on extensive reading in literature review. This represents a framework that covers hard and soft dimension that is crucial in the study. Also, these five variables were the combinations that extracted from studies in the past.

The list below presents the five independents factors together with their sources:

1.   Leadership (Chong, 2005; Wong, 2005 and Pemberton, Stonehouse & Francis, 2002)

2.   Knowledge Process (Chong, 2005; Wong, 2005 and Pemberton, Stonehouse & Francis, 2002)

3.   Technology Infrastructure (Chong, 2005; Wong, 2005 and Pemberton, Stonehouse & Francis, 2002)

4.   Culture and Organizational Structure (Chong, 2005; Wong, 2005 and Pemberton, Stonehouse & Francis, 2002)

5.   Human Capital (Chong, 2005; Wong, 2005 and Pemberton, Stonehouse & Francis, 2002)

2.4   Hypotheses Development

2.4.1 Leadership

Management leadership and support are vital for a successful knowledge management implementation (Sharp, 2003; Horak, 2001; Joshi, 2000). Hence, leaders must share same vision on knowledge management and provide ongoing support to initiate and sustain the knowledge management programs.

Leaders play an extremely important role in acting as role models and they set the example for others in the organization, thus they have direct impact on the organization culture besides determining the way their organization approach and deal with knowledge management (Migdadi, 2008; Wong, 2005). They must be willing to share their existing knowledge with their subordinates, engage in continuous learning and ideas creation process, creating and

promoting a knowledge friendly culture and conveying the importance of knowledge management to their employees.

Hence, the following hypothesis is presented:

H_0: There is no significant relationship between leadership and the implementation of knowledge management.

H_1: There is significant relationship between leadership and the implementation of knowledge management.

2.4.2 Knowledge Process

Knowledge process is defined as something that can be done with the knowledge in the organization by Johannssen in year 2000. According to Skyrme (1999), there are three types of knowledge process: (1) knowledge conversion, (2) knowledge innovation and (3) knowledge sharing. Besides, according to Alavi et al. (2001) and Martensson (2000), knowledge process are divided into four main process which include knowledge creation, knowledge storage, knowledge transfer and knowledge application.

"Knowledge processes such as knowledge creation, knowledge storage, knowledge transfer and knowledge application are those that lie at the heart of creating a successful knowledge based enterprise (Wong, 2005)." The sentence above indicates the importance of knowledge process in the implementation of knowledge management in an organization. Through effective knowledge process, important knowledge can be utilized to create a new knowledge and enlarge the body of organization knowledge assets (Nonaka and Toyama, 2004), knowledge flows can be examined, and knowledge assets can be identified.

Thus, the following hypothesis is presented:

H_0: There is no significant relationship between knowledge processes and the implementation of knowledge management.

H_1: There is significant relationship between knowledge processes and the implementation of knowledge management.

2.4.3 Technology Infrastructure

According to Offsey (1997), technology infrastructure is defined as document managing systems, information retrieval engines, relational and object databases, groupware and work flow systems, push technologies and agents and data mining tools that can facilitate knowledge management.

Technology infrastructure is one of the key enablers in implementing knowledge management in an organization (Wong, 2003). According to Mahmoud Migdadi (2008), when knowledge is well managed with the proper use of technology infrastructure, an organization's administrative processes can be streamlined and improved, all the important knowledge necessary can be integrated and therefore the information contents of the organization will be enhanced. In addition, without technology infrastructure, knowledge sharing process cannot be fully applicable by employees in an organization.

Thus, the following hypothesis is presented:

H_0: There is no significant relationship between technology infrastructures and the implementation of knowledge management.

H_1: There is significant relationship between technology infrastructures and the implementation of knowledge management.

2.4.4 Culture and Organizational Structure

Wong (2005) defines organization culture as the core beliefs, values, social customs and norms that govern the way individuals act and behave in an organization. Many researchers (Hasanali, 2002; Martensson, 2000) indicate that culture is one of the key in implementation of knowledge management and many believes that it will influence the effectiveness of knowledge activities especially knowledge sharing process. In addition, Liebowitz (1999) affirmed that the success of knowledge management is 90% dependent on building a supportive culture.

Nowadays, the biggest obstacle faced by organizations in implementing knowledge management is to develop a supportive culture (knowledge friendly culture) that highly values knowledge and encourage knowledge creation, storing, sharing and application. Besides, according to Wong (2005), there is a need to foster an innovative culture in which individuals are constantly encouraged to generate new ideas, knowledge and solutions. In addition, collaborative culture that serves as an important condition for knowledge transfer and trust that serves as the fundamental aspect of knowledge friendly culture are crucial in knowledge management implementation.

Organizational structure refers to the pattern of relationships and linkages among units or people which is important in facilitating knowledge sharing and creation (Inkpen and Tsang, 2005). Structures that include formalization and centralization are likely to affect knowledge management. In organizations with high formalization, explicit rules and procedures are likely to reduce the flexibility needed for knowledge creation. Further, as jobs are preprogrammed by the organization, there is less need for employees to innovate their knowledge and skills (Willem and Buelens, 2009). Conversely, in organizations with low formalization, members would have greater

willingness in knowledge creation and sharing (Chen and Huang, 2007). Therefore, the less formalized work process would stimulate knowledge management within the organization. Besides that, centralization may have disadvantages on knowledge management in organizations because of the control in centralized systems (Tsai, 2002). According to (Janz and Prasarnphanich, 2003), centralization prevents employees from making wise decision in their work and cause inefficiency in creation and sharing of knowledge.

Therefore, the following hypothesis is introduced:

H_0: There is no significant relationship between culture and structure and the implementation of knowledge management.

H_1: There is significant relationship between culture and structure and the implementation of knowledge management.

2.4.5 Human Capital

Human capitals are the critical driving force in making knowledge work for an organization since they play the role as knowledge providers and value creators in the organization. As stated by Holsapple and Joshi (2001), people are the core for creating organizational knowledge because it is people who create and share the knowledge, and therefore, it is crucial to manage those who are willing to create and share their knowledge (O'Dell and Grayson, 1999). Base on the study of (Becker, 1964), training and education is important in managing human capital that might enhance individual and organizational knowledge. Besides, Human Resource Management also serves as an important tool in managing human capital who mastering organizational knowledge. The statement above indicates the importance of human capital management in knowledge management implementation.

Thus, it can be hypothesized that:

H_0: There is no significant relationship between human capital and the implementation of knowledge management.

H_1: There is significant relationship between human capital and the implementation of knowledge management.

2.5   Conclusion

This chapter has highlighted on literature review and covers the theoretical framework and hypothesis development. There are five independent variables and a dependent variable. The next chapter presents the research methodology. This chapter will directly affect the research methodology. Different variables may need different measurement to ensure the reliability and accuracy of the information.

CHAPTER 3: METHODOLOGY

3.0   Introduction

In the previous chapter, the literature review has identified the previous research and theory which are found to have an impact on the implementation of knowledge management. The chapter culminated with the development of theoretical framework and the hypotheses that are to be analyzed. This chapter begins with the research methods chosen for analysis, for instant how the questionnaire was developed, how sample was selected, how the data was collected, and what are the analysis techniques that will be used on the data obtained from the questionnaire.

This chapter is divided into 8 sections. These sections are research design, data collection method, sampling design, research instrument, constructs measurement, data processing process, explanation of the statistical procedures used to analyze the data and lastly is the summary.

3.1   Research Design

Based on the purpose and nature of the study, a quantitative methodology was employed to conduct this study because it clearly and precisely specifies both independent and dependent variables of the study (Alaxei, 2002). Besides, according to Mohd Nawi, (2009), quantitative methodology is used to collect data for empirical survey and it is more objective and contributes to the reliability of collected data. Furthermore, according to Cameron (2008) and Salahuddin (2009) (as cited in Mohd Nawi, 2009), there are 86 percent of past research studies using single method which is either quantitative method or qualitative method. Causal research approach was employed in this study to understand which variables are the causes (independent

variables) and which variables are the effects (dependent variables) of a phenomenon. This approach is seen as having objective observations, precise measurements, statistical analysis and verifiable truths. The hypotheses constructed in Chapter 1 are tested by carefully analyzing the data using statistics.

3.2   Data Collection Method

A combination of both primary data and secondary data are used to conduct this research study.

Primary data of this study was obtained through questionnaires survey. A survey is a method of collecting primary data based on communication with a representative sample of individuals (Zikmund, Babin, Carr and Griffin, 2010). The questionnaires were distributed to a target population of business associates in Malaysia and it takes about 7 days to collect back the distributed questionnaire.

On the other hand, secondary data was gathered through existing sources such as books, media, census data and soon (Cavana, Delahaye & Sekaran, 2000). In this study, secondary data was collected through several electronic databases such as Emerald Management Plus, ProQuest Online Resources, ScienceDirect and journals that have appropriate materials in this study such as Journal of Knowledge Management.

3.3 Sampling Design

3.3.1 Target Population

According to Sekaran (2003), population refers to the entire group of people, events, or things of interest that can be a focus for the researcher to investigate. Population for this study comprised of all the business associates of 3Q MRC JUNIOR in Malaysia since the purpose of this study is to examine the organizational factors for the implementation of knowledge management in franchised preschool educational institutions. Since there are 139 3Q MRC JUNIORs in Malaysia, the target population of this study is 139 business associates in Malaysia ("Locate Us", 2010).

3.3.2 Sampling Frame and Sampling Location

Anthony G. Turner (2003) had defined sampling frame as a set of source materials from which the sample is selected in the journal "Sampling Frames and Master Samples". It is known as "working population" because it will eventually provide units involved in analysis (Zikmund et al., 2010). Sampling frame in this study is the list of business associates from 3Q MRC JUNIOR obtained through its company website, which is http://www.mrc.edu.sg/JUNIOR/main.htm. Besides, the questionnaire survey was conducted in 3Q MRC JUNIOR located in twelve different states in Malaysia.

3.3.3 Sampling Elements

According to Sekaran & Bougie (2010), sampling elements are those in a sampling unit that is available for selection in some stage of the sampling process. All of the 3Q MRC JUNIOR business associates are available for survey, therefore all business associates can be categorized as sampling elements. These business associates represent good respondents for this study because they possess understanding of knowledge management with depth and breadth.

3.3.4 Sampling Technique

The sampling technique employed in this study was probability sampling method or known as simple random sampling. Probability sampling was used because the elements in the population have a known chance of being chosen as subjects in the sample (Sekaran et al., 2010). In addition, simple random sampling has selected under the type of probability sampling method because every element in the population has a known and equal chance of being selected as a subject (Sekaran, 2003). The sampling is done without replacement which means deliberately avoids choosing any member of the population more than once. Moreover, this sampling design has the least bias and offers the most generalizability. In this study, there are 139 elements in the population, and we need a sample of 103. Every element in the population is being chosen randomly from the list of business associates without replacement.

3.3.5 Sampling Size

Sekaran et al. (2010) states that there are six factors affecting the sample size, which include i) the research objective, ii) the extent of precision desired, iii) the acceptable risk in predicting that level of precision, iv) the amount of variability in the population itself, v) the cost and time constraints and vi) the size of the population itself. In order to ensure a good decision model, a sample size decision table developed by Krejcie and Morgan in year 1970 was employed in this study. Referring to the sample size table of Krejcie and Morgan, from population size of 139, the sample size should be 103.

3.4 Research Instrument

3.4.1 Questionnaire Design

This study was carried out using a set of questionnaire. According to Zikmund et al. (2010), self-administered questionnaire can be defined as a questionnaire completed by respondent rather than by an interviewer. This data collection method seems appropriate for this study because investigating the organizational factors for knowledge management implementation would be best served in real settings (Chong, 2005). Furthermore, according to (Sekaran et al., 2010), questionnaire is the most common and most useful data collection method especially when large numbers of respondents are to be reached in different geographical areas. Thus, questionnaire is appropriate for this study since this study involves 103 respondents from 12 different states of Malaysia.

The questionnaire of this study consisted of three sections which are Section A, Section B and Section C. A brief explanation introducing the concept of

Knowledge Management, leadership, knowledge process, technology infrastructure, culture and organizational structure and human capital were made before the commencement of each variable. A total of 34 items were developed in the questionnaire. This study used some of the questions from various sources of past research studies and make an alterations, in order to adapt with research objectives.

Section A includes demographic background of respondents, which consists of age, gender, level of education, number of franchise operating year(s) and lastly the stage of knowledge management implementation. Section B measured the respondent's overall perception towards knowledge management implementation whereas Section C covers the five independent variables to be measured for the purpose of this study.

3.4.2 Pretesting Questionnaires

It is important to pretest the questionnaire to ensure respondents understand the questions and there are no problems with the wordings or measurements (Zikmund et al., 2010). The objective of pretest is to examine the reliability of the questionnaire by using Cronbach's alpha.

The alpha obtained from this reliability test shows the reliability of the items in the questionnaire. Reliability is the degree to which measures are free from random error and therefore yielding consistent results. The levels of reliability according to Zikmund et al. (2010) are stated in Table 3.1.

Table 3.1: Rule of Thumb of Cronbach's Alpha

Cronbach's Alpha	Strength of Association
0.80- 0.95	Very Good Reliability
0.70 - 0.80	Good Reliability
0.60 - 0.70	Fair Reliability
Less than 0.60	Poor Reliability

Source: Sekaran, U., & Bougie, R. (2010). Research methods for business: A skill buildings approach (5th ed.). Chichester, West Sussex: John Wiley & Sons, Inc.

A pretest was conducted before formal questionnaires were disseminated to the targeted respondents. A total of 20 respondents were chosen to participate in the pretest of questionnaire with the intention of examining their understanding and feedback from the questions. Table 3.2 depicts the result of reliability test.

