



**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**ANASSESSMENT OF KNOWLEDGE MANAGEMENT PRACTICES:
IN THE CASE OF INFO MIND SOLUTIONS PLC**

**BY
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(SGS/0022/2010B)**

**DECEMBER 2019
ADDIS ABABA, ETHIOPIA**

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Declaration

I hereby declare that **An Assessment of Knowledge Management Practices: In The Case of Info Mind Solutions PLC** project is wholly the work of Nigussie Hailu Mekonnen. I have carried out the present study independently with the guidance and support of research advisor **Professor Belete Mebratu**. Also, any other contributors or sources have either been referenced in the prescribed manner or are listed in the acknowledgments together with the nature and the scope of their contribution. And the study has not been submitted for the award of any degree or diploma program in this or any other institution. It is in partial fulfillment of the requirement of the program Master's Degree in business administration.

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December 2019

Endorsement

This is to certify that Nigussie Hailu Mekonnen has carried out his research work entitled “An Assessment of Knowledge Management Practices: In the Case of Info Mind Solutions PLC” under my supervision. This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Professor Belete Mebratu

Advisor name

Signature & Date

St. Mary's University, Addis Ababa

December 2019

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ACRONYMS

KM: Knowledge Management

KMS: Knowledge Management System

IMS: Info Mind Solutions

IT: Information Technology

CTC: Collaborative Technological Capital

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ABSTRACT

This research was aimed at assessing the Knowledge management (KM) practices of Info Mind Solutions (IMS) PLC. The major initiation to conduct this research was to understand the gap and challenges caused by the lack of KM practices in an organization. Especially, when the required knowledge is available but mismanaged. A descriptive research method on both quantitative and qualitative research study was adopted to undertake this research. Since there were 40 employees in the organization, at the time of the research, all total population was included in the sampling technique. Both questionnaires and interviews were used to gather data for this research. The questioners were developed using a five-point Likert scale and closed-ended questionnaires. The interviews were semi-structured. The census sampling method is used since the population size is manageable for the sample. Of the total 40 questionnaires distributed to the employees, 38 questionnaires were returned, with a 95% response rate. Interviews were also conducted with 2 selected senior management team members. The finding of the study shows that most of the employees of IMS have a clear understanding of the knowledge management practices, whereas the organization does not have an established strategic vision and goals for knowledge management. Moreover, the management doesn't prioritize Knowledge management as a key practice. In addition, there are sufficient knowledge management resources and staff with expert knowledge are willing and motivated to share their knowledge. As well as preparing the strategic vision and goal for knowledge management including other procedural manuals for knowledge creation, sharing. Lastly, the organization has to establish a strategic partnership to acquire knowledge from external sources.

Keywords: Knowledge Management, Knowledge Management Practice, Pillars, Leadership, Technology, Organization, Learning

CHAPTER ONE - INTRODUCTION

The purpose of this chapter is to assess the knowledge management practice at Info Mind Solutions Private Limited Company. This chapter deals with the background of the study that presents a detailed explanation of the study. It also includes the statement of the problem, with basic research questions, objectives of the study, significance of the study and delimitation/scope of the study. In addition to this, it reveals an overall organization of the study.

1.1 Background of the Study

Now a day's Knowledge is perceived as a factor along with lands, capital, and labor. Moreover, it is perceived as the most critical resource any organization has (Sohail and Duad, 2009; Adhikari, 2010). Knowledge is recognized as a strategic imperative of organizations. It is known that knowledge is power. Therefore, one has to keep it to oneself to maintain an advantage. The common attitude of most people is to hold on to one's knowledge since it is what makes him or her an asset to the organization. Today, knowledge is still considered power an enormous power in fact but the understanding has changed considerably, particularly from the perspective of organizations.

Knowledge Management (KM) is the management which is concerned with the planning, organizing, motivating and monitoring of people, processes and system in the organization to ensure that its knowledge-related assets are continuously improved and effectively employed (King, 2009). Knowledge management is about applying the collective knowledge of the entire workforce to achieve specific organizational goals. The aim of knowledge management is not necessarily to manage all knowledge, just the knowledge that is most important to the organization. It is about ensuring that people have the knowledge they need, where they need it, when they need it the right knowledge, in the right place, at the right time. (Brún 2005).

Knowledge Management involves efficiently managing the organization's existing knowledge and developing new knowledge, while innovation involves the creation of new knowledge and ideas to facilitate new outcomes. So, there is an integration between KM and

innovation. In other words, if an organization has a strong knowledge base this, in turn, means a better ability to focus innovative efforts efficiently.

Info Mind Solutions (IMS) is a private technology-based recruitment service provider organization. It was established in 1998 G.C and it has a popular website named ethiojobs.net. It is accessible as the first leading job board website from Ethiopia. This company is a pioneer to introduce a modern web recruitment platform to the country. It also plays a catalytic role in the recruitment services and recruitment consultancy service to the local and international companies.

1.2 Statement of the Problem

Organizations have understood that one of their most valuable assets is the knowledge in the minds of their employees. Knowledge is usually stored in the form of organizational practices inside an organization. KM can be found in almost every type of organization today: IT firms, manufacturing, law firms, medical practices, pharmaceutical companies, utilities, engineering firms, healthcare, government departments, banks and insurance companies, and the military sector (Dalkir, 2005).

Knowledge Management provides benefits to individual employees, communities of practice, and to the organization itself (Dalkir, 2005). The findings of different researches depicted that effective use KM practices have contributed a lot to the organization's success. When an organization does not have a proper knowledge management system (KMS) the organization may get memory loss and brain drain. When we say memory loss, the absence of KM leads to the repetition of the same mistakes, given that it has not learned from previous experiences. The absence of brain drains leads to losing valuable knowledge resources when employees leaving the organization.

Rahel Bekele and Worku Jimma (2013) have conducted an assessment on the level of KM practices at Jimma University. The scholars have assessed the perception of staff on the current KM practices of the university from four knowledge management pillars, namely (technology, leadership, organization and learning) and they have ranked the pillars from the

most to least problematic and the desired conditions to prioritize among the pillars to improve future KM practices of the university. The research revealed that the level of perception on KM practices among academic and non-academic staff of the university is different and technology was least problematic and leadership was the most problematic among the four pillars with respect to the current KM practices in the University. From this individual perception, technology, leadership among the four pillars of KM.

Tesfaye Berhane (2015) has conducted a research on the assessment of knowledge sharing practice of the United Nations' World Food Program (WFP), Ethiopia. He used a descriptive research approach with a mixed design. He used a questionnaire and interview to method. The research shows that there is an average awareness and acceptance of knowledge management by the employees of the organization. The other finding show that the organization does not have a strategy or policy for KM practices and there was a gap in utilization of internal knowledge sources of the organization.

Kebede Michael (2016) has researched on the assessment of KM practices in Federal Democratic Republic of Ethiopia defense force. The research aimed to assess the effectiveness of KM and identify factors that affect KM in the Ethiopian defense force and to indicate possible recommendations for future implementation. The research was conducted in qualitative research methodology. The research revealed that there was a lack of incentive mechanism, lack of proper policy and procedures, non-conducive organizational culture and structure, lack of resources, lack of leadership support, the army members attitude and not understanding the benefits of KM to bring a sustainable change in the organization were identified as major influences on KM practice in Ethiopian Defense Force.

Balaban and Gundes (2018) researched on the KM practices in small and medium architecture, engineering and construction firms in Turkey. They used a qualitative research method. To analysis of the data they used a semi-structured pilot interview over the telephone. They were researched based on three categories, those are micro sized firms, small sized firms nad medium sized firms. The research revealed that as the size of the firm grows, the need for a systematic KM increase. It also showed that KM solutions are suitable for mainly large scale

and to a lesser extent for medium scale enterprises. Small enterprises find complex and affordable. Most of the programs are created for use in a wide range of sectors.

Magnus O. Igbinoia and Iguehi J. Ikenwe, (2017) have researched on the concept of knowledge and knowledge management; nature and lifecycle of knowledge management. It also reviews the various processes involved in knowledge acquisition and generation, knowledge capture, knowledge storage, knowledge sharing and knowledge application. The study also discusses the various forms of knowledge elicitation to include questionnaire, interview, observation, role reversal technique, and discussion forums as well as the forms of knowledge representation to include report writing, database management system and institutional repositories. The paper shed light on the various technologies that aids KM practice chief among which are groupware, electronic mail, database management system, data mart, data warehouse among others. The research paper examined the various processes necessary to achieve the goal of knowledge management as well as the systems or technologies required to support these processes. It is also showed that KM has three components namely processes, people and systems, which must be effectively managed to meet the objective of any knowledge management practice.

Kuei-Hsien Niu (2010) conducted a research on knowledge management practices and organizational adaptation, Evidences from high technology companies in China. The field survey research method was used and data were collected from 170 high technology companies in China. Multiple regression analysis as well as mediation tests were conducted to analyze the data. The finding of research indicates that knowledge acquisition, knowledge refining and knowledge applying are important when a firm is trying to enhance its competence. On the other hand, knowledge creation, knowledge refining, knowledge sharing and knowledge applying are influential when a firm is trying to introduce the next round of innovation.

Saeed, et al (2010) have conducted a research on knowledge management practices: role of organizational culture. the present study investigates the predicting role of culture attributes

(Collaboration, Formalization, Trust and Learning) with reference to knowledge management practices (Knowledge Creation). The study was carried out on purposively selected sample of 813 corporate sector employees at different managerial positions. They were administered questionnaires including Organizational culture scale (OCS) and Knowledge Management Practices Scale (KMPS).

The multiple regression analysis results revealed that Collaboration, Formalization and Trust significantly predict Knowledge Management Practices. The effect of management levels on KM process reveal that the senior management levels are significantly different from middle and lower levels in the way they create knowledge. The possible explanation can be that middle managers perform the role of linking pins in organizations taking directives from the top management and forwarding to the operational managers. The senior and lower managers are more involved in planning and execution of decision and handling of information respectively, hence, more involved in knowledge processing than the middle managers.

Manish Kumar, Souren Paul, and Suresh Tadisina, (2005) were researched on eight leading Indian software companies to gather insight into their KM practices. The finding of the research was Indian software companies had an awareness of the capabilities of KMS and used it to improve productivity, reduce defects, facilitate reuse of software components, and share lessons learned in the execution of projects.

From the above stated research, the researcher identified that there was no research conducted on IT based a recruitment service business sector. The researcher is also used descriptive research method. The data was collected using both interview and questioner the data analyzed was conducted using both qualitative and quantitively methods. On the other hand, the research is conducted based on the Stankosky, Calabrese, & Baldanza (2003) the four pillars of KM.

The problem statement in this study would be how IMS manages its knowledge and reuse it when needed. The required knowledge is often available in the organization, but overall the knowledge management practices are not properly utilized. This happens because the

knowledge is often not organized, managed and documented properly. This research is an attempt to fill the gap by assessing the KM practices of IMS. The study also assesses IMS KM practices with a factor of KM pillars such as organization, technology, learning, and leadership.

1.3 Research Questions

In order to provide an appropriate recommendation on how the Info Mind Solutions manage and use its knowledge, the study aims to answer the following questions:

1. What is the level of understanding of individuals at IMS about the concept of Knowledge Management?
2. What is the extent of leadership support to manage and share knowledge at IMS?
3. What is the availability of proper technology and infrastructure to manage knowledge in IMS?
4. What are the barriers to manage knowledge at the IMS?
5. What are the benefits of Knowledge Management on organizational learning and change?

1.4 Objective of the Study

The study has the following general and specific objectives.

1.4.1 General Objective

The general objective of the study is to assess the knowledge management practice at Info Mind Solutions PLC.

1.4.2 Specific Objectives

The study will have the following specific objectives:

- 1 To identify employees attitude towards Knowledge Management.
- 2 To assess the extent of organization leadership responses on how to manage knowledge and for improvement of organizational experiences.
- 3 To assess the extent of technology and infrastructure to manage knowledge

- 4 To identify the barriers to Knowledge Management in IMS.
- 5 To assess the benefits of Knowledge Management on organizational learning and change at the IMS.

1.5 Significance of the Study

The study tried to assess the KM practice in IMS. By looking into the practices of KM in IMS, this thesis anticipated the following listed contributions. This research examined the emerging field of KM, which is yet limited to abstract concepts, ideas, frameworks, and models in the context of private IT service organizations. So, this research contributes to the need for research to discover how KM can support the efficient and effective management of private IT service and other related sector organizations. Because of the practical relevance of finding efficient solution of knowledge management in private IT service organizations, it was anticipated that the results of this study could enhance understanding of the power of KM and hence, could encourage managers of private IT service organizations to consider better ways of implementing KM strategies in order to exploit the benefits further. The findings of this research work can be used for instigating a further review and study of the subject of the organization. It has also used as an initiation for those who are interested to conduct a detailed and comprehensive study on such similar topics.

1.6 Delimitation /Scope of the Study

The study is conducted on Info Mind Solutions (IMS) with a special focus on assessing knowledge management practices. The study is analyzed based on the framework created by Stankosky, Calabrese, & Baldanza, (2003). Those pillars are technology, organizational learning, leadership, and organization are used as a background for the assessment of the organization. By using the above framework, the study is conducted to assess the technology that is used for KM, the role of KM in the learning of IMS. The role of leadership on the KM practices, individual understanding about KM and the challenges of KM practice.

1.7 Limitation

The major constraint in the course of the study was time, which prevented the researcher from undertaking in-depth study and analysis.

1.8 Organization of the study

The paper contains five chapters. The first chapter presents the introduction and it included the background of the study, a statement of the problem, research question with their objective and significance and scope and limitation of the study are included. The second chapter was about the review of related literature which is related to the study area and it gives a detail description of the studied phenomenon by relating other scholarly papers in the area. The third chapter is all about the methodology of the study in which research approach and method, sources of data, sampling techniques and procedure, method of data collection and analysis and the like were included. In the fourth chapter, the collected data were analyzed, discussed and interpreted. And the last chapter contains a summary, conclusion, recommendation, references and an annex.

CHAPTER TWO - LITERATURE REVIEW

2.1 Basic Concepts of Knowledge and Knowledge Management

2.1.1 Data, Information, Knowledge and Wisdom (DIKW)

Before we begin to discuss knowledge management, we have to clearly define the meaning of knowledge. As Emil (2018) stated that we use knowledge all the time and we mean that know-how or wisdom. Data and knowledge are lower denominations to knowledge. In order for KM to succeed, one needs a deep understanding of what constitutes knowledge. Now we will see the boundaries between knowledge, information, and data.

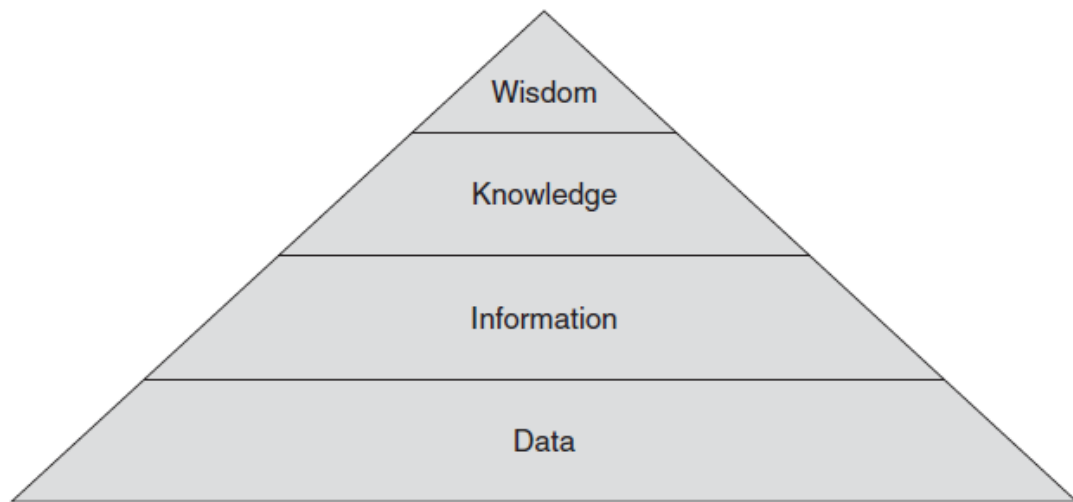
Data: it is a word, letter or number without any contextual meaning. For example, 1 or 7 without any context is mere data because it is not organized in any ways and provides no further information regarding patterns, context, etc.

Information: it is a data that is contextualized, categorized, calculated and condensed. (Davenport & Prusak 2000). It may convey a trend in the environment, or perhaps indicate a pattern of sales for a given period of time and it can be defined as to know what or what is. For example, 1 week has 7 days. We give a contextual meaning for the numerical data 1 and 7.

Knowledge: It is the transformation of information through comparison, consequences, connection, and conversation. Knowledge is closely related to doing and implies know-how and understanding. The knowledge possessed by each individual is a product of his experience and encompasses the norms by which he evaluates new inputs from his surroundings (Davenport & Prusak 2000). It also includes the distilling of new knowledge on the basis of previous knowledge. Knowledge is derived from information but it is richer and more meaningful than information. It includes familiarity, awareness, and understanding gained through experience or study, and results from making comparisons, identifying consequences, and making connections. Some experts include wisdom and insight in their definitions of knowledge.

Wisdom: It is widens knowledge through actions such as unearthing, value, skill and more (Spiegler, 2000).

According to Martin Frické, (2009) explained the knowledge pyramid hierarchy data, information, knowledge, and wisdom (DIKW).



Source: Martin Frické (2009)

Fig 2.1 Pyramid of DIKW (Data Information Knowledge and Wisdom)

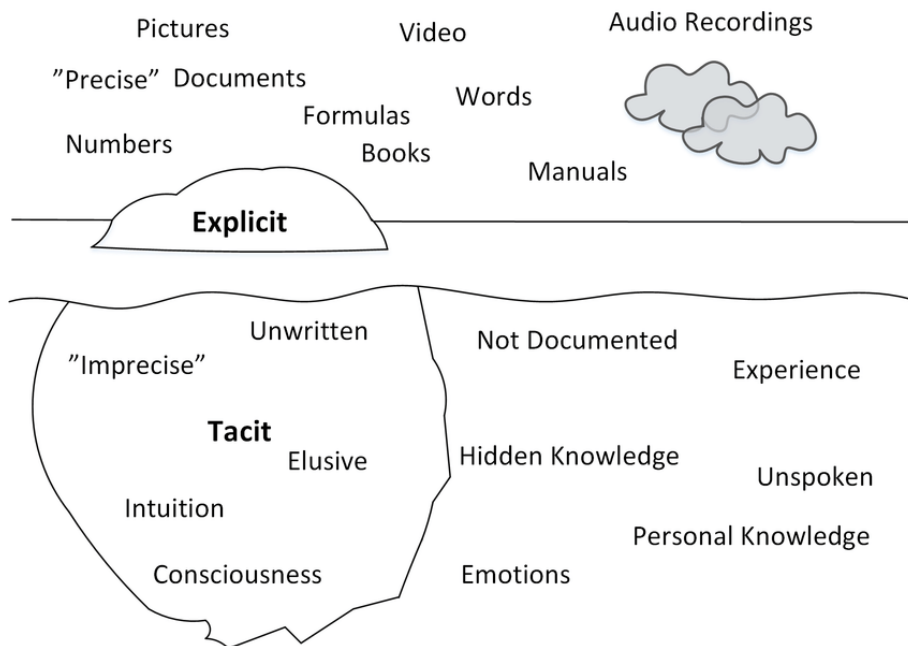
2.1.2 Types of knowledge

In a corporate knowledge is the outcome of the organization and systematic analysis applied to data and information. It is the result of learning that gives the organization's only sustainable competitive advantage. As such, knowledge is a vital asset that has become more significant than land, labor or capital in today's economy (Uriarte, 2008). Knowledge is often classified into two types: tacit and explicit knowledge.

Tacit knowledge is a knowledge type stored in the brain of a person. It is the knowledge that people carry in their heads and involves such intangible factors as personal beliefs, perspective, instinct, and values. It is much less concrete than explicit knowledge. It is more of an "unspoken understanding" about something, a knowledge that is more difficult to write down in a document or a database. It is best conveyed through activities that support direct exchange

and dialogue such as networking, peer assists, online discussion forums or communities of practice. It generally requires extensive personal contact and trust to share effectively (Mohajan, 2016 and Brún, 2005).

Explicit knowledge is a type of knowledge that is available explicitly in various media like documents, publications, research findings, reports, best practices, lessons learned, websites, videos and other forms of storage other than the human brain. It covers “know-what” (facts), “know-why” (science) and “know-who” (networking). Explicit knowledge can be easily communicated and transmitted between individuals, both synchronously (in real-time) and asynchronously (Mohajan, 2016 and Brún, 2005).



Source: Robin_Wikstroem

Fig 2.2 Explicit and tacit knowledge in an iceberg

2.2 Knowledge Management

Knowledge management "is managing the corporation's knowledge through a systematically and organizationally specified process for acquiring, organizing, sustaining, applying, sharing and renewing both the tacit and explicit knowledge of employees to enhance organizational performance and create value." (Davenport & Prusak 2000, pp 10). As (Hajric,

2018) defines that KM *“is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge.”* (Hajric 2018, pp 17) is also explained that the overall objective of KM is not about managing knowledge, it is for knowledge's sake is to create value and leverage and refine the firm's knowledge assets to meet organizational goals.

Today, the key global pressure on management practices is knowledge identification, creation, innovation, dissemination, and development of talent. The ground rules of economic competition have shifted in important ways in recent years because of the impetus of globalization, the proliferation of information technology, the availability of information and the changing nature of organizational forms. Today's economy is dubbed as a knowledge-based or knowledge economy, where participants sell knowledge, focused on research, innovation and other forms of knowledge creation (Islam, 2006).

The efficient management of organizational knowledge can increase the performance of the organization supporting an organization to be more act intelligently in the business (Wiig, 1993). KM is about constructing organizational intelligence by enabling people to improve the way they work in catching, sharing and using knowledge. It contains using the ideas and experience of employees, customers, suppliers, and other related bodies to improve the organization's performance. Building on what works well leads to better practice, strategy and policy. KM promotes an integrated approach to identifying, capturing, retrieving, sharing, and evaluating enterprise information assets. These information assets may include databases, documents, policies, procedures as well as the un-captured tacit expertise and experience stored in individuals' heads (Shailesh and Sanjeev, 2012).

2.3 Why do we need knowledge management?

KM is an area in which companies are often unwilling to invest because it can be expensive to implement properly, and it is extremely difficult to determine a specific return on investment. KM enables the firm to better protect, enhances its ability to innovate, enhances its ability to protect its key knowledge and competencies from being lost or copied and exploit

what it knows and to improve and focus its knowledge development efforts to match its needs. It helps firms learn from past mistakes and successes and also better exploits existing knowledge assets by reusing them in areas where the organization stands to gain something, e.g. Using knowledge from one department to improve or create a product in another department, modifying knowledge from a past process to create a new solution, to enhance the ability of innovation (Caroline, 2005).

2.4 Pillars Model of Knowledge Management

In order to more fully define and understand KM, it is useful to consider KM as having four pillars. Those four pillars of enterprise engineering are leadership, organization, technology, and learning (Stankosky, Calabrese, & Baldanza, 2003). In application, the pillars represent critical success factors for KM implementation. To achieve a basic entry-level KM program, it has been determined that all four pillars must be addressed. The four pillars of a KM framework involve four environmental influences, which are: Social, Political, Governmental and Economic as shown in Figure 2.3.