Table 3.2: Reliability Test (Pretest)

Variables	N of Items	Cronbach's Alpha
Implementation of Knowledge Managment	3	0.657
Leadership	4	0.761
Knowledge Process	4	0.748
Technology Infrastructure	4	0.777
Culture and Organizational Structure	4	0.783
Human Capital Management	4	0.707

Source: Developed for the Research

As shown in Table 3.2, all the variables mentioned have alpha value in between 0.60 to 0.80, which means that the questionnaire has fair and good reliability. Culture and organizational structure scored the highest value of Cronbach's Alpha which is 0.783, indicating a good reliability. Technology infrastructure, leadership and knowledge process obtained a Cronbach's Alpha of 0.777, 0.761 and 0.748 respectively. Further, human capital achieved a Cronbach's Alpha of 0.707. The dependent variable, implementation of knowledge management, obtained the lowest value of Cronbach's Alpha which is 0.657. Based on the reliability test, most of the variables have shown good reliability.

3.5   Constructs Measurement

3.5.1 Origin of Constructs

Table 3.3: Origin of Constructs

Independent Variables	Imported from
Leadership	• (Chong, 2005) • (Wong, 2005) • (Pemberton, Stonehouse & Francis)
Culture and Structure	• (Chong, 2005) • (Wong, 2005) • (Pemberton, Stonehouse & Francis)
Knowledge Process	• (Wong, 2005) • (Pemberton, Stonehouse & Francis)
Human Capital	• (Chong, 2005) • (Pemberton, Stonehouse & Francis)
Technology Infrastructure	• (Chong, 2005) • (Wong, 2005) • (Pemberton, Stonehouse & Francis)

Source: Developed for the Research

3.5.1.1 Modified Operational Definition of Construct

Table 3.4 shows that the items that used to measure the 5 independent variables: leadership, knowledge process, technology infrastructure, culture & organization structure, and human capital. These items were adapted from different authors: Choi, (2000); Anderson, (2001); Chong, (2006); and Kazemi et al., (2010). Anderson (2001) developed KM Assessment Tool to help organization self-assess where their strengths and opportunities lie in managing knowledge. Choi (2000) and Kazemi et al. (2010) used the scale to measure the factors affecting knowledge management implementation. Chong (2006) used the scale to measure the perception of the middle managers concerning the importance and level of implementation of the 11 critical success factors of KM.

It is a 25-item scale, consisting of 5 items on every variable. Each item was measured on a seven-point Likert's scale with the range from strongly disagree (1) to strongly agree (7). The Cronbach's alpha for leadership, knowledge process, technology infrastructure, culture & organization structure, and human capital were 0.775, 0.755, 0.894, 0.804, and 0.730 respectively.

Table 3.5 show that the items that used to measure the dependent variables. These items were adapted from Choi (2000). In Choi's (2000) study, the scale was used to measure the factors affecting knowledge management implementation. In Choi's (2000) study, the items measure of factors affecting KM implementation had achieved a good reliability of above 0.80.

There are 4 items in this variable in measuring the implementation of knowledge management. Each item was measured on a seven-point Likert's scale ranging from strongly disagree (1) to strongly agree (7). The Cronbach's alpha for this scale in this study was 0.748.

Table 3.4: Modified Operational Definition of Construct (Independent Variables)

Independent Variable	Items	Source
Leadership	L1: Top management leadership and commitment are important in the implementation of knowledge management.	Anderson, 2001; Choi, 2000; Chong, 2006; Kazemi et al., 2010
	L2: Leader motivating and encouraging people attitude for acquiring, utilizing and sharing knowledge in the organization.	
	L3: Knowledge management is the responsibility of top management.	
	L4: Leaders' goal and direction are important in determining the success of knowledge management implementation.	
	L5: Leader's behavior influences the effectiveness of knowledge sharing process within the organization.	
Knowledge Process	KP1: Knowledge management process is important in creating a successful knowledge based organization.	
	KP2: Tacit knowledge (e.g. experiences, ideas or values) is valued throughout the organization and transferred among organization members.	
	KP3: Systematic process is used in gathering, creating, storing and application of key knowledge assets.	
	KP4: A well defined knowledge management process is important to the organization so that it knows what it must know in order to achieve what it wants to do.	
	KP5: Knowledge is verified and organized in database.	

Independent Variable	Items	Source
Technology Infrastructure	TI1: Corporate hardware and opening systems to support future development of knowledge management application.	Anderson, 2001; Choi, 2000; Chong, 2006; Kazemi et al., 2010
	TI2: Computer network (e.g. internet, intranet) is important to enhance the effectiveness and efficiency of the knowledge sharing process.	
	TI3: User friendliness of technology infrastructure enhances effectiveness of knowledge management.	
	TI4: Technology infrastructure allows us to better manage different kind of knowledge.	
	TI5: Usability of technology infrastructure enhances effectiveness of knowledge management.	
Culture and Organization Structure	COS1: It is important for members to obtain the value and advantages of knowledge.	
	COS2: Openness between employees is important for implementing knowledge management.	
	COS3: Reformulate any rules and procedures that obstruct the implementation of knowledge management.	
	COS4: Minimization of organizational level for effective knowledge management.	
	COS5: Organization provides a working environment where people are encourage sharing ideas experiences, successes and failures.	

Independent Variable	Items	Source
Human Capital	HC1: Involvement and commitment from employees towards knowledge management are important	Anderson, 2001; Choi, 2000; Chong, 2006; Kazemi et al., 2010
	HC2: Employee's opinions and suggestions are not necessary in the entire knowledge management program	
	HC3: Continuous participation from employees in new learning opportunities such as conference, university course, training to create new organization knowledge	
	HC4: Employees are important because they create organizational knowledge, making knowledge work, and create value in organization	
	HC5: Employees are promoted to the higher position for their ongoing contribution.	

Source: Developed for the Research

Table 3.5: Modified Operational Definition of Construct (Dependent Variable)

Dependent Variable	Item	Source
Knowledge Management Implementation	IKM1: I'm interested with the implementation of knowledge management.	Choi, 2000
	IKM2: I believe that knowledge management program can contribute to our organization products or services competitiveness.	
	IKM3: Organization realized the importance of organizational knowledge assets (copyright, patents), thus, there will be greater emphasis on knowledge management in future.	
	IKM4: I found that knowledge management program fits the organization and industry.	

Source: Developed for the Research

3.5.2 Scale Measurement

The scale is a tool by which researchers distinguished as how they differ from one another on the variables of interest to the study (Cavana et. al., 2000; Sekaran, 2003). In this study, nominal scale, interval scale and Likert Scale are used to measure all the instruments.

Nominal scale is one that allows researcher to assign subjects to certain categories/ group (Cavana et. al., 2000; Sekaran, 2003). It is the lowest level of measurement, with least stringent requirement of entry and the most limited "room" for future mathematical analysis. For example, with respect to variable in genders, respondents are grouped into two categories- male and female.

True class interval scale is the scale with the distance property that allows user to measure the magnitude of the differences in the preference among individuals (Sekaran, 2003). In addition, an interval scale allows researcher to perform certain arithmetical operations on the data collected from the respondents (Cavana et. al., 2000; Sekaran, 2003). This scale has applied for some of the questions in Section A such as age.

Ordinal scale is a ranking scale in which it allows things to be arranged in order based on how much of some concept they posses (Zikmund et al, 2010). For example, in this study, ordinal scale was employed in the question measuring the level of education of respondent in Section A with categories such as High School, Diploma, Bachelor Degree and Master Degree.

According to (Sekaran, 2003), Likert scale is designed to examine how strongly subjects agree or disagree with statement. In this study, a seven- point Likert scale has applied for all the questions in Section B and C. These two sections using seven- point Likert scale (1= Strongly Disagree, 2= Disagree,

3= Moderately Disagree, 4= Neutral, 5= Moderately Agree, 6= Agree, 7= Strongly Agree) to measure both of the dependent and independent variables.

3.6 Data Processing

According to Hair, Money, Page & Samuouel, (2007), data processing is a process of data preparation such as checking, editing, coding, transcribing as well as specifying any special or unusual treatments of data. In this study, data obtained through questionnaire are coded, keyed in, edited, and transformed to make sure it reliability and acceptability.

According to Sekaran (2003), the first step in data preparation is data coding. Data coding involves assigning a number to participants' responses so they can be entered into a database. The self administered questionnaire include 29 items measuring leadership, culture and organizational structure, knowledge process, technology, human capital management and knowledge management implementation and the 5 demographic variables, as shown in Appendix A, seven- point Likert scale has applied for all the 29 questions in Section B and C, where 1= Strongly Disagree, 2= Disagree, 3= Moderately Disagree, 4= Neutral, 5= Moderately Agree, 6= Agree, 7= Strongly Agree, to measure both of the dependent and independent variables. In Section A, demographic variables such as gender, age, level of education, numbers of franchise operating years and level of knowledge management implementation, were coded.

After coding the data, the collected data will be transcribed into the computer for further analysis. This process involves inserting the coded data from the questionnaire into SPSS version 14.0 program for analysis. Next, the data are edited to identify some unreadable, incomplete, or ambiguous responses (Zikmund et al., 2010). By using Statistical Package for Social Science (SPSS), the missing data were numbered as "99" and automatically eliminate the "99" variables in order to obtain more accurate research findings. After the data editing process, the data are checked and

verified to ensure that it has been inputted correctly into the SPSS program.

The next step was followed by data transformation, a variation of data coding, a process of changing the original numeric representation of a quantitative value to another value. In this process, new variables were created by combining the scores on the original questions into a single score. For instance, the five items used to measure the variable "leadership" were combined and divided by 5 to obtain a new score for variable "leadership". In addition, reverse scoring was also employed in this study. For instance, the second item measuring the human capital management was reversed.

3.7   Data Analysis

3.7.1 Descriptive Analysis

A descriptive analysis is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation (Sekaran, 2003). In this study, descriptive analysis was used to describe the demographic characteristics of the respondents by determining the frequency distribution, percentage, mean, and standard deviation of the demographic data.

3.7.2 Reliability Analysis

Reliability refers to the degree to which measures are without bias and ensure consistent measurement across time and variable items in the instruments (Sekaran et al., 2010). Therefore, Cronbach's Alpha was used to assess the consistency and reliability of both independent and dependent variables. According to Sekaran (2003), the weakest value of Cronbach Alpha in a reliability analysis is less than 0.6. Meanwhile, if the value was at par or more than 0.6, the instrument is acceptable but considered weak. Value of more than 0.7 considered acceptable and more than 0.8 is good. Once data has considered being reliable, then they would be useful for any statistical analysis. Thus, Cronbach's Alpha was computed to assess the internal consistency reliability of the five independent variables (leadership, knowledge process, technology infrastructure, culture and organizational structure and human capital) and the dependent variable (knowledge management implementation).

3.7.3 Inferential Analyses

Inferential analyses are used to generate conclusions about the population's characteristics based on the sample data (Zikmund et al., 2010). In other words, such statistical procedures allow the research to draw conclusions about the population based on information contained in the data matrix provided by the sample. Inferential analysis includes hypothesis testing and estimating the true population values based on sample information. A number of statistical tools such as Pearson's correlation analysis and multiple regression analysis were employed in this study.

3.7.3.1 Factor Analysis

According to Zikmund et al. (2010), factor analysis is a multivariate technique used to recognize the underlying dimensions or regularity in phenomena. It act as a statistical tool as factor analysis helping in identifying the right measuring instruments and to guarantee the variability of research results. Factor analysis was performed using the 29 items that measure the five independent variables (culture and organizational structure, knowledge process, leadership, technology infrastructure and human capital) and the dependent variable (knowledge management implementation).

3.7.3.2 Pearson's Correlation Analysis

Pearson's correlation analysis indicates the strength, direction and significance of the bivariate relationship among all the variables that were measured at an interval or ratio level (Sekaran, 2003). A correlation coefficient (r) indicates the strength and direction of the relationship. The correlation coefficient (r) ranges from -1.0 to +1.0. +1.0 (r) indicates a perfect positive relationship while -1.0 means there is a perfect negative relationship. The absolute value indicates the strength and sign shows the direction of the relationship. (r) Equals to zero means there is no relationship between two variables. While (r) ranges from 0.1 to 0.3 indicates a weak relationship and a (r) ranges from 0.4 to 0.6 represents a moderate relationship. Strong relationship is showed with a (r) above 0.7. In this study, Pearson's correlation analysis was used to measure and prove the relationship between five independent variables and dependent variable.

3.7.3.3 Multiple Regression Analysis

Multiple regression analysis is used to analyze contribution of two or more independent variables to the variation of a dependent variable (Kerlinger and Pedhazur, 1973; Sekaran, 2003). It is also used to assess the degree of the relationship between the independent variables and dependent variable. Therefore, it is appropriate to use multiple regression analysis in this study in order to evaluate the relative impact of the five organizational factors on the implementation of knowledge management and the degree to which the variance in implementation of knowledge management can be explained by the five organizational factors.

3.8   Conclusion

This chapter highlighted the research methodology taken to conduct this study. A properly planned research methodology is important for the future development of the study. In the next chapter, various analyze such as descriptive analysis, reliability analysis and inferential analysis will be performed to reveal the patterns and analyzes of the research results.

CHAPTER 4: RESEARCH RESULTS

4.0   Introduction

The previous chapter has described how the research is carried out. This chapter presents the patterns of the results and analyzes of the results which are relevant to the research questions and hypotheses formulated in chapter 1.

This chapter is divided into 4 parts, which consists of descriptive analysis, scale measurement, inferential analysis and finally the conclusion.

4.1   Descriptive Analyses

4.1.1 Respondent Demographic Profile

Table 4.1 illustrates the summary of respondent characteristics such as gender, age, level of education, franchise operating year and knowledge management implementation level.