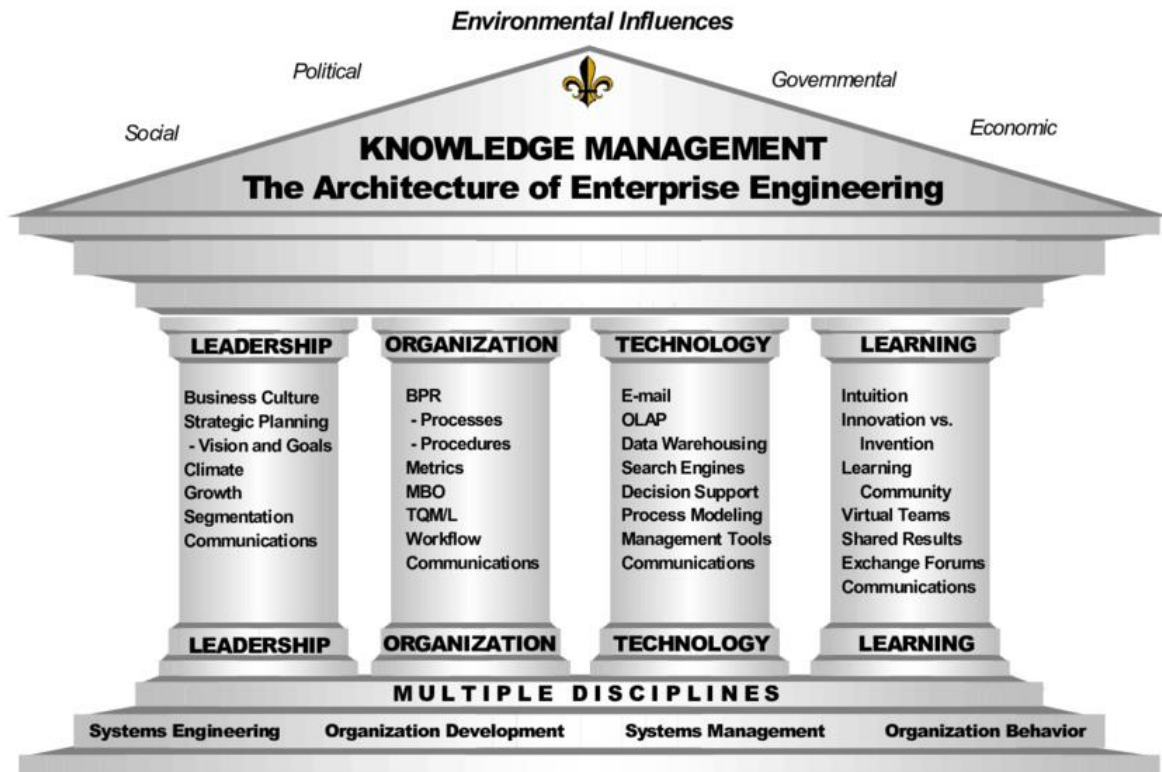
Leadership: deals with decision-making and the strategic alignment of KM initiatives with business objectives, including values, objective knowledge sources, prioritization, and resource allocation of the organization's knowledge assets.

Organization: It emphasizes the strategic redesigning and alignment of operational processes, including functions, processes, formal and informal organizational structures, control measures and metrics, process improvement, and procedures to ensure the success of the KM initiative throughout the organization.

Technology: It establishes the importance of the enabling technological infrastructure, which supports KM with-in the organization and without which the application of KM in any organization would be near impossible.

Learning: it is described as the acquisition of knowledge or a skill through study, experience or instruction and emphasizes the fact that the organization must address KM facilitating approaches such as increasing internal communications, promoting cross-functional teams and

creating a learning community (Stankosky, Calabrese, & Baldanza, 2003). It concentrates on identifying and applying the attributes necessary for a “learning organization.”.



Source: Stankosky, Calabrese, & Baldanza (2003)

Fig 2.3 The four pillars of knowledge management

2.5 Knowledge Management Process

This section will deal with the process of KM. Emil, (2018) explained that the process of KM. As stated, there are six processes included in the management of knowledge. These are:

- Knowledge Discovery & Detection
- Knowledge Capture
- Knowledge Sharing
- Knowledge Reuse
- Knowledge Creation
- Knowledge Acquisition

I. Knowledge Discovery & Detection

This step deals with discovering the knowledge that a firm has all over the organization, as well as the patterns in the information available that hide previously undetected pockets of knowledge. For explicit knowledge as (Bali et al 2009) stated that the gathering uses Intelligence, which is related to expert systems where the system tries to capture the knowledge of an expert, though the extent to which they are competent for this task is questionable (Botha et al 2008). On tacit knowledge, identifying would be difficult since it is residing in the mind of each individual employee and it is the most valuable in for the competitive advantage of the organization. Emily, (2018) stated that the qualitative and quantitative tools/that can be used in the knowledge discovery and detection processes are knowledge surveys, questionnaires, individual interviews, group interviews, focus groups, network analysis, and observation.

II. Knowledge Capture

This stage is concerned with organizing the knowledge to determine what resources, they have at their disposal and to pinpoint strengths and weaknesses. As (Botha et al. 2008, pp 63) stated that the organization of the knowledge includes "classify, map, index, and categorize knowledge for navigation, storage, and retrieval" activities (Botha et al. 2008). Emily, (2018) mentioned how important certain knowledge is to the organization. These two main factors are knowledge severity or criticality and knowledge availability. When the knowledge is critical and unavailable if only one or a few experts exist and/or if they are near retirement age), the more attention this knowledge deserves. This stage can seem like an expensive work, particularly since the return on investment is indirect.

III. Knowledge Sharing

Knowledge sharing is the most important aspect in the KM process for the vast majority of KM initiatives depend upon it. Knowledge sharing can be performed on either push or pull methods. When we say knowledge push knowledge is "pushed onto" the user (e.g. Newsletters, unsolicited publications, etc.). Whereas knowledge pull is when the knowledge worker actively seeks out knowledge sources (e.g. Collaborating with a coworker, seeking out an expert, library search, etc.). It depends on the culture and willingness of the knowledge worker

to pursue out and/or be open to these knowledge sources. Therefore, the culture, incentives, has an impact on sharing knowledge. Emily, (2018).

IV. Knowledge Reuse

Emily, (2018) stated that knowledge reuse means that using the knowledge that has been created. Markus (2001) recognizes that there are three actors on the reuse of knowledge and the three actors may be the same or different individuals. The three actors are:

- **Knowledge Producer:** the maker of the knowledge
- **Knowledge Intermediary:** the one who prepares via the knowledge accessible for knowledge consumers.
- **Knowledge Consumers:** are anyone who uses the produced knowledge from where it is located or analyzed in the form of indexing, categorized, standardized, published, mapped or prepared in other formats.

V. Knowledge Creation

Knowledge is the result of collaboration, interaction, practice, and education. As there are different types to be shared and converted. Its creation also supported by relevant information and data to be used to improve decisions and serve as a base in the creation of additional new knowledge (Hajric, 2018).

According to Nonaka and Takeuchi knowledge creation is the result of socialization, externalization, combination, and internalization. This later was dubbed as the SECI method and is the foundation for knowledge creation and transfer theory. This model is based on tacit and explicit knowledge. They proposed four ways in which knowledge types can be combined and converted.

- i. **Socialization:** Tacit to tacit. Knowledge is passed on through practice, guidance, imitation, and observation.
- ii. **Externalization:** Tacit to explicit. Deemed difficult to practice, however, also an important conversion mechanism. Tacit knowledge is codified into documents, manuals, etc. So that it can be spread easily. Since tacit knowledge can be virtually

impossible to codify, the extent of this knowledge conversion mechanism is debatable. The use of metaphor is cited as an important externalization mechanism.

- iii. **Combination:** Explicit to explicit. This is the simplest form. Codified knowledge sources (e.g. documents) are combined to create new knowledge.
- iv. **Internalization:** Explicit to tacit. As explicit sources are used and learned, the knowledge is internalized, modifying the user's existing tacit knowledge.

This model shows that knowledge conversion is continuous and created as users' practice, collaborate, interact, and learn. It's a continuous, dynamic, swirl of knowledge rather than a static model. It is a visual representation of overlapping, continuous processes that take place or should take place in an organization (Nonaka & Takeuchi 1996).

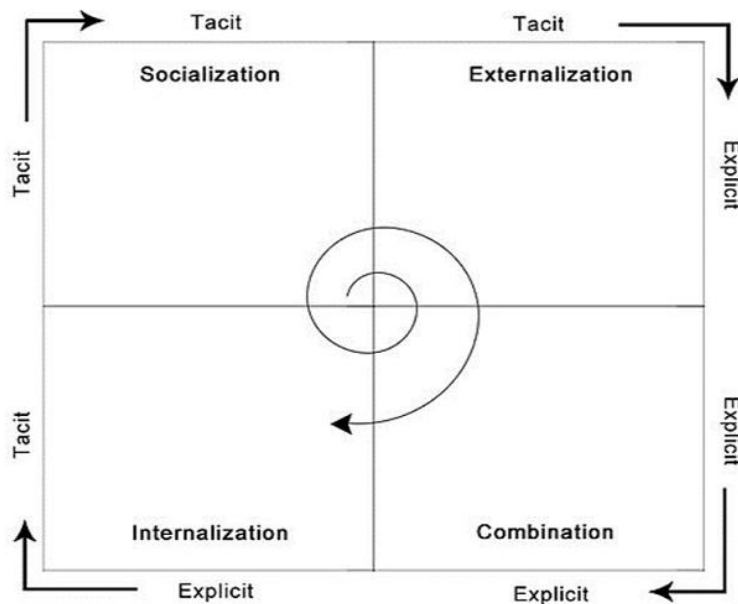


Fig 2.4 The SECI model knowledge creation spiral (Nonaka & Takeuchi, 1996)

VI. Knowledge Acquisition

It is concerned with the knowledge that a firm can try to obtain from external sources, including suppliers, competitors, partners/alliances, customers, and external experts. On the other hand, knowledge acquisition is focused on making sure that the right knowledge is acquired. Essentially the process has two parts.

2.6 Empirical Review

There is a limited number of related researches was conducted related to knowledge management. Kebede Michael (2016) studied on the assessment of knowledge management practices used in the Federal Democratic Republic of Ethiopia defense force. The research aimed to assess the effectiveness of KM and identify factors that affect KM in the Ethiopian defense force and to indicate possible recommendations for future implementation. He has used a qualitative research methodology probability, random and purposive sampling to fit with the army unit's geographical settlement.

According to Kebede Michael (2016) research result, the Ethiopian defense force has very poor KM practices. Some of the results he discovered are lack of incentive mechanism, lack of proper policy and procedures, non-conducive organizational culture and structure, lack of resources, lack of leadership support, the army members attitude and not understanding the benefits of KM to bring a sustainable change in the organization were identified as major influences on KM practice in Ethiopian Defense Force. At last, the researcher recommended that the KM practice improved by focusing on leadership skills, from an organization perspective they should establish a strategy and policy and the top army member should understand knowledge as a strategic asset and motivation and incentives to improve the KM process.

The other research was studied by Tesfaye Berhane (2015), aiming at the assessment of knowledge sharing practice of the United Nations' World Food Program (WFP), Ethiopia. He uses a descriptive research methodology and a mixed design was adopted to undertake this research. To analyze the uses a questionnaire and interview were as a tool. He identified that there is an average level of awareness and acceptance of KM by the employees of the organization. Additionally, there is a gap in the use of the internal knowledge sources and they did not have a strategy or policy that enables the effectiveness of knowledge, sharing of the organization and other shortcomings that can affect knowledge sharing in the organization.

After assessing the organization Tesfaye Berhane (2015), recommended that the organization should reinforce the practice of knowledge sharing by formulating comprehensive knowledge sharing policy/strategy compatible with organizational strategy,

enhance the level of employee awareness regarding the concepts and benefits of knowledge sharing, implement formal knowledge sharing means and relieve employees from work burden by reallocating organizational resources so as to enable them to actively take part in knowledge sharing activities. The researcher also stated that rewarding effective knowledge sharing activities and providing adequate IT infrastructure and skills to exploit it have also vital contributions.

Rahel Bekele and Worku Jimma (2013) was researched on the assessment level of KM practices at Jimma University. The scholars studied the research based on the four KM pillars, namely technology, leadership, organization and learning to examine the perceptions of staffs on the current KM practices and a ranking of the four pillars from the most to least problematic and the desired conditions to prioritize among the pillars to improve future KM practices of the university. The research was conducted using quantitative and qualitative study methods. A random sampling technique was used to fill a self-administered structured questioner.

The finding of the Rahel Bekele and Worku Jimma study revealed that the level of perception on KM practices among academic and non-academic staffs of the University is different and technology was least problematic and leadership was the most problematic among the four pillars with respect to the current KM practices in the University.

Balaban and Gundes (2018) have researched KM practices in small and medium architecture, engineering and construction firms in Turkey, qualitative research method to provide an in-depth understanding of KM approaches and problems experienced by the Turkish Architecture, Engineering and Construction firms (AEC) sector professionals. They also used a semi-structured pilot interview method conducted over the telephone. They also used convenient and purposed sampling methods to identify the sample group to reach informational saturation.

The Scholars identified that small scale firms the two largest firms and one medium-sized firm uses the KM system, whereas the remaining firms do not have the KM system and they prefer to use e-mail and server system for sharing explicit knowledge and meetings and face to face interactions for tacit knowledge.

The Scholar presented the finding in three categories, micro size firms, small size firms, and medium-sized firms. Micro size firms are firms that have less than 10 employees. The small-sized firms did not have a KM system that enables them to implicit knowledge. In all micro-sized companies Meetings and face to face communication were common ways of managing tacit knowledge. Capturing and sharing tacit knowledge was not perceived to be a real problem in this category because the owner or manager organizes all job actives and they create, share, store and reuse their knowledge. This solution does not resolve the KM problem as it was realized that a significant amount of information was lost.

The second categories are small-sized firms that have 10 and 49 employees. They were performed 10 interviews with ten companies. From the interview no companies were adopted the KM system, however, the server system is common to all firms. Most of the companies prefer to keep a hard copy of documents and shared them via e-mails. In this category, the major found problems are duplication file confusion. Knowledge will be lost if the computer is damaged, unorganized storing of knowledge and crises happen when an employee staved construction-related information on their personal computer and interim payment document were lost upon the employee's sudden leave.

The third categories are medium-sized firms and which have 50 and 249 employees. Interviews were made on 5 firms. The information technology (IT) system used for the management of knowledge was identified as a common practice in this category. Sharing knowledge through e-mail is reported to result in communication gaps due to a lack of follow-up procedures for tracking e-mail traffics. The respondents mentioned that information updates about revising data are not included in documents that lead to confusion. All respondents have suggested a solution to the dissemination of Building Information Modeling (BIM). One respondent stated that employees were not willing to share unfinished project tasks in a common digital environment.

From the interview, they pointed out that have identified that the availability of the KM system is not found in a local language, and the second one is KM system revisions becoming unavoidable due to technological progress. Balaban and Gundes, (2018) mentioned that (Kivrak et al., 2008; Emmitt, Pasquire and Mertia, 2012; Xiao and Boyd, 2006) irrespective

of firm size, meetings, and face-to-face communication emerge as common ways of managing tacit knowledge.

The research finding stated that as the size of the firm grows, the need for a systematic KM increase. KM solutions are suitable for mainly large scale and to a lesser extent for medium scale enterprises. Small enterprises find complex and affordable. Most of the programs are created for use in a wide range of sectors.

Calitz, A. P., & Cullen, M. (2017) were researched on the application of a knowledge management framework to automotive original component manufacturers. This research was aimed to present an example of the application of a KM framework to automotive original component manufacturers (OEMs). Its objective was to explore KM according to the four pillars that were developed by Stankosky, Calabrese, & Baldanza in 2003. The research was undertaken using a questionnaire to gather quantitative data.

The scholars identified that during that time there was a limited body of research available on the KM implementation frameworks for the automotive industry. The research presented a novel approach to the use of a KM framework to reveal the status of KM in automotive OEMs. At the time of writing, the relationship between the four pillars and the complexity of KMS had not yet been determined. The finding of the research indicated that there should be a need to be improved KM in the automotive OEM industry. According to the relationships investigated, the four pillars, namely leadership, organization, technology, and learning, are considered significant for KM, regardless of the level of KMS complexity.

Magnus O. Igbinovia and Iguehi J. Ikenwe, (2017) have researched on the concept of knowledge and knowledge management; nature and lifecycle of knowledge management. It also reviews the various processes involved in knowledge acquisition and generation, knowledge capture, knowledge storage, knowledge sharing and knowledge application. The study also discusses the various forms of knowledge elicitation to include questionnaire, interview, observation, role reversal technique, and discussion forums as well as the forms of knowledge representation to include report writing, database management system and institutional repositories. This research paper shed light on the various technologies that aids KM practice chief among which are groupware, electronic mail, database management system,

data mart, data warehouse among others. The research is also showed that KM has three components namely processes, people and systems, which must be effectively managed to meet the objective of any knowledge management practice.

Saeed, et al (2010) have conducted a research on knowledge management practices: role of organizational culture. the present study investigates the predicting role of culture attributes (Collaboration, Formalization, Trust and Learning) with reference to knowledge management practices (Knowledge Creation). The study was carried out on purposively selected sample of 813 corporate sector employees at different managerial positions. They were administered questionnaires including Organizational culture scale (OCS) and Knowledge Management Practices Scale (KMPS).

The scholars were used multiple regression analysis results revealed that Collaboration, Formalization and Trust significantly predict Knowledge Management Practices. Furthermore, ANOVA showed significant difference with reference to levels of managerial positions and knowledge management process. The effect of management levels on KM process reveal that the senior management levels are significantly different from middle and lower levels in the way they create knowledge. The possible explanation can be that middle managers perform the role of linking pins in organizations taking directives from the top management and forwarding to the operational managers. The senior and lower managers are more involved in planning and execution of decision and handling of information respectively, hence, more involved in knowledge processing than the middle managers.

Kuei-Hsien Niu (2010) conducted a research on knowledge management practices and organizational adaptation, Evidences from high technology companies in China. The field survey research method was used and data were collected from 170 high technology companies in China. Multiple regression analysis as well as mediation tests were conducted to analyze the data. The study showed that on the integration of two highly related fields, namely KM and Organizational learning into a systematic order to propose a link between knowledge management and organizational adaptation. The finding of study suggests that knowledge acquisition, knowledge refining and knowledge applying are important when a firm is trying to enhance its competence. On the other hand, knowledge creation, knowledge refining,

knowledge sharing and knowledge applying are influential when a firm is trying to introduce the next round of innovation.

Manish Kumar, Souren Paul, and Suresh Tadisina, (2005) was researched on a title named Knowledge Management Practices in Indian Software Development Companies: Findings from An Exploratory Study. They were used an exploratory study. The interview was conducted using a semi-structured method with senior executives in eight software development companies in the years 2001–2002. The focus group was included senior-level executives (such as, partner, vice-president, projects, senior manager projects) who were either championing KM initiatives or supervising software development projects. These companies were eight of the top 20 software development companies in India. Their revenue ranged from US\$20 million to US\$300 million in 2001–2002.

Initially, Manish Kumar, Souren Paul, and Suresh Tadisina, (2005) research was focused on eight leading Indian software companies and gather insight into their KM practices. The finding of the research was Indian software companies had an awareness of the capabilities of KMS and used it to improve productivity, reduce defects, facilitate reuse of software components, and share lessons learned in the execution of projects. The primary focus of KM in these companies was on the distribution of knowledge through Intranet websites. There was a considerable room for enhancements in the current KMS and consequent tangible benefits from the advanced KMS. They had also recommended a technical and social infrastructure that will help enhance the KM capability of software development companies in India.

2.6 Conceptual Framework

According to Kyoratungye K., Jennifer R. Aduwo, Emmanuel M. and Jude L., (2009), they were constructed a new comprehensive framework for IT-based Organizations. The scholars proposed framework consists of two main distinguishing aspects or elements. These are the integrated KM Influences Aspects encompassing environmental, IT and organizational factors and the other one is Knowledge Development Aspects that consist of KM planning, resources,

and activities as shown in the Figure 2.5. These two aspects interact with each other and within each aspect.

The environmental factors related to national infrastructure and culture in the surrounding environment while organizational factors concern corporate variables and information technology factors (over rapping with the environment) support the process of knowledge creation and its sustainability. These factors shape the other key knowledge development aspects of the framework that include knowledge planning, knowledge resources and knowledge activities (processes). Based on the model, it is then possible to clearly identify the key components of the proposed KMF model as being:

i) Knowledge Influences Aspects

a) Environmental Influences

These factors are external factors that affect the KM practice. The factors including governmental, economic, political, social, and educational factors stated by Holsapple and Joshi, (2000); Okunoye, (2004).

b) Information Technology Influences

These are instruments like Local area network (LAN), computers, software that forms the organization information system are internal factors. The external factor that the organization does not have control over elements are the internet, communication system outside LAN and other.

c) Organizational Influences

These influences are related to the factor within the organization and these include knowledge structure, vision, leadership, corporate culture, corporate infrastructure, continuous learning, knowledge worker, measurement, reward, and incentives, among others.

ii) Knowledge Development Aspects

a) Knowledge management planning

Planning is a starting point for knowledge management.

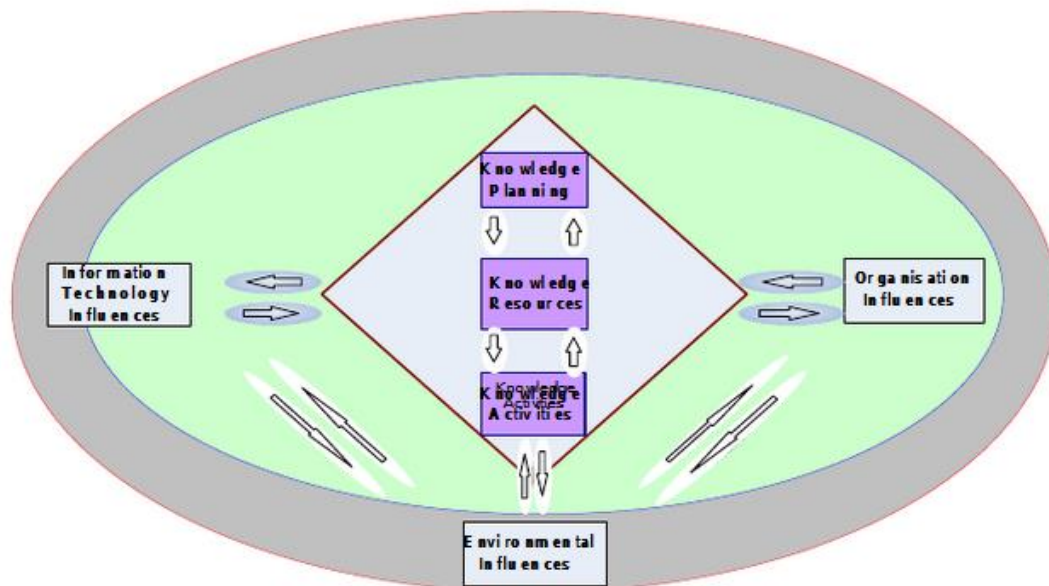
b) Knowledge management resources

There are four resources for knowledge management including human, structure, customer resources (capital) and collaborative technological capital (CTC). CTC allows team members

to collaborate on problems or projects, efficiently capture data and information, and transform it into knowledge. It is against this view that this new knowledge generated from collaborative technology becomes a knowledge resource or capital and hence the use of the term collaborative technological capital.

c) Knowledge Management activities

The knowledge management activities were classified and summarized into six activities basing on the content of each activity. These are knowledge discovery & detection, knowledge capture, knowledge sharing, knowledge reuse, knowledge creation, and knowledge acquisition.



Source: Kyoratungye K., Jennifer R. Aduwo, Emmanuel M. and Jude L., (2009)

Fig 2.5 Comprehensive KM Framework for IT based organization

CHAPTER THREE - RESEARCH DESIGN AND METHODOLOGY

The present research project is aimed at assessing the knowledge management practices and its challenges in bringing organizational change at Info Mind Solutions PLC. Hence, this chapter has described the research design and methodology that has been used while carrying out this study. Under this chapter, research design and approach, source of data and tools, the population of the study, sample size and sampling techniques, methods of data collection, pilot testing and scale reduction, data processing, and analysis, validity and reliability of the data /instruments and ethical consideration were presented.

3.1 Research Design and Approaches

The research design refers to the logical structure of an investigation or inquiry at hand. It states what data is required, from whom, and how it is going to help answer the research questions posed (Jalil, 2013). In this study, a descriptive research design was adopted by using both qualitative and quantitative methods that are mixed research approach. This method is selected because of the fact that the main objective of descriptive research is describing the state of affairs as it prevails at the time of the study (Kothari, 2004). Since the general objective of this research is to assesses the KM practices of the IMS, this method was found to be appropriate for collecting valuable and vast information. It also enables us to gather a detailed description of the existing techniques and practices of KM. Therefore, to assess the KM practice in IMS, a descriptive research design was used.

3.2 Source of Data and Tools

In order to carry out any research activity, information must be gathered from proper sources. Therefore, to achieve the objective of this study both primary and secondary sources of data were used in conducting the research. Accordingly, primary data were collected from employees of IMS through questionnaires and through interviews. A questionnaire is used to get a broad range of information from all staff respondents and interviews used to collect deeper and specific information from selected management members to give depth to the study

as these management members have the expertise and experience to shade light on hidden spots in the research area.