Table 4.1: Respondent Demographic Profile

Demographic Variables	Frequency	Percentage (%)	Mean	Standard Deviation
Gender				
Male	29	28.2	1.83	0.382
Female	103	71.8		
Age				
21 to 30 years	31	30.1		
31 to 40 years	55	53.4		
41 to 50 years	16	15.5	1.87	0.696
51 to 60 years	1	1		
Level of Education				
High School	24	23.3		
Diploma	40	38.8		
Bachelor Degree	34	33.0	2.57	1.295
Master Degree	5	4.9		
Franchise Operating Years				
Less than 1 year	22	21.4		
1 to 2 years	25	24.3		
3 to 5 years	33	32.0	2.55	1.064
6 to 10 years	23	22.3		
Knowledge Management Implementation Level				
No formal Knowledge Management	17	16.5		
Initiated Knowledge Management	48	46.6		
Implemented Knowledge Management	34	33.0	2.17	0.700
* Missing 99.00	4	3.9		

Source: Developed for the Research

Table 4.1 shows the frequency and statistic of gender differences of respondents. As on the result, there are total 103 respondents involve in the questionnaire survey. There are 74 female respondents who contribute towards this survey which consist of 71.8% from the total respondents. While, male respondents contributed 28.2% of total respondents which makes up from only 29 of them. Can't deny, these phenomenon is mainly due to lack of males involvement in the education industry in Malaysia.

Age groups of respondent are divided into 4 main categories. The first categories who dominate the survey is the group age between 31-40 years old that contribute 53% of the total respondents (55 respondents), the age group of 21-30 years old has dominated 30.1% from the total of 103 respondents (31 respondents), 15.5% of the respondent are consist of age group of 41-50 years old (16 respondents); there is only 1% of respondent in the age group of 51-60 which consist of just 1 respondent.

Level of education among the respondents has been tested in this questionnaire survey. The result is shown in Table 4.1. There are 24 respondents had completed their education in at least high school level which contribute 23.3% of the total respondents. Meanwhile, 40 respondents had finished their studies with Diploma recognition that consist of 38.8% of total respondents. Furthermore, 34 respondents are Bachelor Degree holders in different courses which contributed 33% of the total respondents. There are only 5 respondents who had finished their studies in Master Degree in different prospect which consist of 4.9% of the respondents.

Generally, majority of the respondent have managed a franchise pre-school institution for more a year. There are 23 respondents who had started up the franchise business for 6-10 years (22.3% of total respondents). Following, 33 respondents have experiences in managing a franchise pre-school for 3-5 years (32% of total respondents). There are 25 respondents who have

involving in such franchise pre-school business for 1-2 years (24.3% of total respondents). There are only about 22 people out of 103 respondents have starts up such franchise operation for less than a year (21.4% of total respondents).

Base on the questionnaire survey, there are small portion of respondent who have no any formal approaches in knowledge management implementation within the organization. This group of people consists of 17 respondents out of 103 respondents which contributed about 17.2% of total respondent. While, there are 48.5% of respondents which consist of 48 respondents who have awareness of knowledge management and initiated such knowledge management program within their organization. Finally, there are 34 respondents who implemented such knowledge management practices within their organization which consist of 34.3% of total respondents.

4.1.2 Central Tendencies Measurement of Constructs

Measures of central tendencies are measures of the middle or the center of a distribution. In other words, it is used to discover the mean scores for the interval-scaled constructs. Central tendency can be measured in three ways – mean, median or mode. In addition, measure of dispersion in term of standard deviation is also being carried out in this study as well. A total of 29 questions with particular mean score and standard deviation were obtained from the SPSS output. "1, 2, 3, 4, 5, 6, 7" in the tables below indicate the Likert Scale used in evaluating the respondents level of agree and disagree. For instance, Likert scale with 1 indicates "Strongly Disagree", 2 indicates "Disagree", 3 indicates "Moderately Disagreed", 4 indicates "Neutral", 5 indicating "Moderately Agree", 6 indicates "Agree"; and 7 indicates "Strongly Disagree".

Table 4.2: Central Tendencies Measurement of Constructs: *Leadership*

Questions	1	2	3	4	5	6	7	Mean	Standard Deviation
1. Top management leadership and commitment are important in the implementation of knowledge management.	0%	0%	0%	1%	10.7%	42.7%	54.4%	6.3371	.7055
2. Leader motivating and encouraging people attitude for acquiring, utilizing and sharing knowledge in the organization.	0%	0%	0%	2.9%	10.7%	46.4%	39.8%	6.2330	.7567
3. Knowledge management is the responsibility of top management.	0%	2.9%	2.9%	9.7%	24.3%	45.6%	14.6%	5.5049	1.1278
4. Leaders' goal and direction are important in determining the success of knowledge management implementation.	0%	0%	0%	1%	12.6%	55.3%	31.1%	6.1650	.6729
5. Leader's behavior influences the effectiveness of knowledge sharing process within the organization.	0%	0%	0%	1.9%	9.7%	54.4%	34%	6.2039	.6911

Table 4.2 above presents the percentage, mean and standard deviations of responses for each of the items for the independent variable, leadership.

Overall, most of the respondents are agreed with the questionnaires statement regarding the leadership roles toward knowledge management implementation. There are about 54.4% of the respondent strongly agreed that "Top management leadership and commitment are important in the implementation of knowledge management". Meanwhile, there are 46.4% of respondents agree with the statement that "Leader motivating and encouraging people attitude for acquiring, utilizing and sharing knowledge in the organization". The statement "Knowledge management is the responsibility of top management" have some 45.6% per cent of respondent agree with such concept. Further, 55.3% of the respondents think that "Leaders' goal and direction are important in determining the success of knowledge management implementation" and they are agree with such statement. There are also about 54.4% agree that "Leader's behavior influences the effectiveness of knowledge sharing process within the organization".

The statement "Knowledge management is the responsibility of top management" has the highest standard deviation, which is 1.1278. The item with second highest standard deviation with 0.7567 score is question 2 statement "Leader motivating and encouraging people attitude for acquiring, utilizing and sharing knowledge in the organization." On the other hand, question 1 "Top management leadership and commitment are important in the implementation of knowledge management" obtain the highest mean score of 6.337. Following, the second highest score is the statement "Leader motivating and encouraging people attitude for acquiring, utilizing and sharing knowledge in the organization" which scored 6.2330.

Table 4.3: Central Tendencies Measurement of Constructs: *Knowledge Process*

Questions	1	2	3	4	5	6	7	Mean	Standard Deviation
1. Knowledge management process is important in creating a successful knowledge based organization.	0%	0%	0%	1.9%	10.7%	61.2%	26.2%	6.1165	.6612
2. Tacit knowledge (e.g. experiences, ideas or values) is valued throughout the organization and transferred among organization members.	0%	0%	0%	2.9%	14.6%	60.2%	22.3%	6.0194	.6998
3. Systematic process is used in gathering, creating, storing and application of key knowledge assets.	0%	2.9%	2.9%	0%	21.4%	48.5%	30.1%	6.0574	.7154
4. A well defined knowledge management process is important to the organization so that it knows what it must know in order to achieve what it wants to do.	0%	0%	0%	0%	16.5%	56.3%	27.2%	6.1068	.6554
5. Knowledge is verified and organized in database.	1%	1%	1%	1.9%	26.2%	54.4%	15.5%	5.7864	.8360

The percentage, mean, and standard deviations of responses for each of the questions for independent variable - knowledge process are shown in Table 4.3.

There are about 61.2% of the respondent gave the respond of "agree" toward the 1st question (Knowledge management process is important in creating a successful knowledge based organization.) regarding knowledge process in the questionnaire. Some 60.2% of the respondents have agreed with the following statement "Tacit knowledge is valued throughout the organization and transferred among organization members" as well. Further, the statement "Systematic process is used in gathering, creating, storing and application of key knowledge assets" has gain majority consensus from the respondents as well. About 48.5% of respondent is agreed with such statement. Besides, 56.3% of the respondents also agree that a well defined knowledge management process is important to the organization so that it knows what it must know in order to achieve what it wants to do. There is about 54.4% of the respondent rates the statement with "Agree" toward "Knowledge is verified and organized in database."

The highest standard deviation has scored 0.8360. The statement is "Knowledge is verified and organized in database". "Systematic process is used in gathering, creating, storing and application of key knowledge assets" has the second highest means score with 0.7154 among the statement of knowledge process inside the questionnaire. Regarding the mean score, the statement "Knowledge management process is important in creating a successful knowledge based organization is the highest score the knowledge process statement. Meanwhile, the statement that has the second highest is question 4(A well defined knowledge management process is important to the organization so that it knows what it must know in order to achieve what it wants to do.). The mean score is 6.1068.

Table 4.4: Central Tendencies Measurement of Constructs: *Technology Infrastructure*

Questions	1	2	3	4	5	6	7	Mean	Standard Deviation
1. Corporate hardware and operating systems to support future development of knowledge management application.	0%	0%	0%	3.9%	20.4%	55.3%	20.4%	5.9223	.7500
2. Computer network (e.g. Internet, intranet) is important to enhance the effectiveness and efficiency of the knowledge sharing process.	0%	0%	0%	0%	16.5%	43.7%	39.8%	6.2330	.7168
3. User friendliness of technology infrastructure enhances effectiveness of knowledge management.	0%	0%	0%	2.9%	17.5%	46.6%	33%	6.0971	.7861
4. Technology infrastructure allows us to better manage different kind of knowledge.	0%	0%	0%	3.9%	9.7%	53.4%	33%	6.1553	.7509
5. Usability of technology infrastructure enhances effectiveness of knowledge management.	0%	0%	0%	1.9%	19.4%	47.6%	31.1%	6.0777	.7629

Table 4.4 show the percentage, mean and standard deviations of the responses for each of the items for independent variable - technology infrastructure.

At this part, there are some 55.3% of the respondents agreed with the statement inside the technology infrastructure questionnaire that corporate hardware and operating systems to support future development of knowledge management application. Furthermore, some 43.7% of respondent also respond with the status of "Agree" toward the statement "Computer network is important to enhance the effectiveness and efficiency of the knowledge sharing process." The following statement about technology infrastructure stated that "User friendliness of technology infrastructure enhances effectiveness of knowledge management". It is being accepted by the respondent by the majority respond with the status "Agree". Some 46.6% of the respondent also agreed with the statement that "Technology infrastructure allows us to better manage different kind of knowledge". Nevertheless, usability of technology infrastructure enhances effectiveness of knowledge management which being included in the last statement of technology infrastructure also gain majority consensus from the respondent which about 47.6% of the respondent agreed with the statement.

"User friendliness of technology infrastructure enhances effectiveness of knowledge management" is the statement with the highest score in standard deviation with 0.7861. Meanwhile, the second highest is the statement "Usability of technology infrastructure enhances effectiveness of knowledge management" which score 0.7629. Regarding the mean score, the statement "Computer network is important to enhance the effectiveness and efficiency of the knowledge sharing process" has the highest mean score of 6.2330. The second highest score is the statement "Technology infrastructure allows us to better manage different kind of knowledge" which scored 6.1553.

Table 4.5: Central Tendencies Measurement of Constructs: *Culture and Organizational Structure*

Questions	1	2	3	4	5	6	7	Mean	Standard Deviation
1. It is important for members to obtain the value and advantages of knowledge.	0%	0%	0%	0%	24.3%	50.5%	25.2%	6.0097	.0707
2. Openness between employees is important for implementing knowledge management.	0%	0%	0%	0%	25.2%	45.6%	29.1%	6.0388	.7399
3. Reformulate any rules and procedures that obstruct the implementation of knowledge management.	0%	0%	0%	1.9%	23.3%	61.2%	13.6%	5.8641	.6575
4. Minimization of organizational level for effective knowledge management.	0%	0%	0%	0%	39.8%	43.7%	16.5%	5.7670	.7168
5. Organization provides a working environment where people are encouraged to share ideas, experiences, successes and failures.	0%	0%	0%	1%	11.7%	56.3%	31.3%	6.1758	.6631

Table 4.5 above presents the percentage, mean and standard deviations for the responses of questions for independent variable - culture and organizational structure.

There are about 50.5% of the respondent gave the respond of "agree" toward the 1st question (It is important for members to obtain the value and advantages of knowledge.). Meanwhile, the following statement have about 45.6% responded with the status "Agree" toward the statement "Openness between employees is important for implementing knowledge management." Following, there are 61.2% of the respondent agreed with the statement cited that "Reformulate any rules and procedures that obstruct the implementation of knowledge management". Some 43.7% also agreed of the statement "Minimization of organizational level for effective knowledge management". Nevertheless, the last statement of culture and structure stated that "Organization provides a working environment where people are encouraged to share ideas, experiences, successes and failures" also gain majority consensus from the respondent which about 56.3% of the respondent agreed with the statement.

The statement "Openness between employees is important for implementing knowledge management" is the highest of the standard deviation which scored 0.7399. Further, the second highest score of standard deviation is about 0.7168 scored by the statement "Minimization of organizational level for effective knowledge management." On the other hand, the highest mean score the statement "Organization provides a working environment where people are encouraged to share ideas, experiences, successes and failures." Following, the second highest score is the statement "Openness between employees is important for implementing knowledge management" that consist of 6.0388 mean score.

Table 4.6: Central Tendencies Measurement of Constructs: *Human Capital*

Questions	1	2	3	4	5	6	7	Mean	Standard Deviation
1. Involvement and commitment from employees toward knowledge management are important.	0%	0%	0%	1.9%	14.6%	47.6%	35.9%	6.1748	.7465
2. Employee's opinions and suggestions are not necessary in the entire knowledge management program.	18.4%	28.2%	9.7%	13.6%	20.4%	6.8%	2.9%	3.2136	1.7413
3. Continuous participation from employees in new learning opportunities such as conference, university course, training to create new organizational knowledge.	0%	0%	0%	1%	23.3%	56.3%	20.4%	5.9612	.6848
4. Employees are important because they create organizational knowledge, making knowledge work, and create value in organization.	0%	0%	0%	3.9%	6.8%	63.1%	26.2%	6.1165	.6903
5. Employees are promoted to the higher position for their ongoing contributions.	0%	0%	0%	5.8%	15.5%	54.5%	24.3%	5.9709	.7977

The percentage, mean, and standard deviations of responses for each of the items for *human capital* are shown in Table 4.6.