In addition to this, the secondary data were also obtained from different sources like books, relevant literature, research paper, articles, published and unpublished materials, internet, web sites, and different official reports and other similar studies conducted in the field were gathered, reviewed and used to substantiate the intended objectives.

3.3 Sample Size and Sampling Techniques

The research was conducted to assess the Knowledge Management practice of Info Mind Solutions PLC. The total number of IMS staff was 40 when this research was conducted. Since the population size is manageable and the census sampling method is used. There are 8 departments in the organization.

Table 3.1 List of the selected number of staffs with their departments

No	Department	Population size	Sample size
1	Human Resource and Administration	7	7
2	Human Resource Business and Consultancy	9	9
3	Finance	6	6
4	Product Development	4	4
5	Communication	2	2
6	Ethiojobs	5	5
7	Dereja	5	5
8	IT	2	2
	Total	40	40

Source: primary data, 2019

3.4 Methods of Data Collection

To collect primary data from the respondent's the instrument applied was a structured self-administered questionnaire prepared. The questionnaires were structured in a closed-ended and Likert scale model. The use of a Likert scale is to make it easier for respondents to

answer the question in a simple way. Personally, administered questionnaires provide a high response rate, questions can be more detailed, rapport with respondents and usually a convenience. Semi-Structured interviews were chosen to allow new ideas to be brought up during the interview as a result of the interviewee's responses. Then, respondents of the questionnaire were given a brief oral explanation about the questionnaire in groups in addition to the instructions that were detailed at the beginning of each questionnaire in writing. The questionnaires were distributed to be filled by each of the staff individually.

The questionnaire used in this study was constructed from questionnaires used in similar studies. Filled questionnaires were collected on the deadline set at the time of distribution. Data were then analyzed, categorized, summarized and presented in the research paper. Concerning management interview, one to one interview was held with senior management members. More questions were raised as necessary while the interview progressed flexible, in line with the principles of a semi-structured interview. Likewise, information and insights obtained from management members were summarized and reported. The interview was made with two management team members for not more than 30 minutes each.

3.5 Pre-Test

Pre-testing is essential while conducting research to correct instruments that we are using to collect primary data. The draft questionnaires and interview questioners were given to the research advisor and selected 10 staff who are knowledgeable professionals in the area to review the items for clarity and completeness. By incorporating the suggestions and comments given, the instruments were handed to the advisor for the same purpose. After advisor confirmation, the survey questioners and interview questions are distributed. Finally, the nominal scale was used to collect personal information about respondents, closed-ended questioners and a five-point Likert scale were used to empirically measure the response of the staff.

As a result, modifications to some of the questionnaire items were made like removing duplicated questions. Then, participants were informed about, the research (its purpose, benefits, risks and what was expected of them in the research process) and be aware that they would not be obliged to participate in the study and if they wish to participate, their responses

would be anonymous and confidential. Besides, the investigator would explain how the questionnaires would be filled and what care should be taken. After the completion of data collection through the questionnaire, an interview with the selected management IMS was conducted on the agreed-upon schedule. Having completed the data collection, the investigator checked and verified the completeness of the collected questionnaire. Then, the data were tabulated to facilitate the analysis process.

3.6 Data Processing and Analysis

The data collected was edited, organized and tabulated. The qualitative data were encoded, processed, analyzed and interpreted using Statistical Package for Social Science (SPSS). Throughout the analysis process percentages and frequency, tables were employed. Descriptive data analysis was used to analyze the data using percentages and mean. Also, the qualitative data collected by interview. To make the presentation easily understandable, findings are illustrated using tables. Finally, based on the summary of findings, conclusions were drawn and recommendations were given.

3.7 Validity & Reliability of Data

3.7.1 Validity

The questioners are collected from different related validity refers to how well a test measures what it is purported to measure. The researcher checked the validity of questionnaires developed for this study. Before distributing the final questionnaires to the respondents, it was checked and commented by 10 employees of Info Mind Solutions and the advisor of the researcher. The final version of the questionnaires was distributed after incorporating all the comments and feedback obtained from them.

3.7.2 Reliability

Reliability is essentially the dependability of an instrument to test what it was designed to test. It refers to the consistency and dependability of a measuring instrument; using it repeatedly should give the same or similar results every time. According to Hair, et al., (2006), if α is greater than 0.7 and smaller than 0.3 it means that it has high reliability and low reliability respectively.

To measure the internal consistency of the instruments, the questionnaire was distributed to 10 selected employees of Info Mind Solution. And Cronbach's Alpha was found to be, it is above 0.7 therefore, it means it has high reliability. The following Table 3.3 Presents the consistency of measures based on the statistics tool.

The instruments have five sections and each of the sections Cronbach's Alpha is measured. There is a total of 54 items Likert scale instruments. A Cronbach's alpha result for each section is above 0.7 obtained which is well above what is considered acceptable by scholars.

Table3.2 Reliability test

Case processing summary

Cases	N %	N	Percentage
Valid		38	100.0
Excluded		0	0
Total		38	100.0

Table3.3 Cronbach's alpha of all factors

No	Item name	N of Items	Cronbach's Alpha
1	Awareness and understanding level of individuals on KM	7	0.832
2	Leadership support to knowledge manage	13	0.809
3	The availability of proper technology and Infrastructure to KM	6	0.725
4	Barriers to knowledge management	15	0.722
5	Significance of retaining knowledge	13	0.826

3.8 Ethical consideration

When referring to similar studies conducted by other researchers' ethical consideration was taken into account. The researcher acknowledged the work of others" and indicated the sources in this study. The questionnaire was distributed to all staff members who were willing to fill in. The purpose of the questionnaire has been clearly indicated in the questionnaire as well as interview covering notes. Confidentiality of personal information and anonymity of the respondents was ensured.

CHAPTER FOUR - RESULTS AND DISCUSSIONS

The primary focus of the study is to assess the knowledge management practices at Info Mind Solutions. Therefore, this chapter presents the analysis of the responses that were received from the closed-end questionnaires distributed to the employees. In addition to this, this chapter assesses knowledge management practices based on data gathered through semi-structured interviews with two senior management.

4.1 Demographic characteristics of the respondents

Due to manageable population size (N= 40) the researcher has conducted a census. Questioners were distributed to 40 respondents, out of which 38 questioners were completed and returned. Therefore, the response rate was 38 (95%). On the other hand, 2 interviews were conducted with the senior management team members.

The study sought to establish demographic characteristics of respondents based on sex and age of respondents, total years of experience in the IMS and Educational level.

Table 4.1 Sex of respondents

Sex	Frequency	Percent
Male	12	31.6
Female	26	68.4
Total	38	100.0

Source: primary data, 2019

As illustrated in table 4.1, of the total of 38 respondents 12 (31.6%) were males while the remaining 26 (68.4%) were females. From these, we can observe that the workforce of IMS is dominated by a female.

Table 4.2 Age of respondents

Age	Frequency	Percent
18 - 25	6	15.8
26 - 35	27	71.1
36 - 40	2	5.3
Above 40	3	7.9
Total	38	100.0

Source: primary data, 2019

Table 4.2 shows that 6 (15.8 %) of respondents are within the age range 18-25. 27 (71.1%) respondents were within 26 - 35 age range which is the highest percentage of all. 2 respondents (5.3 %) were within 36 - 40 age range and the last 3 (7.9%) of respondents were above 40 years old.

Table 4.3 Educational level of respondents

Educational Level	Frequency	Percent
Diploma	3	7.9
Degree (BSc /BA)	26	68.4
Masters /Second Degree/ M.A/ MSc	9	23.7
Total	38	100.0

Source: primary data, 2019

As shown in table 4.3, most of the respondents hold a bachelor's degree. There were 3 (7.9 %) diploma holders, 27 (68.4 %) degree holders, and 9 (23.7 %) masters holders. This shows that the majority of employees have the essential qualification to accomplish their job and are ready to contribute towards the KM initiative/practice.

Table 4.4 Year of service of respondents

Year of service in IMS	Frequency	Percent
Less than 3 years	21	55.3
3 - 5 Years	13	34.2
6 - 10 years	2	5.3
More than 10 years	2	5.3
Total	38	100.0

Source: primary data, 2019

Data gathered through questioner regarding how long the respondents serve the organization as shown in table 4.4, 21 (55.3 %) of the respondents serve less than 3 years which is the highest percentage of all. 13 (34.2 %) of the respondent have worked in the organization between 3 and 5 years. 2 (5.3%) of the respondent have served the organization for 6 - 10 years and the remaining 2 (5.3%) of the respondent have served the organization for more than 11 - 15 years. This shows that the majority of the respondents served up to 5 years of service at the organization.

4.2 Research Findings and Discussion

4.2.1 Individual awareness and understanding level on knowledge management

Table 4.5 Awareness and understanding level of individuals on KM

Statement	Measurement	SDA	DA	N	A	SA	Mean	SD
a) I have a clear understanding of the concept of 'knowledge management'.	Frequency	-	1	5	12	20	4.34	0.81
	Percent	-	2.6	13.2	31.6	52.6		
b) KM is merely a platform for repository/database for electronic resources.	Frequency	-	1	5	16	16	4.24	0.81
	Percent	-	2.6	13.2	42.1	42.1		
c) KM is a management tool to help staff acquire and share knowledge.	Frequency	-	1	4	20	13	4.18	0.73
	Percent	-	2.6	10.5	52.6	34.2		

Statement	Measurement	SDA	DA	N	A	SA	Mean	SD
d) KM contributes significantly to my day-to-day operations.	Frequency	-	2	4	18	14	4.16	0.82
	Percent	-	5.3	10.5	47.4	36.8		
e) KM has no relevance for my job and I do not get any added value.	Frequency	16	18	4	-	-	1.68	0.66
	Percent	42.1	47.4	10.5	-	-		
f) KM is about gaining, sharing, retaining and using knowledge.	Frequency	-	1	5	18	14	4.18	0.76
	Percent	-	2.6	13.2	47.4	36.8		
g) There is no relationship between KM and organizational efficiency.	Frequency	10	25	3	-	-	1.82	0.56
	Percent	26.3	65.8	7.9	-	-		

Source: primary data, 2019

Index: SDA= Strongly Disagree, DA=Disagree, N=Neutral, A =Agree SA=Strongly Agree, SD = Standard Deviation

As shown in Table 4.5, most of the respondents have a clear understanding of the concept of knowledge management mean of 4.34. There is a clear understanding of the KM as a platform for repository/database for electronic resources with a mean of 4.24. Most of the respondents agreed that they have an understanding of KM as a management tool to help them to acquire and share knowledge with a mean of 4.18. Most of the respondents have clearly understood the KM contribute to their day-to-day operation with a mean of 4.16. 0.66 of mean results show that respondents strongly disagreed on the relevance of KM on their job and it does not have any added value. The mean result 4.18 show that respondents clearly understood that KM is about gaining, sharing, retaining and using knowledge. 1.82 of the Mean result shows that respondents are strongly agreed that KM has a relation with organizational efficiency. Generally, from the above result, most of the respondents have a clear awareness and understanding of KM.