There are about 47.6% of the respondent gave the respond of "agree" toward the 1st question (Involvement and commitment from employees toward knowledge management are important). Meanwhile, the following statement have about 28.2% responded with the status "Disagree" toward the statement "Employee's opinions and suggestions are not necessary in the entire knowledge management. In this case, it is a reverse option question where the answer expected from the respondent is the disagreement from the respondents. Following, there are 56.3% of the respondent agreed with the statement cited that "Continuous participation from employees in new learning opportunities such as conference, university course, training to create new organizational knowledge." Furthermore, 63.1% of the respondents also agree with the statement "Employees are important because they create organizational knowledge, making knowledge work, and create value in organization." There are about 54.5% of the respondents agreed that employees are promoted to the higher position for their ongoing contributions.

The statement "Employee's opinions and suggestions are not necessary in the entire knowledge management program" is the highest score of the standard deviation (1.7413). The second highest score of standard deviation is the statement "Employees are promoted to the higher position for their ongoing contributions" which scored 0.7977. On the other hand, the highest mean score is the statement "Involvement and commitment from employees toward knowledge management are important" that score 6.1748 of the mean score. While, the second highest of the mean score (6.1165) is the statement "Employees are important because they create organizational knowledge, making knowledge work, and create value in organization".

Table 4.7: Central Tendencies Measurement of Constructs: *Knowledge Management Implementation*

Questions	1	2	3	4	5	6	7	Mean	Standard Deviation
1. I'm interested with the implementation of knowledge management.	0%	0%	0%	5.8%	16.5%	60.2%	17.5%	5.8937	.7529
2. I believe that knowledge management program can contribute to our organization products or services competitiveness.	18.4%	28.2%	9.7%	3.9%	13.6%	55.3%	27.2%	6.0583	.7518
3. Organization realized the importance of organizational knowledge assets (copyright, patents), thus, there will be greater emphasis on knowledge management in future.	0%	2.9%	2.9%	1%	17.5%	50.5%	31.1%	6.1165	.7181
4. I found that knowledge management program fits the organization and industry.	0%	0%	0%	3.9%	20.4%	59.2%	16.5%	5.8835	.7181

The percentage, mean, and standard deviations of responses for each of the items for *knowledge management implementation* are shown in Table 4.7.

In the 1st question of knowledge management implementation, there are about 60.2% of the respondent gave the respond that they are interested with the implementation of knowledge management. Meanwhile, 55.3% of the respondents responded that they "agree" knowledge management program can contribute to the organization products or services competitiveness. Furthermore, the statement of question 3 stated that there are some 50.5% of the respondents Organization realized the importance of organizational knowledge assets thus; there will be greater emphasis on knowledge management in future. Nevertheless, the question 4 statement that emphasized on fitness on the knowledge management into the industry and organization (I found that knowledge management program fits the organization and industry) have received majority agreement of 59.2% that knowledge management fit respondents' organization or industry.

The highest standard deviation score is the 1st question "I'm interested with the implementation of knowledge management" that has 0.7529 score. While, the second highest score of standard deviation is 2nd question "I believe that knowledge management program can contribute to our organization products or services competitiveness." On the other hand, the statement "Organization realized the importance of organizational knowledge assets (copyright, patents), thus, there will be greater emphasis on knowledge management in future" has scored the highest mean among the statements in the knowledge management implementation part. The second highest score is the statement "I believe that knowledge management program can contribute to our organization products or services competitiveness". The mean score is 6.0583.

4.2   Reliability Analysis

The questionnaire used to collect data was tested by pilot test to ensure its high reliability and validity. According to Zikmund et al. (2003), pilot test is any small-scale exploratory research technique that uses sampling but does not apply to rigorous standard. It is conducted before actual test to ensure that respondent has no problem in answering the question and have followed the instruction correctly. To conduct pilot test, thirty set of questionnaires were distributed to the targeted respondents. Feedback was gathered on the clarity of the information and statement on how the questionnaires can be improved. Then, Cronbach's alpha reliability test was used to analyze the result of pilot test. Lastly, the full scale of the research will be implemented once each of the constructs meets the minimum requirement of 0.60.

Table 4.8: Reliability Test

Variables	N of Items	Cronbach's Alpha
KM Implementation	4	0.748
Leadership	5	0.775
Knowledge Process	5	0.755
Technology Infrastructure	5	0.894
Culture and Organizational Structure	5	0.804
Human Capital	5	0.730

Source: Developed for the Research

Table 4.8 shows the result of reliability analysis. Generally, the five independent variables showed a good reliability. Among the five independent variables that measures knowledge management, technology infrastructure scored the highest value of Cronbach's alpha which is 0.894, representing a very good reliability. Culture and structure obtained a Cronbach's alpha of 0.804, followed by leadership (0.775), knowledge process (0.755), and human capital (0.730). Furthermore, the dependent variable, knowledge management implementation scored a Cronbach's alpha of 0.748, indicating a good reliability. Since all the variables showed Cronbach's alpha above

0.70, it can be concluded that the overall reliability of questionnaire used in this study is considered good.

4.3   Inferential Analyses

4.3.1 Factor Analysis

Factor analysis with principal component method was employed by using varimax rotation to examine the underlying structure and identify the multicollinearity between variables. A total of 29 items were used to measure 5 independent variables (leadership, knowledge process, technology infrastructure, culture and organizational structure and human capital) and dependent variable (knowledge management implementation). Moreover, any underlying components for each variable were examined by varimax rotation.

4.3.1.1 Factor Analysis on Independent Variables

Table 4.9: Factor Analysis on Organizational Factors (Independent Variables)

Independent Variable	Factor Loading					
	1	2	3	4	5	6
Leadership						
Leadership and commitment	**.636**	-.486	-.092	-.065	-.033	.139
Leader motivating people	**.688**	-.469	-.021	-.123	-.038	-.006
Leader responsibility	**.344**	-.197	.545	-.213	.051	.182
Leader goal and direction	**.619**	-.439	-.077	-.023	.016	-.259
Leader behavior	**.606**	-.436	-.142	.213	-.007	-.130
Knowledge Process						
Knowledge management process	**.431**	-.149	.036	.371	.339	-.209
Tacit knowledge	**.358**	.293	.184	.145	.442	.336
Systematic process	**.407**	.276	-.088	-.060	.520	-.338
Well defined KM	**.703**	-.046	-.116	-.183	.138	.228
Knowledge verify and organize in database	**.301**	-.144	.452	-.206	.383	-.043

Independent Variable	Factor Loading					
	1	2	3	4	5	6
Technology Infrastructure						
Corporate hardware and operating system	**.674**	.157	.134	-.293	.045	-.195
Computer network	**.754**	.142	-.077	-.273	.214	.006
User friendliness	**.722**	.080	.017	-.373	-.142	-.008
Better managing knowledge	**.692**	.330	-.067	-.214	-.298	-.026
Usability	**.684**	.149	.047	-.268	-.320	-.162
Culture and Organizational Structure						
Obtain value and advantage of knowledge	**.612**	-.251	-.089	.366	-.152	-.050
Openness between employee	**.571**	.169	.035	.236	.204	.122
Reformulate rules	**.538**	.231	.321	.323	-.198	-.228
Minimization of organizational level	**.419**	.018	.501	.198	-.009	.048
Working environment	**.589**	.195	-.211	.029	-.082	.561

Independent Variable	Factor Loading					
	1	2	3	4	5	6
Human Capital						
Employee involvement and commitment	**.671**	-.270	-.151	.026	-.082	.192
Opinion	**.280**	.088	-.677	.010	.326	-.032
Employee learning	**.701**	.327	-.062	.195	-.200	-.186
Employee create knowledge, making knowledge work and create value	**.596**	.438	-.097	.116	-.113	-.056
Employee promotion	**.521**	.062	.107	.446	-.119	.174
Eigenvalues	**8.461**	1.835	1.536	1.351	1.302	1.019
Total Variance (62.017%)	**33.845**	7.340	6.146	5.404	5.207	4.076
KMO	0.861					
Approximate Chi-square	1107.093*					

*p value < 0.01

Source : Developed for the Research

Table 4.9 showed a five-factor loading with Eigenvalues greater than 1.0 for the five domains of organizational factors (leadership, knowledge process, technology infrastructure, culture and organizational structure and human capital) with total variance explained by 62.017% of the total variance. The total variance of factor 1 was 33.845%, followed by factor 2 = 7.340%, factor 3 = 6.146%, factor 4 = 5.404%, factor 5= 5.207%, and factor 6 = 4.076%. The KMO measure of the sampling adequacy was 0.861. A value of close to 1 indicates that the patterns of correlations are relatively

compact and so factor analysis could yield distinct and reliable factors. Hence, KMO of 0.861 represent great value and sufficient correlations. The Barlett's Test of Sphericity was significant (Chi-square = 1107.093, $p < 0.01$). This indicates that there are some relationships between items.

4.3.1.2 Factor Analysis on Dependent Variable

Table 4.10: Factor Analysis on Implementation of KM (Dependent Variable)

Dependent Variable	Factor Loading
I'm interested with the implementation of knowledge management.	.741
I believe that knowledge management program can contribute to our organization products or services competitiveness.	.895
Organization realized the importance of organizational knowledge assets (copyright, patents), thus, there will be greater emphasis on knowledge management in future.	.843
I found that knowledge management program fits the organization and industry.	.724
Eigenvalues	2.585
Total Variance	64.616
KMO	0.756
Approximate Chi-square	150.137*

*p value < 0.01

Source: Developed for the Research

Table 4.10 showed a total of four items used to assess dependent v ariable – knowledge management implementation were extracted into one factor with Eigenvalues of 2.585. The total variance of factor loading was explained by 64.616%. This means that all four items are significantly explain the 64.616% of variance in dependent variable. The KMO measure of the sampling adequacy was 0.756 indicating sufficient intercorrelations. The Bartlett's Test of Sphericity was significant. (Chi-square = 150.137, p < 0.01) This indicates that there are some relationships between items.

As a conclusion, the result of factor analysis indicates that the questionnaire has a very good fitness of model. This means that every question has an interrelationship and fit into the variable. Hence, it further strengthens methodology used in the study and provides a valid statistical result for the study.

4.3.2 Pearson's Correlation Analysis

Table 4.11: Pearson's Correlation Analysis

	LE	KP	TI	C&OS	HC	KMI
Leadership(LE)	1					
Knowledge Process(KP)	.507*	1				
Technology Infrastructure(TI)	.563*	.555*	1			
Culture and Organization Structure(C&OS)	.536*	.537*	.610*	1		
Human Capital (HC)	.430*	.502*	.582*	.582*	1	
Knowledge Management Implementation (KMI)	.549*	.543*	.509*	.582*	.538*	1

* p-value < 0.01

Source: Developed for the Research

In this table, all independent variables were positively correlated with knowledge management implementation. All independent variables, namely, leadership (r = 0.549, p < 0.01), knowledge process (r = 0.543, p < 0.01), technology infrastructure (r = 0.509, p < 0.01), culture and organization structure (r = 0.582, p < 0.01), human capital (r = 0.538, p < 0.01) indicated a moderate relationship with dependent variable - knowledge management implementation. Therefore, we can conclude that these 5 variables had a significant impact on Knowledge Management Implementation.

The leadership variable has a 0.549 correlation with the knowledge management implementation variable. This indicated a moderate positive relationship between leadership and knowledge management implementation. Thus, when perceived leadership is high, degree of knowledge management

implementation is high. Besides, the relationship between leadership and knowledge management implementation is significant. It is because the p-value (0.000) is less than alpha value (0.01). Hence, Ho was rejected.

The knowledge process variable has a 0.543 correlation with the knowledge management implementation variable. This indicated a moderate positive relationship between knowledge process and knowledge management implementation. Thus, when perceived knowledge process is high, degree of knowledge management implementation is also high. Besides, the relationship between knowledge process and knowledge management implementation is significant. It is because the p-value (0.000) is less than alpha value (0.01). Hence, Ho was rejected.

The technology infrastructure variable has a 0.509 correlation with the knowledge management implementation variable. This indicated a moderate positive relationship between technology infrastructure and knowledge management implementation. Thus, when perceived technology infrastructure is high, degree of knowledge management implementation is high. Besides, the relationship between technology infrastructure and knowledge management implementation is significant. It is because the p-value (0.000) is less than alpha value (0.01). Hence, Ho was rejected.

The culture and organizational structure variable has a 0.582 correlation with the knowledge management implementation variable. This indicated a moderate positive relationship between culture and organizational structure and knowledge management implementation. Thus, when perceived culture and organizational structure is high, degree of knowledge management implementation is also high. Besides, the relationship between culture and organizational structure and knowledge management implementation is significant because the p-value (0.000) is less than alpha value (0.01). Hence, Ho was rejected.

The human capital variable has a 0.538 correlation with the knowledge management implementation variable. This indicated a moderate positive relationship between human capital and knowledge management implementation. Thus, when perceived human capital is high, degree of knowledge management implementation is high. Besides, the relationship between human capital and knowledge management implementation is significant. It is because the p-value (0.000) is less than alpha value (0.01). Hence, Ho was rejected.

4.3.3 Multiple Regression Analysis

Table 4.12: Multiple Regression Analysis

Independent Variables	Unstandardized Coefficients	Standardized Coefficients	t-value	Sig.
	B	Beta		
Constant	.001		.002	.998
Leadership	.242	.235	2.477	.015
Knowledge Process	.264	.194	2.021	.046
Technology Infrastructure	.015	.015	.146	.884
Culture and Organizational Structure	.286	.226	2.182	.032
Human Capital	.193	.200	2.046	.043
R^2	.481			
Adjusted R^2	.454			
F	17.985**			

Source: Developed for the research

Table 4.12 above shows that the correlation coefficient, R= 0.694, means that there is a positive correlation between the five independent variables and dependent variable. The value of R Square is 0.481 which indicates that 48.1% of the variance in the dependent variable (knowledge management implementation) is explained by the five independent variables (culture and organizational structure, human capital, leadership, knowledge process and technology infrastructure). However, it is still leaves 51.9% unexplained in this study. In other words, there are other additional variables that are important in the implementation of knowledge management that have not been considered in this study.

Furthermore, according to table above, p- value (Sig. 0.000) is less than alpha value 0.05, thus, the F- statistic which equals to 17.985 is significant. We can say that this model is a good descriptor for the relation between the dependent variable and predictors. Therefore, the independent variables (leadership, culture and organizational structure, knowledge process, human capital and technology infrastructure) are significantly explaining the variance in the knowledge management implementation. Since the p- value is less than 0.05 and is in the reject region, there H_0 is rejected.

In addition, the four independent variables (leadership, knowledge process, culture and organizational structure and human capital) are significant to predict the dependent variable (knowledge management implementation) in this study because their p- values (Sig.) are less than alpha value 0.05. However, the independent variable (technology infrastructure) is not significantly predicting the dependent variable (knowledge management implementation). This is because their p- values (Sig.) are more than the alpha value 0.05.

Therefore, a multiple linear regression is formed by using the data from the column headed "B" shown in the table above. The regression equation is as below:

Knowledge management implementation
= 0.001 + 0.242 leadership + 0.264 knowledge processes + 0.015 technology infrastructure + 0.286 culture and organizational structure + 0.193 human capital

From the table above, culture and organizational structure are the predictor variables that contribute the highest to the variation of the dependent variable (knowledge management implementation) because it has the highest Beta coefficient which is 0.286 if compared to other predictor variables.

Table 4.13: Multicollinearity

Model	Collinearity Statistics	
	Tolerance	VIF
1 Ledership	.595	1.679
Human Capital	.561	1.782
Culture and Organizational Structure	.497	2.012
Knowledge Process	.583	1.714
Technology Infrastructure	.475	2.105

Source: Developed for the Research

From the table, leadership has a highest tolerance value of 0.595, followed by knowledge process = 0.583, human capital = 0.561, culture and organizational structure = 0.497 and technology infrastructure = 0.475. The low tolerance value indicates a good collinearity. Besides, the highest variance inflation factor (VIF) value is technology infrastructure =2.105, followed by culture and organizational

structure = 2.012, human capital = 1.782, knowledge process = 1.714, and leadership = 1.679. The VIF value of < 10 indicates good multicollinearity. Overall, the results indicates that there every independent variable is highly independent and not affected by other variables.

4.4   Conclusion

All of the hypotheses are tested in this chapter. The next chapter will be carried out on the discussion and interpretation of the results, together with the implications, limitations and recommendations for the further research.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0   Introduction

The previous chapter presents the research results and discussion. This chapter concludes this thesis. Section 5.1 summarizes the statistical analyzes. Section 5.2 outlined the discussions of major findings. Next, section 5.3 describes the managerial implications of the study. In section 5.4, limitations of this study are discussed. Section 5.5 offers the recommendation for future research. Finally, section 5.6 provides an overall conclusion of the entire research project.

5.1   Summary of Statistical Analyses

5.1.1 Descriptive analysis

5.1.1.1 Respondent Demographic Profile

There are 74 female respondents (71.8% of the total respondents) contribute toward this survey. While, male respondents are contribute 28.2% of total respondents with only 29 male's respondents.

Age groups of respondent are divided into four main categories. The first categories is the group age of 31-40 years old which contribute 53% of the total respondents (55 respondents), the age group of 21-30 years old has dominated 30.1% from the total of 103 respondents (31

respondents), 15.5% of the respondent are consist of age group of 41-50 years old (16 respondents); there is only 1% of respondent in the age group of 51-60 that just consist of 1 respondent.

There are 24 respondents (23.3%) had completed their education in at least high school level. Meanwhile, 40 respondents (38.8%) had finished their studies with Diploma recognition. Furthermore, 34 respondents (33%) are Bachelor Degree holders. There are only five respondents (4.9%) who had finished their studies in Master Degree.

There are 23 respondents (22.3% of the total respondents) had started up the franchise business for 6-10 years Following, 33 respondents (32% of the total respondents) have experiences in managing a franchise pre-school for 3-5 years. There are 25 respondents (24.3% of the total respondents) who have involving in such franchise preschool business for 1 - 2 years. There are only about 22 people (21.4%) having starts up such franchise operation for less than a year.

There are 17 respondents (17.2% of the total respondents) who have no any formal approaches in knowledge management implementation within the organization. While, there are 48 respondents (48.5% of the total respondents) who have awareness of knowledge management and initiated such knowledge management program within their organization. Finally, there are 34 respondents (34.3% of the total respondents) who implemented such knowledge management practices within their organization.

5.1.1.2 Central Tendencies Measurements of Constructs

A total of twenty nine questions with particular mean score were obtained from the SPSS output. Base on the analysis, majority of the respondents are agreed with the questions regarding the independent variables (leadership, knowledge process, technology infrastructure, culture and organizational culture; and human capital) roles toward knowledge management implementation. The responses about the degree of agreement from the respondents were concentrating on "Moderately Agree", "Agree", and "strongly Agreement". There was only one of the statements in the questionnaire who have received majority of disagreement from the respondents. Mainly, this is under expectation of the researchers who try to reverse the way of the statement presentation. The statement is "Employee's opinions and suggestions are not necessary in the entire knowledge management program." Besides, the analysis of mean and standard deviation of each statement in the questionnaire is being carry out in the analysis as well.

5.1.2 Reliability Analysis

From the result of reliability test, technology infrastructure scored the highest value of Cronbach's alpha which is 0.894, followed by culture and structure (0.804), leadership (0.775), knowledge process (0.755), and human capital (0.730). Also, the dependent variable, implementation of knowledge management scored a Cronbach's alpha of 0.748.

5.1.3 Inferential Analyses

5.1.3.1 Factor Analysis

From the result of factor analysis, the measure of independent variables showed that five-factor loading with Eigenvalues greater than 1.0 for the five domains of organizational factors (leadership, knowledge process, technology infrastructure, culture and organizational structure and human capital) with total variance explained by 62.017% of the total variance. The KMO measure of the sampling adequacy was 0.861 and the Barlett's Test of Sphericity was significant (Chi-square = 1107.093, $p < 0.01$). This indicates that there are some relationships between items. Further, the measure of dependent variable showed a total of four items used to assess implementation of knowledge management were extracted into one factor with Eigenvalues of 2.585 and total variance of the 64.616%. The KMO measure of the sampling adequacy was 0.756 and the Bartlett's Test of Sphericity was significant. (Chi-square = 150.137, $p < 0.01$) This indicates that there are some relationships between items.

5.1.3.2 Pearson's Correlation Analysis

From the result of Pearson's Correlation Analysis, there are moderate positive relationship between the five independent variables and the dependent variable. Hence, when each of the independent variable is high, the dependent variable is high as well.

5.3.1.3 Multiple Regression Analysis

Besides, from the result of multiple regression analysis, leadership shows the greatest contribution to the variation of the dependent variable (knowledge management implementation) because it has the highest Beta coefficient which is 0.235 if compared to other predictor variables. Conversely, technology infrastructure shows the least contribution to the variation of the dependent variable because it has the lowest Beta coefficient which is 0.015. Furthermore, the four independent variables (leadership, knowledge process, culture and organizational structure and human capital management) are found significantly impact the dependent variable. For the multicollinearity analysis, both VIF and tolerance value indicated that there is good multicollinearity.

5.2   Discussion of Major Findings

This study investigates the influence of 5 independent variables (leadership, knowledge process, cultures and organizational structure, technology infrastructures, and human capital) on the implementation of knowledge management among franchised pre-school education institutions in Malaysia. Literature suggests that such 5 independent variables have result in successful implementation of knowledge management (Wong, 2005; Chong, 2005; Chong & Choi, 2005; Moffett, McAdam, & Parkinson, 2003).

In the result of the study, it shows that 4 independent variables (leadership, knowledge process, cultures and organizational structure, and human capital) have significant relationship with the implementation of knowledge management. However, base on the Multiple Regression Analysis one of the independent variable (technology infrastructure) infrastructures is not significantly predicting the implementation of knowledge management when incorporating other variables ($p > 0.05$).

The result obtained is consistent with the findings in the past researches. According to the quantitative and statistical analysis conducted by Wong (2005), technology infrastructure was ranked to be less important, 8th among 11 variables for knowledge management implementation. It is indisputable that technology infrastructure can facilitate knowledge management, but it should not be seen as an absolute answer to knowledge management, since it is just a tool. This is supported by (Chase, 1997) whereby successful knowledge management implementation was mainly linked to "soft" issues, such as organizational culture and people, which is comparable with result in this study. Further, technology was being viewed as less important because majority of preschool educational institution associates has less rely on technology. The importance of technology is minimal in preschool as compared to primary and secondary school.

Meanwhile, leadership is ranked to be the most important factors for the successful implementation of knowledge management in the study conducted by Siong Choy Chong in year 2005 and that of Wong in year 2005. As leadership plays an important role in ensuring the successful implementation of knowledge management, top management should devote themselves to promote a corporate mindset that emphasis co-operation and knowledge sharing throughout the organization. Skyrme (1999) further pointed out that a good score in leadership indicates that knowledge is seen as strategic and its contribution to the business is articulated.

Furthermore, According to Wong (2005), knowledge processes such as knowledge acquisition, organizing, sharing and application are what lie in heart of knowledge management. Thus, in order to ensure the success of knowledge management implementation, a systematic and well defined knowledge process should be organized in a proper manner.

Besides, a "knowledge-friendly culture" is one of the top three factors among the 11 factors in the study of Wong as well. This showed that culture is a significant factor in implementing knowledge management. According to the findings of Chong and Wong (2007), a knowledge sharing culture is one of the most important elements that need to be understood before implementing any new strategy in their organization. Several studies discuss about the role of organizational structure. Willem et al. (2009) study showed that in contrast to previous studies (Chen et al., 2007), hierarchy and centralization had no adverse effect on knowledge sharing per se. However, team-based structures and horizontal coordination resulted in higher knowledge sharing which is crucial for knowledge management.

Human capital (training and education, Human Resource Management) has moderate influence over the implementation of knowledge management in the study by Wong (2005). It is true that human capital is the sole originators of knowledge. As supported by Davenport and Volpel (2001), "managing knowledge is managing people; managing people is managing knowledge". However, researcher Chong (2005) has pointed out that knowledge management is still in the introductory stage in Malaysia. Management may still unclear on the type of training that is suitable for knowledge management implementation (Chong, 2005). In addition, they may lack of experience on the importance of effective Human Resource Management toward knowledge management implementation.

5.3   Implications of the Study

5.3.1   Managerial Implication

Generally, the result of this study has several implications for the implementation of knowledge management within franchise preschool education institution. First the result indicates that leadership, knowledge process, cultures and structure, and human capital have significant impact on the implementation of knowledge management in the organization. Particularly, the factors as discuss should aggressively develop and pay more emphasis on such variables in the whole process of knowledge management implementation. These may enhance the progress of knowledge management implementation and thus create more effectiveness toward the organization.

The proposed frameworks would be use as references for those firms in pre-implementing stage of knowledge management. Manager and practitioner may thus identify those essential issues and factors effectively in planning and developing knowledge management (Migdadi, 2009). Since many of the franchise preschool educational institutions had just started to establish knowledge management program, such research paper may provide a basis for them to evaluate their entire knowledge management practices (Migdadi, 2009). Manager and practitioner may use this study as a performance measurement tool towards the activities throughout each phases of implementation process. This study may serve as an ideal benchmark for them in measuring what exactly a knowledge based organization should look like. Meanwhile, for those firms who still lack of initiative to implement knowledge management, such research may provide better insights into the organizational factors for implementing knowledge management.

Secondly, the result of the study indicates that each of the proposed variables has significant interrelationship between each variables. This means that 5 critical factors are interdependent in determine the success of knowledge management implementation. Manager and practitioner should understand the effect of correlation between each factor and take them into consideration before implementing knowledge management. Each of the factors needs to be equally emphasis in order to achieve desire outcome from the implementation of knowledge management within the organization. As supported by the researcher Kavindra Mathi (2004), the success of the initiative is ultimately determined by sufficient combination of the above-mentioned factors and their incorporation within the line organization.

5.4   Limitation of the Study

This study has some limitations. The most prominent limitation is that the scope for this study is limited to only one company which is 3Q MRC JUNIORs in Malaysia. Although 3Q MRC JUNIORs has its 139 franchisees operate within every single part of Malaysia, yet it could not generalize on all franchised preschool education institutions in Malaysia precisely because there are number of identical businesses out there such as Smart Reader, Typhoon Kids and so on which are not included in this study. The study should cover more franchised preschool education institutions or even other industry to further investigate the organizational factors on knowledge management implementation.

Besides that, there is limitation pertaining to bias in the questionnaires. The self-administered questionnaires consist of some difficult terms that the respondents did not understand and therefore they may randomly select an answer which caused the results to be misinterpreted. For instance, terms like knowledge management, tacit and explicit knowledge are those that not understandable by respondents who has no

or little business knowledge foundation or background. In addition, there are also likely that some respondents intentionally distort their opinion on some sensitive issues that they did not want to disclose to others. For example, the fixed-alternative nature of the level of education may lead to inflated answer chosen by respondents who did not wish to reveal their low education level.

On the other hand, there are several factors eliminated from the research because this is a study developed mainly for academic purpose and partly fulfillment of final year project requirement. Likewise, researchers are not encouraged to incorporate too many factors as proposed by other past researchers (Wong, 2005; Chong, 2005; Chong et al., 2005; Moffett et al., 2003). Perhaps this is the reason why there is 51.9% of the variance in the dependent variable (implementation of knowledge management) is unexplained by the five independent variables (culture and organizational structure, human capital management, leadership, knowledge process and technology infrastructure).