4.2.2 Leadership support to Knowledge Management

Table 4.6 Leadership support to knowledge manage

Statement	Measurement	SDA	DA	N	A	SA	Mean	SD
a) Senior management is usually able to provide sufficient resources as required for the implementation of various projects or initiatives.	Frequency	-	11	6	11	10	3.53	1.17
	Percent	-	28.9	15.8	28.9	26.3		
b) Management usually involves line staff to establish their needs and get their buy-in when implementing projects or initiatives.	Frequency	-	1	6	16	15	4.18	0.80
	Percent	-	2.6	15.8	42.1	39.5		
c) Senior or experienced personnel are valued for their knowledge and expertise.	Frequency	-	-	2	17	19	4.45	0.60
	Percent	-	-	5.3	44.7	50.0		
d) A strategic vision and goals for knowledge management have been established by senior management.	Frequency	18	15	5	-	-	1.66	0.70
	Percent	47.4	39.5	13.2	-	-		
e) Knowledge management is seen as an important practice in IMS.	Frequency	18	15	5	-	-	1.66	0.70
	Percent	47.4	39.5	13.2	-	-		
f) IMS basic values & purpose emphasize the gaining, sharing, retaining and using of knowledge.	Frequency	-	7	13	16	2	3.34	0.84
	Percent	-		34.2	41.1	5.3		
g) IMS has an open, encouraging & supportive culture.	Frequency	-	-	6	13	19	4.34	0.74
	Percent	-	-	15.8	34.2	50.0		
h) IMS has policies and programs intended to improve worker retention.	Frequency	-	5	5	13	15	4.00	1.04
	Percent	-	13.2	13.2	34.2	39.5		
i) IMS uses strategic partnerships to acquire knowledge.	Frequency	16	14	4	4	-	1.89	0.98
	Percent	42.1	39.5	10.5	10.5	-		
j) IMS is good at the capture and use of knowledge.	Frequency	6	11	9	12	-	2.71	1.08
	Percent	15.8	28.9	23.7	31.6	-		
k) Management increases efficiency by using knowledge to improve general productivity.	Frequency	-	7	10	21	-	3.37	0.78
	Percent	-	18.4	26.3	55.3	-		
l) Management identifies and protects strategic knowledge present within the company.	Frequency	-	2	10	21	5	3.76	0.75
	Percent	-	5.3	26.3	55.3	13.2		
m) Capturing of critical know-how (e.g. project information etc.) forms part of our daily routine.	Frequency	-	2	10	21	5	3.76	0.75
	Percent	-	5.3	26.3	55.3	13.2		

Source: primary data, 2019

Index: SDA= Strongly Disagree, DA=Disagree, N=Neutral, A =Agree SA=Strongly Agree,
SD = Standard Deviation

From table 4.6. with a 3.53 mean result shows that respondents are agreed that senior management provides resources for the implementation of various projects. 4.18 of the mean result shows that respondents are agreed that management is involved in line staff to establish their needs and get their buy-in when implementing projects or initiatives. 4.58 of mean result shows that senior or experienced personnel are valued for their knowledge and expertise. 1.55 of the mean result shows that the organization does not have an established strategic vision and goals for knowledge management. 2.97 of the mean result shows that the KM practice is less or not intermediate. 3.26 of mean results show that the three is an intermediate emphasize values & purpose on gaining, sharing, retaining and using of knowledge. 4.37 of the mean result shows that IMS has a great encouraging & supportive culture and an open environment.

On the other hand, a 4.03 of mean result shows that IMS is greatly working on improving worker retention using its policy and programs.4.26 of the mean result shows that IMS have a great strategic partnership to acquire knowledge. 1.61 of the mean result shows that IMS does not have a strategic partnership to acquire knowledge. 3.03 of the mean result shows that there is a moderate practice of the capturing and use of knowledge. 3.29 of the mean result shows that management is moderately using knowledge to improve general productivity. 3.76 of the mean result shows that management is good at identifying and protecting strategic knowledge present within the company. 3.5 of the mean result shows that there is a good practice of capturing critical know- forms part of our daily routine.

4.2.3 Availability of proper Technology and Infrastructure to KM

Table 4.7 The availability of proper technology and Infrastructure to KM

Statement	Measurement	SDA	DA	N	A	SA	Mean	SD
a) IMS has an effective cataloguing and archiving procedures are there for managing a Knowledge	Frequency	19	11	5	3	-	1.79	0.96
	Percent	50.0	28.9	13.2	7.9	-		
b) IMS has internet and intranet access procedural manual/documentation of Knowledge sharing mechanism.	Frequency	19	11	5	3	-	1.79	0.96
	Percent	50.0	28.9	13.2	7.9	-		
c) The information which is stored in the company information system is managed to ensure validity, reliability and that information is up to date.	Frequency	-	2	6	25	5	3.87	0.70
	Percent	-	5.3	15.8	65.8	13.2		
d) The organizational information system is accessible throughout the company to all employees.	Frequency	-	-	6	21	11	4.13	0.66
	Percent	-	-	15.8	55.3	28.9		
e) Knowledge management is seen as an important practice in IMS.	Frequency	14	16	5	3	-	1.92	0.91
	Percent	36.8	42.1	13.2	7.9	-		
f) Technology is a key enabler in ensuring that the right information is available to the right people at the right time	Frequency	-	-	5	22	11	4.16	0.63
	Percent	-	-	13.2	57.9	28.9		

Source: primary data, 2019

Index: SDA= Strongly Disagree, DA=Disagree, N=Neutral, A =Agree SA=Strongly Agree, SD = Standard Deviation

From table 4.7, show that 1.79 of the mean result indicate that IMS does not have effective cataloguing and archiving procedures for managing knowledge. 1.79 of mean result show that IMS does not have an internet and intranet access procedural manual/documentation of the knowledge sharing mechanism. 3.87 of mean result show that the stored company information validity, reliability of information is managed properly. 4.13 of the mean result shows that the organization's information system is easily accessible to all staff. 1.92 of the mean result shows that KM is not seen as an important practice. 4.16 of the mean result shows that technology is a key enabler for the right information is available to the right people at the right time.

4.2.4 Barriers to Knowledge Management

Table 4.8 Barriers to knowledge management

Statement	Measurement	SDA	D	N	A	SA	Mean	SD
a) IMS does not have a knowledge management strategy/policy for the transfer of knowledge among existing and leaving employees.	Frequency	-	-	2	25	11	4.24	0.54
	Percent	-	-	5.3	65.8	28.9		
b) Staff with expert knowledge are not willing and motivated to share.	Frequency	8	22	8	-	-	2.00	0.65
	Percent	21.1	57.9	21.1	-	-		
c) The working environment and the nature of work being performed is not conducive for knowledge transfer/sharing.	Frequency	13	10	8	7	-	2.24	1.12
	Percent	34.2	26.3	21.1	18.4	-		
d) Internal systems/processes are vague and lengthy.	Frequency	14	17	5	2	-	1.87	0.84
	Percent	36.8	44.7	13.2	5.3	-		
e) Time is not sufficient to acquire or learn new knowledge.	Frequency	10	22	6	-	-	1.89	0.64
	Percent	26.3	57.9	15.8	-	-		
f) There exists a culture of initiating everything from scratch/reinventing the wheel.	Frequency	7	19	10	2	-	2.18	0.80
	Percent	18.4	50.0	26.3	5.3	-		
g) There is a lack of trust among knowledge workers and dominance of “knowledge is power” attitude.	Frequency	9	20	7	2	-	2.05	0.80
	Percent	23.7	52.6	18.4	5.3	-		
h) The existence of fear of job security and loss of credit if one shares knowledge/skills to others.	Frequency	8	23	5	2	-	2.03	0.75
	Percent	21.1	60.5	13.2	5.3	-		
i) There is no reward/recognition for knowledge sharing initiatives.	Frequency	-	-	4	24	10	4.16	0.59
	Percent	-	-	10.5	63.2	26.3		
j) There is a lack of information on whom to consult on specific knowledge/skill areas and where to look for information/guidance.	Frequency	9	20	7	2	-	2.05	0.80
	Percent	23.7	52.6	18.4	5.3	-		
k) Cultural factors block opportunities to learn from each other.	Frequency	9	20	7	2	-	2.05	0.80
	Percent	23.7	52.6	18.4	5.3	-		
l) There is a lack of experts who manage the knowledge management system.	Frequency	25	10	3	-	-	1.42	0.64
	Percent	65.8	26.3	7.9	-	-		
m) There is no proper knowledge management tools and infrastructure	Frequency	9	20	7	2	-	2.05	0.80
	Percent	23.7	52.6	18.4	5.3	-		
n) There is a lack of leadership support.	Frequency	-	-	18	14	6	3.68	0.73
	Percent	-	-	47.4	36.8	15.8		

Statement	Measurement	SDA	D	N	A	SA	Mean	SD
o) There is a turnover of skilled employees.	Frequency	8	17	8	5	-	2.26	0.95
	Percent	21.1	44.7	21.1	13.2	-		

Source: primary data, 2019

Index: SDA= Strongly Disagree, DA=Disagree, N=Neutral, A =Agree SA=Strongly Agree, SD = Standard Deviation

From the above table; a 4.24 mean result indicates that IMS currently does not have KM strategy/ policy for the transfer of knowledge among exiting and leaving employees. 2.00 of the mean result shows senior experts are willing and motivated to share their knowledge. 2.24 of the mean result shows that the working environment and the nature of work being performed is conducive for knowledge transfer/sharing. 1.87 of mean result shows that the organization's internal systems/ processes are clear and precise. 1.89 of the mean result shows that time can do affect the employees to learn or acquire new knowledge or there is sufficient time to acquire or learn new knowledge. 2.18 of mean result shows that there is no culture of initiating everything from scratch and it shows that they are reusing of existing knowledge.

On the other hand, 2.05 of the mean result shows that there is no lack of trust among knowledge workers and there is no dominance of “knowledge is power” attitude. 2.03 of the mean result shows that employees do not have a fear of job security and loss of credit if they share knowledge/skills to others. 4.16 of the mean result shows that there is no reward/recognition for knowledge sharing initiatives. 2.05 of the mean result shows that there is no lack of information on whom to consult on specific knowledge/skill areas and where to look for information/guidance. 2.05 of the mean result shows that there no cultural factors block opportunities to learn from each other. 1.42 of the mean result shows that there is no lack of experts who manage the knowledge management system. 2.05 of the mean result shows that there is a proper knowledge management tools and infrastructure for KM. 3.68 of the mean result show that KM practice lacks leadership support. 2.26 of the mean results shows that the turnover of skilled employees is less or minimal.

4.2.5 Knowledge Management for organizational learning and organizational change

Table 4.9 Learning on an individual level

Learning on an individual level is achieved by		
Statements	Frequency	Percentage
i) On the job training ii) Formal training workshops iii) Through the company's intranet or internet iv) other online learning platform tools	38	100.0
Total	38	100.0

Source: primary data, 2019

Table 4.9 shows that learning at the individual level is 38 (100%) of respondents develop their knowledge or learn using on the job training, formal training workshops, by using the company's intranet and internet resources and from other online learning platforms.

Table 4.10 Learning on a team or departmental level

Learning on a team or departmental level is achieved by		
Statements	Frequency	Percentage
i) On the job training ii) Formal training workshops iii) Through the company's intranet or internet iv) other online learning platform tools	38	100.0
Total	38	100.0

Source: primary data, 2019

Table 4.10 indicates that learning at the team or departmental level is 38 (100%) of respondents develop their knowledge or learn using on the job training, formal training workshops, by using the company's intranet and internet resources and from other online learning platforms.

Table 4.11 Learning on an organizational level

Learning on an organizational level is achieved by		
Statements	Frequency	Percentage
i) Recording information in an organizational database ii) Recording information on the organization's intranet or internet	38	100.0
Total	38	100.0

Source: primary data, 2019

Table 4.11 shows that learning on at an organizational level is achieved by 38 (100%) of respondents show that by recording information in an organizational database and recording information on the organization's intranet or internet.

Table 4.12 Significance of retaining knowledge

Statement	Measurement	SDA	DA	N	A	SA	Mean	SD
a) Improving the IMS competitive advantage	Frequency	-	-	8	22	8	4.0	0.65
	Percent	-	-	21.1	57.9	21.1		
b) Improving customer satisfaction	Frequency	-	3	-	26	9	4.08	0.74
	Percent	-	7.9	-	68.4	23.7		
c) Introducing innovations	Frequency	-	1	-	20	17	4.39	0.63
	Percent	-	2.6	-	52.6	44.7		
d) Inventory reductions	Frequency	-	-	8	21	9	4.03	0.67
	Percent	-	-	21.1	55.3	23.7		
e) Reduction of waste	Frequency	-	-	3	21	14	4.29	0.61
	Percent	-	-	7.9	55.3	36.8		
f) Employee training and development	Frequency		3	2	26	7	3.97	0.753
	Percent		7.9	5.3	68.4	18.4		
g) Cost reduction	Frequency		2	5	23	8	3.97	0.75
	Percent		5.3	13.2	60.5	21.1		
h) Revenue growth	Frequency		2	6	22	8	3.95	0.76
	Percent		5.3	15.8	57.9	21.1		

Statement	Measurement	SDA	DA	N	A	SA	Mean	SD
i) Better decision-making	Frequency			8	18	12	4.11	0.72
	Percent			21.1	47.4	31.6		
j) Improving the quality of service	Frequency		1	5	9	23	4.42	0.82
	Percent		2.6	13.2	23.7	60.5		
k) Reducing delivery time	Frequency				10	28	4.74	0.44
	Percent				26.3	73.7		
l) Improving worker efficiency or productivity	Frequency		2	9	6	21	4.21	0.99
	Percent		5.3	23.7	15.8	55.3		
m) Prevented duplicate research and development	Frequency		3	1	8	26	4.50	0.89
	Percent		7.9	2.6	21.1	68.4		

Source: primary data, 2019

Index: SDA= Strongly Disagree, DA=Disagree, N=Neutral, A =Agree SA=Strongly Agree, SD = Standard Deviation

From table 4.12, it can be seen that a mean score (4.0) shows that the majority of respondents are agreed that learning can improve organizations a competitive advantage. 4.08 of the mean result shows that most respondents are agreed that learning can improve Improving customer satisfaction. 4.39 of the mean of results shows that most respondents are agreed that learning can introduce innovations. 4.03 of the mean result shows that most of the respondents are agreed that learning can Inventory reductions. 4.29 of the mean result shows that most of the respondents are agreed that learning improves the reduction of waste. 3.97 of the mean result shows that most respondents are agreed that learning improves employee training and development.

On the other hand, 3.97 of the mean result shows that most respondents are agreed that learning improves on reducing costs. 3.95 of the mean result shows that most of the respondents are agreed that learning increases the revenue of the organization. 4.11 of the mean result shows that most of the respondents are agreed that learning improves employee's decision-making skills. 4.42 of the mean result shows that most of the respondents are agreed that learning improves the quality of service. 4.74 of the mean of result show that most respondents are agreed that learning highly improve the delivery time of service requests. 4.21 of the mean result shows that most respondents are agreed that learning highly improves

worker efficiency or productivity. 4.5 of the mean result shows that the majority of respondents are agreed that learning highly prevents duplicate research and development.

4.2.6 Summary of the interview conducted

The interview was conducted with two senior management who are knowledgeable in the research area. There are eight questions that were answered by the selected respondents. A semi-structured interview was used to get additional information when conducting the interview.

Senior managers were asked whether the organization has a policy or strategy that helps to manage KM practice in the organization. Both of the interviewees stated that currently, IMS does not have an established strategic vision and goals for KM Practice. It also does not have an internet and intranet access procedural manual/documentation of the knowledge sharing mechanism. In addition to this, there is no effective cataloguing and archiving procedures are there for managing a Knowledge.

The researcher inquired senior management about the KM practices of their organization in general and specific to their department. One senior manager described that *“as a tech-based company, we have an electronic internet and intranet-based storage of knowledge that has been created at the individual level, group /team level and organizational level. And the knowledge is accessible to all staff according to their working department and role.”* On the other hand, the other manager stated that *“we share knowledge via collaboration tools like G-suits, VoIP (Voice over internet telephony) communication tools like skype, Customer relation management (CRM) application, collaboration tools, email and conduct training sessions twice a month. All employees share the knowledge they experience during work using presentation tools and the presentation is also recorded and is easily accessible to all staff via shared drives. Amongst ourselves (the team), we share our acquired knowledge via the G-suite platform and the knowledge that has been created while we are working or through our experience.”*

Concerning their assessment of individual attitudes towards KM effectiveness in relation to organizational change the respondents, answered as follows.

While one respondent believes that *“employees are motivated to share their knowledge on training session, held twice a month. There is a good awareness of knowledge management and this enables others to gain knowledge and improve their performance.”* The other respondent also further supported this statement by agreeing that *“most of the employees at an individual level have a positive attitude towards knowledge management. They will share their knowledge using the resources we have efficiently.”*

Both respondents agreed that the barriers or challenges for KM practice in the organization is related to many factors, including, lack of leadership support, a lack of a strategic vision and goals for KM practice, a lack of reward/recognition for knowledge sharing initiatives, a lack of an internet and intranet access procedural manual/documentation of knowledge sharing mechanism, a lack of effective cataloguing and archiving procedures for managing a Knowledge, a lack of a strategic partnership to acquire knowledge and KM is not seen as an importance practice even if there is an awareness.

Senior managers were asked about the role leadership in KM practice in the organization. As for the role leadership plays in KM practices, both respondents answered that even if leadership is basic for KM practice the current leadership does not give due attention towards KM practice and hinders it. On the other hand, senior managers were asked about the benefit of KM on organizational learning and change questions, both respondents stated that a positive addition to their current KM will help by reducing waste , cost and increase revenue, maximizing customer satisfaction, increase productivity, reduce inventory, increase service delivery time by increasing employee’s efficiency, increases decision-making skill using the knowledge repositories.

Overall, the organizational culture of IMS is a conducive environment that enables employees to share their knowledge with others. Both respondents stated that to improve the current KM practice they have to address the barriers or challenges that have been mentioned in the barriers section.

CHAPTER FIVE - SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1 Introduction

This chapter deals with the summary of major findings, conclusions, and recommendations for the research in line with the objectives of the study. The recommendations part suggests possible solutions to the major findings of the study.

5.2 Summary of the major findings

The purpose of this chapter is to assess the knowledge management practice at Info Mind Solutions. Knowledge is recognized as a strategic imperative of organizations. It is known that knowledge is power. When an organization does not have a proper knowledge management system (KMS) the organization may get memory loss and brain drain. The efficient management of organizational knowledge can increase the performance of the organization supporting an organization to make intelligent business decisions. Therefore, one has to keep and maintain knowledge to have a competitive advantage.

This part of the section tries to summarize the key findings of the study. The result of the research states the following major findings in relation to KM practice: -

- ❖ The majority of the staff have a clear understanding of KM practices.
- ❖ The organization does not have an established strategic vision and goals of knowledge management
- ❖ The organization does not have an internet and intranet access procedural manual/documentation of knowledge sharing mechanism and there is no effective cataloguing and archiving procedures are there for KM.
- ❖ The organization does not have a KM strategy/policy for the transfer of knowledge among existing and leaving employees.
- ❖ The result shows that KM is not seen as an important practice in the organization.
- ❖ There is an open, encouraging & supportive culture however due to lack of leadership support KM practices are adversely affected.

- ❖ There are no strategic partnerships to acquire knowledge.
- ❖ There is a lack of leadership support for KM practices.
- ❖ There is no reward/recognition for knowledge sharing initiatives.
- ❖ Staff with expert knowledge are willing and motivated to share.
- ❖ Learning at individual and group/ team level is majorly achieved by on the job training, formal training workshops, through the company's intranet or internet and other online learning platform tools whereas at the organization level is achieved by using recording information in an organizational database and recording information on the organization's intranet or internet.
- ❖ Senior management teams and other employees have a clear understanding of Knowledge management of organizational learning and organizational change, but they do not give much attention to improving the KM practices.

5.3 Conclusions

The following conclusions are made based on the review of the related literature and data obtained from respondents and secondary data. All conclusions and recommendations are presented as per the research objectives of this study.

- ❖ From the study, individuals are highly aware of the concept of KM,
- ❖ From the study, it is possible to conclude that there is less or minimal support of leadership on the KM practices and KM does not see as important.
- ❖ The study also shows that the availability of proper technology is sufficient for KM practices.
- ❖ The study identified that even if there is no proper guideline and policy for KM the organizational culture is suitable for knowledge management. The staff is willing to share their knowledge with others and this enables all staff to gain knowledge using the culture the employees have.
- ❖ The study, it is possible to conclude that the major barriers or challenges to KM are clearly identified below.
- ❖ The study identified that there is a lack of strategic vision and goal for knowledge management,

- ❖ The study identified that there is a lack of a strategic vision and goal, there is no internet and intranet access procedural manual/documentation of the knowledge sharing mechanism.
- ❖ The study identified that there is a lack of effective cataloguing and archiving procedures for KM,
- ❖ The study identified that KM is seen as a low priority from the management side,
- ❖ The study identified that IMS does not have a strategic partnership to acquire knowledge and
- ❖ The study identified that there is no reward/recognition for knowledge sharing initiatives by the employees

5.4 Recommendations

Based on the results of the analysis and conclusion made the following recommendations are forwarded which helps IMS to assess its Knowledge management practice.

- ❖ It is recommended that the management should prepare the strategic vision and goal for KM,
- ❖ It is recommended that the management team has to give attention to the use of KM to improve organizational learning and development,
- ❖ It is recommended that there should be a reward/recognition for knowledge sharing initiatives by the employees,
- ❖ It is recommended that to increase the capacity of the organization on knowledge management the organization has to establish a strategic partnership to acquire knowledge from external sources and
- ❖ It is recommended that the management should prepare an internet and intranet access procedural manual/documentation of knowledge sharing mechanism and prepare an effective cataloguing and archiving procedures for KM.

REFERENCES

1. Adhikari, D. (2010). Knowledge management in academic institutions. *International Journal of Educational Management*, 24(2), 94-104.
2. Balaban-Ökten, B., and Gundes, S., 2018. Knowledge management in small and medium architecture, engineering and construction firms in Turkey. *The electronic journal of knowledge management*, 16(2), pp. 155-169, ISSN 1479-4411 Retrieved from www.ejkm.com
3. Bali, R., Wickramasinghe, N., & Lehaney B. (2009). Knowledge management primer, London: Routledge
4. Botha A, Kourie D, & Snyman R, (2008). Coping with continuous change in the business environment, knowledge management and knowledge management technology, Chandice Publishing Ltd.
5. Calitz, A. P., & Cullen, M. (2017). The application of a knowledge management framework to automotive original component manufacturers. *interdisciplinary journal of information, Knowledge, and Management*, 12, 337- 365.
<https://doi.org/10.28945/3897>
6. Call, D., 2005. Knowledge management - Not rocket science. *Journal of knowledge management*, 9(2), pp.19-30.
7. Caroline De Brún, (2005). ABC of knowledge management, *NHS national library for health: Knowledge management specialist library*.
8. Dalkir, K. (2005). Knowledge management in theory and practice. McGill University
9. Emil Hajric, (2018). Knowledge management system and practices: *A Theoretical and Practical Guide for Knowledge Management in Your Organization*. Retrieved from
https://www.academia.edu/38795814/Knowledge_Management_A_Theoretical_And_Practical_Guide_Emil_Hajric_PDF_
10. Filemon A. Uriarte, (2008). Introduction to knowledge management, Asean Foundation, Jakarta, Indonesia, ISBN No. 978 - 979 - 19684 - 0 - 9

11. Geoffrey Marczyk, David DeMatteo, and David Festinger, (2005). Essentials of research design and methodology, John Wiley & Sons, Inc., Hoboken, New Jersey, Canada., pp 209-219
12. Haftamu Ebuy, Rahel Bekele and Worku Jimma, (2013), Assessment of knowledge management practices in Jimma University: Consideration of technology, leadership, organization and learning pillars Retrieved from <https://www.researchgate.net/publication/265380795>
13. Hair, J. F. J., Anderson, R. E., Tatham, R. L., & Black, W.C (2006). Mutivariate data analysis (5th ed.).New Jersey: Prentice-Hall
14. Haradhan Kumar Mohajan, (2016), Sharing of tacit knowledge in organizations: *a review. american journal of computer science and engineering*. Vol. 3, No. 2, pp. 6-19.
15. Holsapple, C. and Joshi, K. (2000). An Investigation of Factors that Influence the Management of Knowledge in Organisation. *Journal of Strategic Information System*, (9:2-3), 2000, pp. 235-261
16. Holsapple, C. and Joshi, K.(1999). Description and Analysis of Existing Knowledge Management Frameworks. In *Proceedings of the 32nd Hawaii International Conference on System Sciences*, 1999.
17. Islam, N. (2006). AIT Bangkok. International conference on technology based developments: Strategies and options for Pakistan.
18. Jalil, M.M. (2013). Practical guidelines for conducting research, donor committee for enterprise development (DCID).
19. John Girard, and JoAnn Girard, (2015). Defining knowledge management: toward an applied compendium, *international institute for applied knowledge management*, online journal of applied knowledge management Vol. 3, Iss 1
20. Kebede Michael, (2016). Assessment of knowledge management practice: the case of federal democratic republic of Ethiopia ministry of national defense, Addis Ababa University
21. Kivrak, S., Arslan, G., Dikmen, I. and Birgonul, M.T., 2008. Capturing knowledge in construction projects: knowledge platform for contractors. *Journal of management in engineering*, Vol 24 No. 2, pp.87–95.