In addition, the data collection in this study is simply based on quantitative methods. However, there are lots of researchers proposed that multi-method research (a combination of qualitative and quantitative data collection method) can lead to more reliable and accurate research results although quantitative approach is proved suitable for knowledge management research in the past studies. According to Mahmoud Migdadi (2009), a combination use of quantitative and qualitative methods is an important direction for future work in proving the knowledge management outcomes.

Lastly, these limitations are acknowledged but they do not detract from the significance of findings in this study. Further, it merely provides platforms for future research.

5.5   Recommendations for Future Research

The current finding of this study has indicated some limitations throughout the research process. Some of the limitation for this study is controllable and manageable. Researchers have figured out that there are spaces for improvement and avenues to further extending this study in future.

First of all, researchers should simplify and avoid sensitive issues in the development of questionnaires. This is one of the ways to obtain accurate results. Besides, future study should include those target samples from different franchise preschool educational institutions or even other industries (Chong, 2005). With such method, the result gather from the research can be generalized and the success factors presented can be correlated with all business organization.

Secondly, there are 5 factors that influence the implementation of knowledge management which have been adopted into the study from various research papers by other researchers. The chosen variables are the most common variable studies among the researchers regarding knowledge management implementation. As base on the Multiple Regression Analysis, there are still some other important variables which being forgone in this studies that may significantly explain remaining 51.9% of the variance in the knowledge management implementation. It would be interesting to expand this study by investigating the complete set of factors that proposed by majority of the researchers (Wong, 2005; Chong, 2005; Chong et al, 2005; Moffett et al., 2003). These would significantly increase the reliability and comprehensiveness of the study toward the knowledge management implementation factors. Moreover, it can provide clearer information on the current knowledge management trend in Malaysia as well as the interrelationship between each variable and toward knowledge management implementation.

To improve the theoretical framework and the methodological approach, both qualitative and quantitative analyzes are recommended. Qualitative methods such as focus group and observation allow researcher to gain a closer insights into some human related variables. For instance, leadership and culture.

5.6   Conclusion

This chapter concludes the study with the summary of statistical analyzes. Discussion on findings of this study is presented to meet objectives as well as hypotheses of this study. This chapter ends with implications, limitations of the study and the further recommendation for future researches.

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APPENDIX A: Questionnaire Survey

UNIVERSITI TUNKU ABDUL RAHMAN (UTAR)
FACULTY OF BUSINESS AND FINANCE
BACHELOR OF BUSINESS ADMINISTRATION (HONS)
ACADEMIC YEAR 2010/2011
YEAR 3

Dear Participant,

We are 3rd year students of Bachelor of Business Administration in UTAR. This questionnaire is designed to study the "**Organizational Factors for the Implementation of Knowledge Management in Franchised Preschool Educational Institutions".** This survey is part of the research project which will be submitted in partial fulfillment of the requirement of our business degree.

Your participation will greatly contribute to the success of the survey. We deeply appreciate your participation. It will only take about 15 minutes to complete this questionnaire. The information provided will be treated as confidential information and solely for the academic purpose.

Name of Student:	Student ID:
1. Chu Chee Howe	08ABB05855
2. Lim Xi Shun	08ABB05726
3. Lim Xtn Yi	08ABB06331
4. See Chia Hui	08ABB06481
5. Yeoh Boon Pien	08ABB06327

Section A: Respondent Profile

Please put a tick mark ☑ in the appropriate box wherever required.

1. Gender

□ Male

□ Female

2. Age (Years)

□ 21 – 30

□ 31 – 40

□ 41 – 50

□ 51 – 60

3. Level of Education

□ High School

□ Diploma

□ Bachelor Degree

□ Master Degree

4. Number of Franchise Operating Years

□ Less than 1

□ 1-2

□ 3-5

□ 6-10

5. Please put a tick mark ☑ in the appropriate box wherever required.

Which of the following best fits your organization in term of Knowledge Management?

☐ There is no formal Knowledge Management initiative exists within the organization.

☐ There is an awareness of Knowledge Management, management has recently initiated a program, but there are no visible results yet.

☐ A knowledge management program exists and has been running for over 6-12 months. Some preliminary results have been achieved.

Knowledge management is "*the formalization of and access to experience, knowledge and expertise that create new capabilities, enable superior performance, encourage innovation and enhance customer value*" (Lytras et al., 2002). It is a formalized, integrated approach to identifying and managing organizational knowledge assets (e.g. patent, copyright).

Section B: The following statement describe overall perception of knowledge management.

Please indicate the degree of your agreement or disagreement with each statement by marking (✕) in the box provided below:

1	2	3	4	5	6	7
Strongly disagree	Disagree	Moderately disagree	Neutral	Moderately agree	Agree	Strongly Agree

General Perception toward Knowledge Management	1	2	3	4	5	6	7
1. I'm interested with the implementation of knowledge management.							
2. I believe that knowledge management program can contribute to our organization products or services competitiveness.							
3. Organization realized the importance of organizational knowledge assets (copyright, patents), thus, there will be greater emphasis on knowledge management in future.							
4. I found that knowledge management program fits the organization and industry.							

Section C: This section seeks your opinion toward the organizational Knowledge management enablers.

Please indicate the degree of your agreement or disagreement with each statement by marking (✕) in the box provided below:

1	2	3	4	5	6	7
Strongly disagree	Disagree	Moderately disagree	Neutral	Moderately agree	Agree	Strongly Agree

> Leadership is about influencing, motivating and enabling others to contribute toward the effectiveness and success of the organizations of which they are members.

Leadership	1	2	3	4	5	6	7
1. Top management leadership and commitment are important in the implementation of knowledge management.							
2. Leader motivating and encouraging people attitude for acquiring, utilizing and sharing knowledge in the organization.							
3. Knowledge management is the responsibility of top management.							
4. Leaders' goal and direction are important in determining the success of knowledge management implementation.							
5. Leader's behavior influences the effectiveness of knowledge sharing process within the organization.							

Knowledge management processes are used to facilitate the process of creating, storing, sharing and application of knowledge.

Knowledge Process	1	2	3	4	5	6	7
1. Knowledge management process is important in creating a successful knowledge based organization.							
2. Tacit knowledge (e.g. experiences, ideas or values) is valued throughout the organization and transferred among organization members.							
3. Systematic process is used in gathering, creating, storing and application of key knowledge assets.							
4. A well defined knowledge management process is important to the organization so that it knows what it must know in order to achieve what it wants to do.							
5. Knowledge is verified and organized in database.							

Technology infrastructure is a tool used by organization to enable its employees to share information on a large scale.

Technology Infrastructure	1	2	3	4	5	6	7
1. Corporate hardware and operating systems to support future development of knowledge management application.							
2. Computer network (e.g. Internet, intranet) is important to enhance the effectiveness and efficiency of the knowledge sharing process.							
3. User friendliness of technology infrastructure enhances effectiveness of knowledge management.							
4. Technology infrastructure allows us to better manage different kind of knowledge.							
5. Usability of technology infrastructure enhances effectiveness of knowledge management.							

> Organizational culture defines the core beliefs, values, norms and social customs that manage the way individuals act and behave in an organization (Wong K.Y., 2005).
>
> Organizational structure refers to the division of labor as well as the patterns of coordination, communication, workflow and formal power that direct organizational activities.

Culture and Organization Structure	1	2	3	4	5	6	7
1. It is important for members to obtain the value and advantages of knowledge. 2.							
3. Openness between employees is important for implementing knowledge management.							
4. Reformulate any rules and procedures that obstruct the implementation of knowledge management.							
5. Minimization of organizational level for effective knowledge management.							
6. Organization provides a working environment where people are encouraged to share ideas, experiences, successes and failures.							

Human capital is the knowledge providers and value creators in an organization that serve as the critical driving force in making knowledge work for an organization.

Human Capital	1	2	3	4	5	6	7
1. Involvement and commitment from employees toward knowledge management are important.							
2. Employee's opinions and suggestions are not necessary in the entire knowledge management program.							
3. Continuous participation from employees in new learning opportunities such as conference, university course, training to create new organizational knowledge.							
4. Employees are important because they create organizational knowledge, making knowledge work, and create value in organization.							
5. Employees are promoted to the higher position for their ongoing contributions.							

Thank you for your kind co-operation!!

APPENDIX B: Respondent Demographic Profile

<u>Gender</u>

Statistics

N	Valid	103
	Missing	0

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	18	17.5	17.5	17.5
	female	85	82.5	82.5	100.0
	Total	103	100.0	100.0	
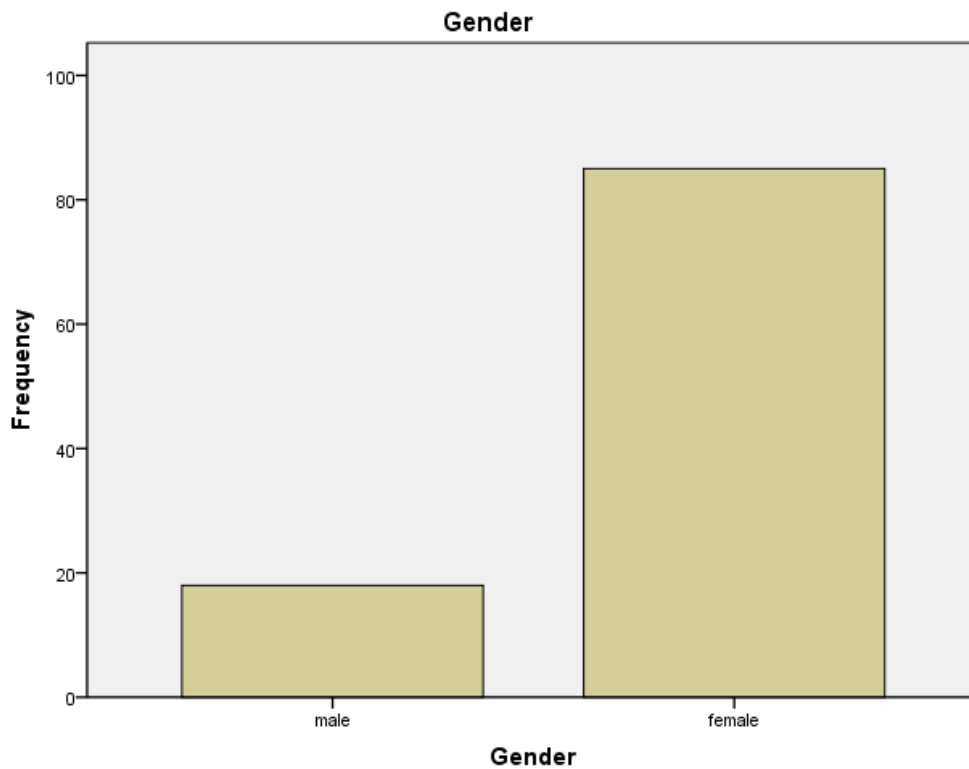
Age

Statistics

N	Valid	103
	Missing	0

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30	31	30.1	30.1	30.1
	31-40	55	53.4	53.4	83.5
	41-50	16	15.5	15.5	99.0
	51-60	1	1.0	1.0	100.0
	Total	103	100.0	100.0	

Age
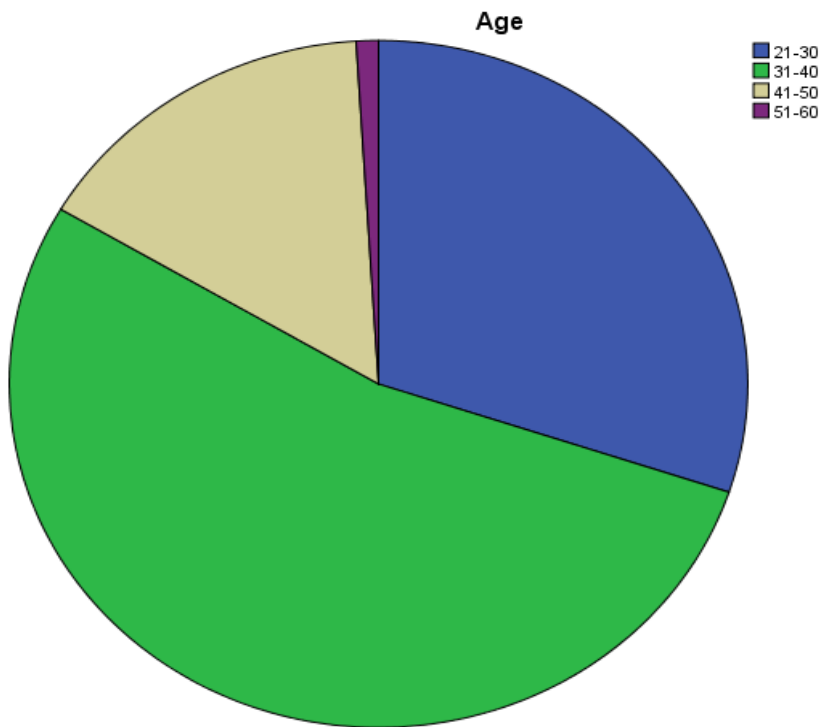
Level of Education

Statistics

N	Valid	103
	Missing	0

Level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	24	23.3	23.3	23.3
	Diploma	40	38.8	38.8	62.1
	Bachelor Degree	33	32.0	32.0	94.2
	Master Degree	6	5.8	5.8	100.0
	Total	103	100.0	100.0	

Level of education

- High School
- Diploma
- Bachelor Degree
- Master Degree
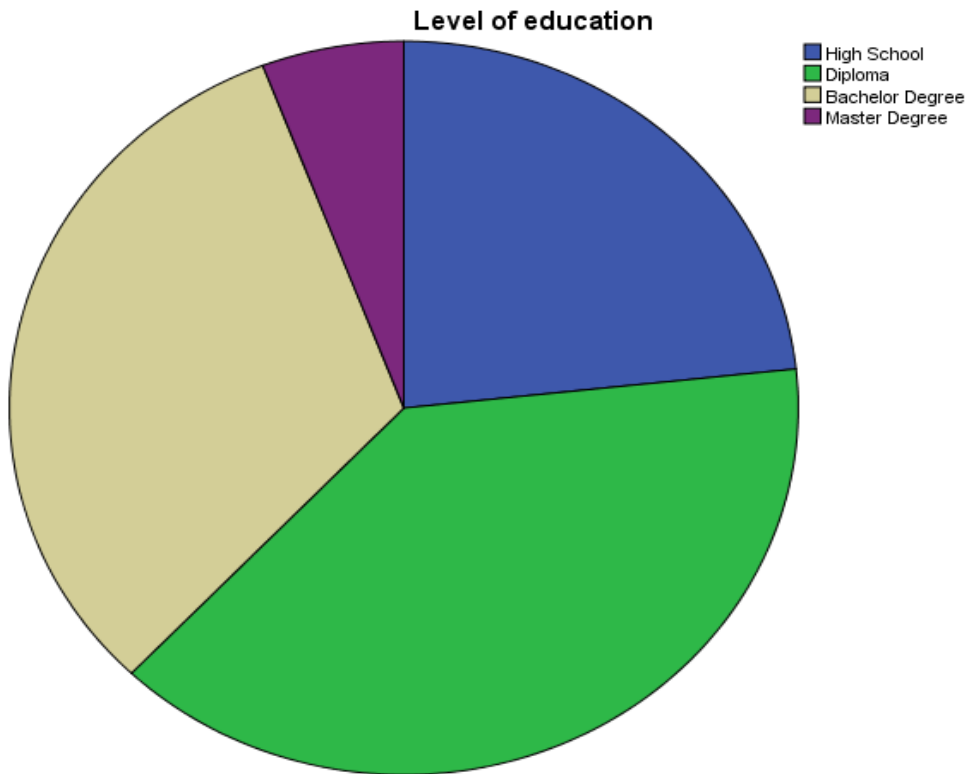
Franchise Operating Years

Statistics

N	Valid	103
	Missing	0

Franchise Operating Years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	22	21.4	21.4	21.4
	1-2	25	24.3	24.3	45.6
	3-5	33	32.0	32.0	77.7
	6-10	23	22.3	22.3	100.0
	Total	103	100.0	100.0	
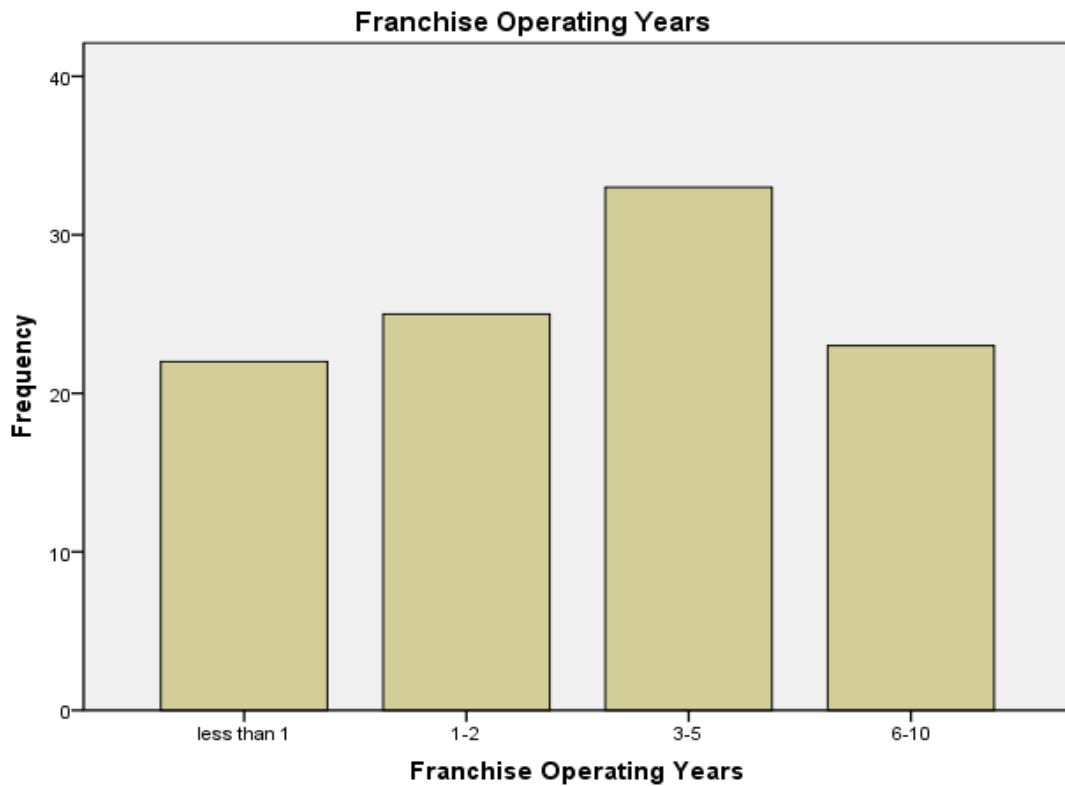
Knowledge Management Implementation Level

Statistics

N	Valid	99
	Missing	4
Mean		2.1717

KM Implementation Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal Km	17	16.5	17.2	17.2
	Initiated km	48	46.6	48.5	65.7
	implemented km	34	33.0	34.3	100.0
	Total	99	96.1	100.0	
Missing	99.00	4	3.9		
Total		103	100.0		

Implementation of Km

- No formal Km
- Initiated km
- implemented km
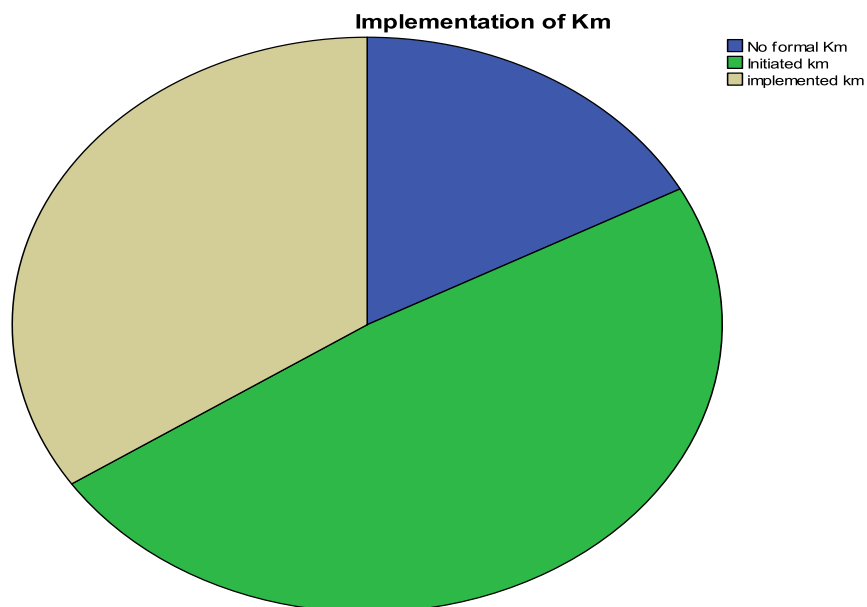
APPENDIX C: Central Tendencies Measurement of Constructs

<u>Leadership</u>

Statistics

		Leadership and commitment	Leader motivating people	Leader responsibility	Leader goal and direction	Leader behavior
N	Valid	103	103	103	103	103
	Missing	0	0	0	0	0
Mean		6.3301	6.2330	5.5049	6.1650	6.2039
Std. Deviation		.70556	.75672	1.12785	.67297	.69111

Leadership and commitment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	1.0	1.0	1.0
	Moderately agree	11	10.7	10.7	11.7
	Agree	44	42.7	42.7	54.4
	Strongly agree	47	45.6	45.6	100.0
	Total	103	100.0	100.0	

Leader motivating people

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	2.9	2.9	2.9
	Moderately agree	11	10.7	10.7	13.6
	Agree	48	46.6	46.6	60.2
	Strongly agree	41	39.8	39.8	100.0
	Total	103	100.0	100.0	

Leader responsibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	2.9	2.9	2.9
	Moderately disagree	3	2.9	2.9	5.8
	Neutral	10	9.7	9.7	15.5
	Moderately agree	25	24.3	24.3	39.8
	Agree	47	45.6	45.6	85.4
	Strongly agree	15	14.6	14.6	100.0
	Total	103	100.0	100.0	

Leader goal and direction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	1.0	1.0	1.0
	Moderately agree	13	12.6	12.6	13.6
	Agree	57	55.3	55.3	68.9
	Strongly agree	32	31.1	31.1	100.0
	Total	103	100.0	100.0	

Leader behavior

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	1.9	1.9	1.9
	Moderately agree	10	9.7	9.7	11.7
	Agree	56	54.4	54.4	66.0
	Strongly agree	35	34.0	34.0	100.0
	Total	103	100.0	100.0	

Knowledge Process

Statistics

		Knowledge management process	Tacit knowledge	Systematic process	Well defined km	Knowledge verify and organise in database
N	Valid	103	103	103	103	103
	Missing	0	0	0	0	0
Mean		6.1165	6.0194	6.0874	6.1068	5.7864
Std. Deviation		.66127	.69987	.71547	.65548	.83608

Knowledge management process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	1.9	1.9	1.9
	Moderately agree	11	10.7	10.7	12.6
	Agree	63	61.2	61.2	73.8
	Strongly agree	27	26.2	26.2	100.0
	Total	103	100.0	100.0	

Tacit knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	2.9	2.9	2.9
	Moderately agree	15	14.6	14.6	17.5
	Agree	62	60.2	60.2	77.7
	Strongly agree	23	22.3	22.3	100.0
	Total	103	100.0	100.0	

Systematic process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately agree	22	21.4	21.4	21.4
	Agree	50	48.5	48.5	69.9
	Strongly agree	31	30.1	30.1	100.0
	Total	103	100.0	100.0	

Well defined km

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately agree	17	16.5	16.5	16.5
	Agree	58	56.3	56.3	72.8
	Strongly agree	28	27.2	27.2	100.0
	Total	103	100.0	100.0	

Knowledge verify and organise in database

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.0	1.0	1.0
	Moderately disagree	1	1.0	1.0	1.9
	Neutral	2	1.9	1.9	3.9
	Moderately agree	27	26.2	26.2	30.1
	Agree	56	54.4	54.4	84.5
	Strongly agree	16	15.5	15.5	100.0
	Total	103	100.0	100.0	

Technology Infrastructure

Statistics

		Corporate hardware and operating system	Computer network	User friendliness	Better managing knowledge	Usability
N	Valid	103	103	103	103	103
	Missing	0	0	0	0	0
Mean		5.9223	6.2330	6.0971	6.1553	6.0777
Std. Deviation		.75002	.71680	.78609	.75091	.76298

Corporate hardware and operating system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	4	3.9	3.9	3.9
	Moderately agree	21	20.4	20.4	24.3
	Agree	57	55.3	55.3	79.6
	Strongly agree	21	20.4	20.4	100.0
	Total	103	100.0	100.0	

Computer network

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately agree	17	16.5	16.5	16.5
	Agree	45	43.7	43.7	60.2
	Strongly agree	41	39.8	39.8	100.0
	Total	103	100.0	100.0	

User friendliness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	2.9	2.9	2.9
	Moderately agree	18	17.5	17.5	20.4
	Agree	48	46.6	46.6	67.0
	Strongly agree	34	33.0	33.0	100.0
	Total	103	100.0	100.0	

Better managing knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	4	3.9	3.9	3.9
	Moderately agree	10	9.7	9.7	13.6
	Agree	55	53.4	53.4	67.0
	Strongly agree	34	33.0	33.0	100.0
	Total	103	100.0	100.0	

Usability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	1.9	1.9	1.9
	Moderately agree	20	19.4	19.4	21.4
	Agree	49	47.6	47.6	68.9
	Strongly agree	32	31.1	31.1	100.0
	Total	103	100.0	100.0	

Culture and Organizational Structure

Statistics

	Obtain value and advantage of knowledge	Openness between employee	Reformulate rules	Minimization of organizational level	Working environment
N Valid	103	103	103	103	103
Missing	0	0	0	0	0
Mean	6.0097	6.0388	5.8641	5.7670	6.1748
Std. Deviation	.70704	.73993	.65751	.71680	.66314

Obtain value and advantage of knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately agree	25	24.3	24.3	24.3
	Agree	52	50.5	50.5	74.8
	Strongly agree	26	25.2	25.2	100.0
	Total	103	100.0	100.0	

Openness between employee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately agree	26	25.2	25.2	25.2
	Agree	47	45.6	45.6	70.9
	Strongly agree	30	29.1	29.1	100.0
	Total	103	100.0	100.0	

Reformulate rules

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	1.9	1.9	1.9
	Moderately agree	24	23.3	23.3	25.2
	Agree	63	61.2	61.2	86.4
	Strongly agree	14	13.6	13.6	100.0
	Total	103	100.0	100.0	

Minimization of organizational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately agree	41	39.8	39.8	39.8
	Agree	45	43.7	43.7	83.5
	Strongly agree	17	16.5	16.5	100.0
	Total	103	100.0	100.0	

Working environment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	1.0	1.0	1.0
	Moderately agree	12	11.7	11.7	12.6
	Agree	58	56.3	56.3	68.9
	Strongly agree	32	31.1	31.1	100.0
	Total	103	100.0	100.0	