22. Kothari, C. (2004). *Research methodology methods and techniques*. New Delhi: New Age International (P) Limited.
23. Kuei-Hsien Niu, (2010). Knowledge management practices and organizational adaptation, *Journal of Strategy and Management*, Vol. 3 Iss 4, pp. 325 – 343, <http://dx.doi.org/10.1108/17554251011092692>
24. Kyorantungye K., Jennifer R. Aduwo, Emmanuel M. and Jude L., (2009). Knowledge Management Frameworks: A Review of Conceptual Foundations and a KMF for IT-based Organizations, *Uganda Technology & Management University*, Retrieved from <https://www.researchgate.net/publication/242666295>
25. Magnus O. Igbinovia and Iguchi J. Ikenwe, (2017). Knowledge management: processes and systems, *journal of information and knowledge management*. Vol. 8 No. 3, pp. 26 – 38, <https://dx.doi.org/10.4314/ijikm.v8i3.3>
26. Manish Kumar, Souren Paul and Suresh Tadisina, (2005). Knowledge Management Practices in Indian Software Development Companies: Findings from An Exploratory Study, *Asian Academy of Management Journal*, Vol. 10, No. 1, 59–78
27. Martin Frické, (2009). The knowledge pyramid: a critique of the DIKW hierarchy, The University of Arizona, Tucson, *USA Journal of Information Science*, Vol 35 No.2, pp. 131–142, DOI: 10.1177/0165551508094050
28. Markus, L. (2001). Toward a theory of knowledge reuse: types of knowledge reuse situations and factors in reuse success. *Journal of Management Information Systems*, summer 2001, Vol. 18, No. 1, pp. 57-93.
29. Saeed, Tahir, Tayyab, Basit, M. Anis-Ul-Haque , Ahmad, H. Mushtaq and Chaudhry, Anwar,(2010). Knowledge Management Practices: Role of organizational culture. *ASBBS Annual Conference: Las Vegas*, Vol. 17 No. 1
Retrieved from <https://pdfs.semanticscholar.org/b59b/e0888aea984fe003d423991256b30ae47a43.pdf>
30. Sanjay Mohapatra Rahul Thakurta , (2014), "Knowledge management practices of an IT company", *Emerald Emerging Markets Case Studies*, Vol. 4 Iss 2, pp. 1 – 27 <http://dx.doi.org/10.1108/EEMCS-07-2013-0130>

31. Singh, S. (2008), "Role of leadership in knowledge management: a study", *Journal of Knowledge Management*, Vol. 12 No. 4, pp. 3-15.
<https://doi.org/10.1108/13673270810884219>
32. Smith, R.D., and Bollinger, A.S., (2001), Managing organizational knowledge as a strategic asset. *Journal of knowledge management*, 5(1), pp.8-18.
33. Sohail, M. and Duad, S. (2009). Knowledge sharing in higher education, institutions: Perspectives From Malaysia. *The Journal of Information and Knowledge Management Systems*, Vol 39 No. 2, pp 125-142, Retrieved from
https://www.academia.edu/18073585/KNOWLEDGE_SHARING_IN_HIGHER_EDUCATION_INSTITUTIONS_PERSPECTIVES_FROM_MALAYSIA
34. Spiegler, I. (2000). Knowledge Management: A New idea or a Recycled concept?, *Communication of Association for Information System*, Vol 3 No 14, pp. 1-24.
35. Stankosky, M. A. (2005). Advances in knowledge management: University research toward an academic discipline. Retrieved from
<http://v5.books.elsevier.com/bookscat/samples/9780750678780/9780750678780.PDF>
36. Stankosky, M. F., Calabrese, F., & Baldanza, C. (2003). A systems approach to engineering a knowledge management system. Washington, DC: Management Concepts Press
37. Tesfaye Berhane, (2015) Assessment of the knowledge sharing practice: The case of World Food Program, Ethiopia, Addis Ababa University
38. Thomas H. Davenport and Laurence Prusak, (2000). How organization manage what they know, *Harvard business school press*, Boston, Massachusetts.
39. Wiig, K. M. (1993). Knowledge management foundations, schema press, Texas.
40. W.R. King (ed.), (2009). Knowledge management and organizational learning, *Annals of Information Systems*, Springer Science+Business Media, LLC
41. Yeshiareg Temtime, Worku Jimma*, Mniyichel Belay, 2017 Knowledge management practices on product improvement for dire dawa national and ture cement factories in Ethiopia 2015; Cross-Sectional Survey Method, Department of Information Science, Jimma University, Jimma, Ethiopia, Science and Technology 2017, 7(3): 61-71 DOI: 10.5923/j.scit.20170703.01

ANNEXES

Survey Questioners

St. Mary's University
School of Graduate Studies
Masters of Business Administration (MBA)

Dear respondent,

First of all, I would like to thank you in advance for dedicating your precious time to fill out this questionnaire. I am conducting research on “**An Assessment of Knowledge Management Practices: In the case of Info Mind Solutions PLC**” for the Master’s thesis. The purpose of this study is to fulfill a thesis requirement for the Masters of Business Administration in General Management at St. Mary’s University. To make the study more fruitful, your response to the given question would be necessary.

The questions should only take about 30 minutes of your time. All of your responses to the given questions would be used for the research and will be kept strictly confidential. Your help with this research is strictly voluntary. So, I will collect the completed paper from you on time of completion, a maximum of one week. Finally, the results of this study will be presented publicly at Saint Mary University.

Dear respondents! Please note that:

- ✓ You should not conduct other respondents to fill it
- ✓ Please give more attention and complete as fast as possible
- ✓ complete and return it to the data collector

Thank you in advance for your time and kind cooperation. Please don't hesitate to contact me with any comments and questions.

Nigussie Hailu, e- mail..... Telephone number.....

I. Demographic profile

For the item below put a "√"mark on the following box to indicate your personal information

1. Sex : Male Female

2. Age: 18-25 26-35 36 – 40 Above 40

3. Your educational level?

Diploma B.Sc./ BA M.Sc. /MA PhD

4. Total years of experience in the organization?

< 3 years 3-5 years 6-10 year 11- 15 years Above 15 years

II. Study Related Question

A. Individual understanding of the concept of KM

5. What is your awareness and understanding of about the concept of KM and sharing in IMS using the following scale?

1 Strongly Disagree; 2 Disagree; 3 Neutral; 4 Agree; 5 Strongly Agree

Statement	1	2	3	4	5
a) I have a clear understanding of the concept of 'knowledge management'.					
b) It is merely a platform for repository/database for electronic resources.					
c) It is a management tool to help staff acquire and share knowledge.					
d) KM contributes significantly to my day-to-day operations.					
e) KM has no relevance for my job and I do not get any added value.					
f) KM is about gaining, sharing, retaining and using knowledge.					
g) There is no relationship between KM and organizational efficiency.					

B. Leadership

6. How do you rate leadership support to manage and share knowledge in IMS using the following scale?

5 Strongly Agree; 4 Agree; 3 Neutral; 2 Disagree; 1 Strongly Disagree;

Statement	5	4	3	2	1
a) Senior management is usually able to provide sufficient resources as required for the implementation of various projects or initiatives.					
b) Management usually involves line staff to establish their needs and get their buy-in when implementing projects or initiatives.					
c) Senior or experienced personnel are valued for their knowledge and expertise.					
d) A strategic vision and goals for knowledge management have been established by senior management.					
e) Knowledge management is seen as an important practice in IMS.					
f) IMS basic values & purpose emphasize the gaining, sharing, retaining and using of knowledge.					
g) IMS has an open, encouraging & supportive culture.					
h) IMS has policies and programs intended to improve worker retention.					
i) IMS uses strategic partnerships to acquire knowledge.					
j) IMS is good at the capture and use of knowledge.					
k) Management increases efficiency by using knowledge to improve general productivity.					
l) Management identifies and protects strategic knowledge present within the company.					
m) Capturing of critical know-how (e.g. project information etc.) forms part of our daily routine.					

C. Technology and Infrastructure

7. How do you rate the availability of proper technology and Infrastructure to manage knowledge in IMS?

Please rate the statements below by using the following scale:

1 Strongly Disagree; 2 Disagree; 3 Neutral; 4 Agree; 5 Strongly Agree

(indicate your selection by marking the appropriate box)

Statement	1	2	3	4	5
a) IMS has an effective cataloguing and archiving procedures are there for managing a Knowledge					
b) IMS has internet and intranet access procedural manual/documentation of Knowledge sharing mechanism.					
c) The information which is stored in the company information system is managed to ensure validity, reliability and that information is up to date.					
d) The organizational information system is accessible throughout the company to all employees.					
e) Knowledge management is seen as an important practice in IMS.					
f) Technology is a key enabler in ensuring that the right information is available to the right people at the right time					

D Barriers to Knowledge Management

8. Is there any barrier or challenge to knowledge management at IMS?

Please rate the statements below by using the following scale:

5 Strongly Agree; 4 Agree; 3 Neutral; 2 Disagree; 1 Strongly Disagree;

(indicate your selection by marking the appropriate box)

Statement	5	4	3	2	1
a) IMS does not have a knowledge management strategy/policy for the transfer of knowledge among existing and leaving employees.					
b) Staff with expert knowledge are not willing and motivated to share.					
c) The working environment and the nature of work being performed is not conducive for knowledge transfer/sharing.					
d) Internal systems/processes are vague and lengthy.					
e) Time is not sufficient to acquire or learn new knowledge.					
f) There exists a culture of initiating everything from scratch/reinventing the wheel.					
g) There is a lack of trust among knowledge workers and dominance of “knowledge is power” attitude.					
h) The existence of fear of job security and loss of credit if one shares knowledge/skills to others.					
i) There is no reward/recognition for knowledge sharing initiatives.					
j) There is a lack of information on whom to consult on specific knowledge/skill areas and where to look for information/guidance.					
k) Cultural factors block opportunities to learn from each other.					
l) There is a lack of experts who manage the knowledge management system.					
m) There is no proper knowledge management tools infrastructure					
n) There is a lack of leadership support.					

Statement	5	4	3	2	1
o) There is a turnover of skilled employees.					

E. Organizational Learning and Change

Please put your choice with a "√"mark in the appropriate box (mark more than one box if applicable):

9. At IMS, learning on an individual level is achieved by:

- a) On the job training
- b) Formal training workshops
- c) Through the company's intranet or internet
- d) Other online learning platform tools

10. At IMS learning on a team or departmental level is achieved by:

- a) On the job training
- b) Formal training workshops
- c) Through the company's intranet or internet
- d) Other online learning platform tools

11. At IMS learning on an organizational level is achieved by:

- a) Recording information in an organizational database
- b) Recording information on the organization's intranet

12. What are the benefits of KM on organizational learning and change?

Please rate the significance of retaining knowledge (i.e. learning) in IMS, with regard to the statements below by using the following scale:

1 Strongly Disagree; 2 Disagree; 3 Neutral; 4 Agree; 5 Strongly Agree
 (indicate your selection by marking the appropriate box)

Statement	1	2	3	4	5
a) Improving the IMS competitive advantage					
b) Improving customer satisfaction					
c) Introducing innovations					
d) Inventory reductions					
e) Reduction of waste					
f) Employee training and development					
g) Cost reduction					
h) Revenue growth					
i) Better decision-making					
j) Improving the quality of service					
k) Reducing delivery time					
l) Improving worker efficiency or productivity					
m) Prevented duplicate research and development					

Interview questions

St. Mary's University
School of Graduate Studies
Masters of Business Administration (MBA)

Dear Madam/Sir,

Thank you in advance for devoting your precious time to answer the questions. I am a graduate student in the Masters of business administration at Saint Mary University School of Graduate studies. I am conducting research on “**An Assessment of Knowledge Management Practices: In the case of Info Mind Solutions PLC**” for the Master’s thesis.

Your responses will be kept confidentially and used for academic purposes only.

Questions:

1. Is there a knowledge management policy/strategy in IMS to manage its practice?
2. Could you tell me please the Knowledge Management practices in your organization specially in your department?
3. Could you tell me how do you evaluate the individual employees’ attitude towards knowledge management practice?
4. What do you consider as potential barriers/challenges of KM practices in your organization? What measures do you propose?
5. Could you tell me the role of Leadership on Knowledge management practice of IMS?
6. Is there any benefits IMS got from Knowledge Management for organizational learning and change?
7. How is the role of the organizational culture on the Knowledge management practice of IMS?
8. What actions do you recommend to improve the current KM practice within IMS?

Thank you again for your cooperation.