Human Capital

Statistics

		Employee involvement and commitment	Employee opinion and suggestion not necessary	Employee learning	Employee create knowledge, making knowledge work, and create value	Employee promotion
N	Valid	103	103	103	103	103
	Missing	0	0	0	0	0
Mean		6.1748	3.2136	5.9612	6.1165	5.9709
Std. Deviation		.74659	1.74137	.68488	.69028	.79775

Employee involvement and commitment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	1.9	1.9	1.9
	Moderately agree	15	14.6	14.6	16.5
	Agree	49	47.6	47.6	64.1
	Strongly agree	37	35.9	35.9	100.0
	Total	103	100.0	100.0	

Employee opinion and suggestion not necessary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	19	18.4	18.4	18.4
	Disagree	29	28.2	28.2	46.6
	Moderately disagree	10	9.7	9.7	56.3
	Neutral	14	13.6	13.6	69.9
	Moderately agree	21	20.4	20.4	90.3
	Agree	7	6.8	6.8	97.1
	Strongly agree	3	2.9	2.9	100.0
	Total	103	100.0	100.0	

Employee learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	1.0	1.0	1.0
	Moderately agree	23	22.3	22.3	23.3
	Agree	58	56.3	56.3	79.6
	Strongly agree	21	20.4	20.4	100.0
	Total	103	100.0	100.0	

Employee create knowledge, making knowledge work, and create value

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	4	3.9	3.9	3.9
	Moderately agree	7	6.8	6.8	10.7
	Agree	65	63.1	63.1	73.8
	Strongly agree	27	26.2	26.2	100.0
	Total	103	100.0	100.0	

Employee promotion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	6	5.8	5.8	5.8
	Moderately agree	16	15.5	15.5	21.4
	Agree	56	54.4	54.4	75.7
	Strongly agree	25	24.3	24.3	100.0
	Total	103	100.0	100.0	

Knowledge Management Implementation

Statistics

		Knowledge Mangement interest	Km competitiveness	Emphasis Km in future	Km fit organization and industry
N	Valid	103	103	103	103
	Missing	0	0	0	0
Mean		5.8932	6.0583	6.1165	5.8835
Std. Deviation		.75294	.75180	.71813	.71813

Knowledge Management interest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	6	5.8	5.8	5.8
	Moderately agree	17	16.5	16.5	22.3
	Agree	62	60.2	60.2	82.5
	Strongly agree	18	17.5	17.5	100.0
	Total	103	100.0	100.0	

Km competitiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	4	3.9	3.9	3.9
	Moderately agree	14	13.6	13.6	17.5
	Agree	57	55.3	55.3	72.8
	Strongly agree	28	27.2	27.2	100.0
	Total	103	100.0	100.0	

Emphasis Km in future

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	1.0	1.0	1.0
	Moderately agree	18	17.5	17.5	18.4
	Agree	52	50.5	50.5	68.9
	Strongly agree	32	31.1	31.1	100.0
	Total	103	100.0	100.0	

Km fits organization and industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	4	3.9	3.9	3.9
	Moderately Agree	21	20.4	20.4	24.3
	Agree	61	59.2	59.2	83.5
	Strongly Agree	17	16.5	16.5	100.0
	Total	103	100.0	100.0	

APPENDIX D: Reliability Analysis (Pretest)

Leadership

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.761	.797	4

Knowledge Process

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.748	.780	4

Technology Infrastructure

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.777	.771	4

Culture and Organizational Structure

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.783	.780	4

Human Capital

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.707	.738	4

Knowledge Management Implementation

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.657	.647	3

Appendix E: Reliability Test (Pilot Test)

Leadership

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.775	.808	5

Knowledge Process

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.755	.750	5

Technology Infrastructure

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.894	.896	5

Culture and Organizational Structure

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.804	.812	5

Human Capital

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.730	.783	5

Knowledge Management Implementation

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.748	.755	4

APPENDIX F:Factor Analysis

Independent Variables

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.861
Bartlett's Test of Sphericity	Approx. Chi-Square	1107.093
	df	300
	Sig.	.000

Communalities

	Initial	Extraction
Leadership and commitment	1.000	.674
Leader motivating people	1.000	.711
Leader responsibility	1.000	.535
Leader goal and direction	1.000	.650
Leader behavior	1.000	.640
Knowledge management process	1.000	.506
Tacit knowledge	1.000	.578
Systematic process	1.000	.638
Well defined km	1.000	.614
Knowledge verify and organise in database	1.000	.507
Corporate hardware and operating system	1.000	.623
Computer network	1.000	.715
User friendliness	1.000	.687
Better managing knowledge	1.000	.728
Usability	1.000	.693
Obtain value and advantage of knowledge	1.000	.605
Openness between employee	1.000	.468
Reformulate rules	1.000	.641
Minimization of organizational level	1.000	.468
Working environment	1.000	.751
Employee involvement and commitment	1.000	.590
Opinion	1.000	.652
Employee learning	1.000	.715
Employee create knowledge, making knowledge work, and create value	1.000	.586
Employee promotion	1.000	.530

Communalities

	Initial	Extraction
Leadership and commitment	1.000	.674
Leader motivating people	1.000	.711
Leader responsibility	1.000	.535
Leader goal and direction	1.000	.650
Leader behavior	1.000	.640
Knowledge management process	1.000	.506
Tacit knowledge	1.000	.578
Systematic process	1.000	.638
Well defined km	1.000	.614
Knowledge verify and organise in database	1.000	.507
Corporate hardware and operating system	1.000	.623
Computer network	1.000	.715
User friendliness	1.000	.687
Better managing knowledge	1.000	.728
Usability	1.000	.693
Obtain value and advantage of knowledge	1.000	.605
Openness between employee	1.000	.468
Reformulate rules	1.000	.641
Minimization of organizational level	1.000	.468
Working environment	1.000	.751
Employee involvement and commitment	1.000	.590
Opinion	1.000	.652
Employee learning	1.000	.715
Employee create knowledge, making knowledge work, and create value	1.000	.586
Employee promotion	1.000	.530

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.461	33.845	33.845	8.461	33.845	33.845	3.942	15.766	15.766
2	1.835	7.340	41.185	1.835	7.340	41.185	3.895	15.579	31.346
3	1.536	6.146	47.331	1.536	6.146	47.331	2.352	9.408	40.754
4	1.351	5.404	52.735	1.351	5.404	52.735	1.854	7.414	48.168
5	1.302	5.207	57.941	1.302	5.207	57.941	1.733	6.930	55.098
6	1.019	4.076	62.017	1.019	4.076	62.017	1.730	6.919	62.017
7	.907	3.628	65.645						
8	.886	3.546	69.191						
9	.842	3.368	72.558						
10	.734	2.937	75.495						
11	.678	2.714	78.209						
12	.653	2.611	80.820						
13	.604	2.415	83.235						
14	.572	2.289	85.524						
15	.534	2.135	87.659						

16	.508	2.033	89.692						
17	.444	1.777	91.469						
18	.412	1.647	93.116						
19	.362	1.446	94.562						
20	.309	1.235	95.798						
21	.282	1.128	96.925						
22	.233	.931	97.856						
23	.203	.814	98.670						
24	.177	.708	99.377						
25	.156	.623	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component					
	1	2	3	4	5	6
Leadership and commitment	.636	-.486	-.092	-.065	-.033	.139
Leader motivating people	.688	-.469	-.021	-.123	-.038	-.006
Leader responsibility	.344	-.197	.545	-.213	.051	.182
Leader goal and direction	.619	-.439	-.077	-.023	.016	-.259
Leader behavior	.606	-.436	-.142	.213	-.007	-.130
Knowledge management process	.431	-.149	.036	.371	.339	-.209
Tacit knowledge	.358	.293	.184	.145	.442	.336
Systematic process	.407	.276	-.088	-.060	.520	-.338
Well defined km	.703	-.046	-.116	-.183	.138	.228
Knowledge verify and organise in database	.301	-.144	.452	-.206	.383	-.043
Corporate hardware and operating system	.674	.157	.134	-.293	.045	-.195
Computer network	.754	.142	-.077	-.273	.214	.006
User friendliness	.722	.080	.017	-.373	-.142	-.008
Better managing knowledge	.692	.330	-.067	-.214	-.298	-.026
Usability	.684	.149	.047	-.268	-.320	-.162
Obtain value and advantage of knowledge	.612	-.251	-.089	.366	-.152	-.050
Openness between employee	.571	.169	.035	.236	.204	.122
Reformulate rules	.538	.231	.321	.323	-.198	-.228
Minimization of organizational level	.419	.018	.501	.198	-.009	.048
Working environment	.589	.195	-.211	.029	-.082	.561
Employee involvement and commitment	.671	-.270	-.151	.026	-.082	.192
Opinion	.280	.088	-.677	.010	.326	-.032
Employee learning	.701	.327	-.062	.195	-.200	-.186
Employee create knowledge, making knowledge work, and create value	.596	.438	-.097	.116	-.113	-.056
Employee promotion	.521	.062	.107	.446	-.119	.174

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component					
	1	2	3	4	5	6
Leadership and commitment	.636	-.486	-.092	-.065	-.033	.139
Leader motivating people	.688	-.469	-.021	-.123	-.038	-.006
Leader responsibility	.344	-.197	.545	-.213	.051	.182
Leader goal and direction	.619	-.439	-.077	-.023	.016	-.259
Leader behavior	.606	-.436	-.142	.213	-.007	-.130
Knowledge management process	.431	-.149	.036	.371	.339	-.209
Tacit knowledge	.358	.293	.184	.145	.442	.336
Systematic process	.407	.276	-.088	-.060	.520	-.338
Well defined km	.703	-.046	-.116	-.183	.138	.228
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Better managing knowledge	.692	.330	-.067	-.214	-.298	-.026
Usability	.684	.149	.047	-.268	-.320	-.162
Obtain value and advantage of knowledge	.612	-.251	-.089	.366	-.152	-.050
Openness between employee	.571	.169	.035	.236	.204	.122
Reformulate rules	.538	.231	.321	.323	-.198	-.228
Minimization of organizational level	.419	.018	.501	.198	-.009	.048
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Opinion	.280	.088	-.677	.010	.326	-.032
Employee learning	.701	.327	-.062	.195	-.200	-.186
Employee create knowledge, making knowledge work, and create value	.596	.438	-.097	.116	-.113	-.056
Employee promotion	.521	.062	.107	.446	-.119	.174

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Dependent Variable

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.756
Bartlett's Test of Sphericity	Approx. Chi-Square	150.137
	df	6
	Sig.	.000

Communalities

	Initial	Extraction
Knowledge Mangement interest	1.000	.548
Km competitiveness	1.000	.802
Emphasis Km in future	1.000	.711
Km fit organization and industry	1.000	.524

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.585	64.616	64.616	2.585	64.616	64.616
2	.699	17.464	82.080			
3	.432	10.789	92.868			
4	.285	7.132	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Knowledge Management interest	.741
Km competitiveness	.895
Emphasis Km in future	.843
Km fit organization and industry	.724

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

APPENDIX G: Pearson's Correlation Analysis

Descriptive Statistics

	Mean	Std. Deviation	N
KM_Implementation	5.9879	.58930	103
Leadership	6.0874	.57166	103
Knowledge_Process	6.0233	.43141	103
Technology_Infrastructure	6.0971	.60835	103
Human_Capital_Management	5.8019	.60876	103
Culture_and_Organizational_Structure	5.9709	.46645	103

Correlations

		KM_Implementation	Leadership	Knowledge_Process	Technology_Infrastructure	Human_Capital	Culture_and_Organizational_Structure
KM_Implementation	Pearson Correlation	1	.549**	.543**	.509**	.538**	.582**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	103	103	103	103	103	103
Leadership	Pearson Correlation	.549**	1	.507**	.563**	.430**	.536**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	103	103	103	103	103	103
Knowledge_Process	Pearson Correlation	.543**	.507**	1	.555**	.502**	.537**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	103	103	103	103	103	103
Technology_Infrastructure	Pearson Correlation	.509**	.563**	.555**	1	.582**	.610**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	103	103	103	103	103	103
Human_Capital	Pearson Correlation	.538**	.430**	.502**	.582**	1	.582**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	103	103	103	103	103	103
Culture_and_Organizational_Structure	Pearson Correlation	.582**	.536**	.537**	.610**	.582**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	103	103	103	103	103	103

**. Correlation is significant at the 0.01 level (2-tailed).

APPENDIX H: Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.694 [a]	.481	.454	.43532

a. Predictors: (Constant), Human_Capital, Leadership, Knowledge_Process, Culture_and_Organizational_Structure, Technology_Infrastructure

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.041	5	3.408	17.985	.000[a]
	Residual	18.382	97	.190		
	Total	35.422	102			

a. Predictors: (Constant), Human_Capital, Leadership, Knowledge_Process, Culture_and_Organizational_Structure, Technology_Infrastructure

b. Dependent Variable: KM_Implementation

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	.001	.668		.002	.998	-1.323	1.326		
Leadership	.242	.098	.235	2.477	.015	.048	.436	.595	1.679
Human_Capital	.193	.095	.200	2.046	.043	.006	.381	.561	1.782
Culture_and_Organizational_Structure	.286	.131	.226	2.182	.032	.026	.546	.497	2.012
Knowledge_Process	.264	.131	.194	2.021	.046	.005	.524	.583	1.714
Technology_Infrastructure	.015	.103	.015	.146	.884	-.189	.219	.475	2.105

a. Dependent Variable: KM_Implementation

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	Leadership	Human_Capital	Culture_and_ Organizational_ Structure	Knowledge_ Process	Technology_ Infrastructure
1	1	5.981	1.000	.00	.00	.00	.00	.00	.00
	2	.006	31.215	.16	.08	.55	.00	.02	.06
	3	.005	34.774	.22	.39	.12	.00	.02	.21
	4	.004	40.649	.01	.50	.25	.00	.01	.60
	5	.003	48.793	.00	.01	.04	.86	.28	.02
	6	.002	51.960	.61	.02	.04	.13	.66	.11

a. Dependent Variable: KM_Implementation