

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
COLLEGE OF EDUCATIONAL AND BEHAVIORAL STUDIES
DEPARTMENT OF EDUCATION LEADERSHIP AND MANAGEMENT

**PRACTICES OF KNOWLEDGE MANAGEMENT IN PRIVATE
SECONDARY SCHOOLS OF ARADA SUB CITY**

BY: ZELALEM CHERINET

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Addis Ababa, Ethiopia

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ACRONYMS

KM	Knowledge Management
KMS	Knowledge Management System
KS	Knowledge Sharing
IT	Information Technology
KMLC	Knowledge Management Life Cycle
WB	World Bank
UN	United Nations
CMIC	China Market Intelligence Center
UK	United Kingdom
UNESCO	United Nation Educational Science and Cultural Organizations

Abstract

The purpose of this study was to assess the practices and problems of knowledge management in private secondary schools in Arada Sub City in Addis Ababa. In this study, mixed research approach under descriptive survey research design was used. Mixed research provides a better understanding of the research problem and question than either method by itself. Six private secondary schools were included in this study in Arada Sub City .65 school teachers selected by simple random sampling techniques and 6 principals were selected by purposive sampling techniques method. Questionnaires, interviews and document analyses were used for the purpose of collecting relevant data. Data obtained thorough questionnaires were analyzed using statistical tools average mean. In addition to, this, data gathered through interview were also analyzed in narrative form. The finding of the study revealed that knowledge management practice in private secondary school was at moderate level. Based on the finding, lack of adequate internal facilities, shortage of time to share knowledge and the absence of clear policy on knowledge management were problems of knowledge management on private secondary schools. Based on the finding, it is concluded that there was a medium level of knowledge management practices by the teachers of private secondary schools is identified by the researcher. The researcher concluded that there were no adequate internet facilities provided for teachers and there was lack of an overall policy or strategy on knowledge management. In line with the above findings and conclusions it was recommended that private secondary schools should provide internet access to teachers and needed to adopt a clear policy regarding to knowledge management. The school management should also create conducive environment for teachers in sharing knowledge among them.

CHAPTER ONE

Introduction

This chapter covers background of the study, statement of the problem, objective of the study, research questions, and significance of the study, delimitation of the study, limitations and organization of the study.

1.1. Background of the Study

In today's knowledge based economy, there is a dire need for modern organizations to integrate knowledge management (KM) practices in their organization process and structure in order to extend their success and values for sustainable organizational development and competency. Organizations are highly investing on organizing and use of their intellectual capital (David, 1997). This is due to the reason that utilizing the organizational knowledge determines the success and maintains competitive advantage of a given organization. In this respect, knowledge management is created as a tool for this purpose (Senge, 1990).

According to Theriou et al (2010) knowledge management has been a natural evolution over the early years of the twenty first century and a hot topic in several business communities. The ability to manage knowledge has become increasingly more crucial in today's knowledge economy. Jones (2003) explained that knowledge management is an integrated, systematic approach to identify, manage and share all of the department's information and knowledge assets, including data bases, documents, policies and procedures as well as previously unarticulated expertise and experience resident in individual officers. Besides, Theriouetal (2010) pointed out the knowledge management (KM) enables the existing individual knowledge to be captured and transformed into organizational knowledge which in turn should be diffused and shared among employees knowledge management is based on the idea that an organization's most valuable resource is knowledge of its people. This means that creating, sharing and using knowledge are among the most important activities of nearly every person in every organization (Servin, 2005). According to Yang et al (2011), the tangible assets like land, labor and capital are no longer sufficient to evaluate the real value of an organization's effectiveness and efficiency rather the efficiency of using the intangible assets of the organization that is knowledge are reinforced to identify the value of an organization. Akmar and Lee (2004) stated that now a days, people are aware of the

important of knowledge and ways to acquire, capture, retrieve use or measure, manage and collaborate knowledge so that knowledge can be shared without losing it.

According to Kingo J. Mchombu(2013) the successful management of transition from an agricultural to knowledge based society, it is argued, should go beyond formulating information communication technology policies to include knowledge management polices as well. The contribution of information and knowledge system in six key sectors of the national economy is described as vital to kick start the revival and reconstruction of Africa. The sectors identified are poverty eradication and wealth generation, transfer of technologies and innovation, education sector, agricultural sector small, medium and micro enterprises and health sector. The new era of knowledge management challenges information specialists for invent and reposition themselves as infirmities and knowledge managers who can manage efficiently the process of converting data and information into knowledge for development.

Work places require competencies in their workforce according to their changing needs. Rapid changes and resulting obsolescence of technologies have rendered existing knowledge and skills obsolete. Companies compete by innovation to remain competitive. Therefore their products and services have become knowledge intensives. For this they need to systematic and display knowledge in their output in order to sustain and create value.

As knowledge is the most valuable organizational asset it is important to manage it for the success of educational institutions. As per the knowledge of the researcher, the practice of knowledge management particularly in educational institutions is almost none. The researcher came across some studies conducted in the area of knowledge management in higher education. Local researchers have conducted knowledge system in area like hospitals, banking and airlines industries. Because of the limited number of prior studies and the importance of pioneering work of launching knowledge management implementation, this study tries to address the research gap in the practices and problems of knowledge management in private secondary schools in Arada sub city, Addis Ababa.

This study was conducted in 6 private secondary schools established in Arada sub city. In Arada sub city there are eight governmental secondary schools the study tries to treat the technological infrastructure and the knowledge sharing culture of these secondary private schools in the realization of their vision.

1.2. Statement of the Problem

Cabrera (2002) claimed that organizational members may be reluctant to share knowledge each other, due to an insufficient understanding of the benefits doing so. As the researcher observes individuals often fails to see a personal benefit from sharing knowledge or he or she perceives inadequate support from the management of the organizations to put in to practice to their work. The Government of Ethiopia has placed importance on information communication technology for education (ICT4E) for national development. Both the national information communication technology for development (ICT4D) 2010 plan and ICT in education implementation strategy recognize ICT as an enabler for widening access to education for Ethiopian population (Hare, 2007) and for facilitating educational delivery and training at all levels.

Thus, in its five years policy action plan (2006-2010), the Ethiopian Ministry of Capacity Building stated that the Government is committed to addressing the nation's human resources requirements in the area of ICTs through the promotion of mass ICT literacy and training. This is aimed at increasing the use of ICTs in educational institutions as well as implementing initiatives aimed at connecting schools and higher educational institutions to online resources. ICT related technologies are being deployed to support learning at different level of educational system (Getahan, 2006).

As I myself observed in my teaching experiences the existing knowledge management implementation of private secondary schools has been unplanned, without a coherent framework for knowledge sharing. Moreover, the existing culture, knowledge sharing techniques and ICT infrastructure does not provide sufficient support for knowledge sharing practices in private secondaryschools.

The major findings in the area of knowledge management in previous studyTesfaye shows,(2015) has done his research on the title Assessments of knowledge sharing practice ;the case of world food program , Ethiopia ,Ibrahim (2016) conducted study on the impact of knowledge management on organizational performance ;the case of Ethiopian Insurance Corporation showed that there are large amount of knowledge residing within individuals, teams and organization as a whole. The knowledge may be in such diverse areas as technical and academic expertise and educational pedagogies. The problems of private high schools lies in being able to effectively use the sharing of creation of knowledge for the development

of individuals and terms among the college and manage the use of it's in the achievement of academic goals.

In the implementation of knowledge management the above researchers stated that there is a rapidly growing interests and engagement to develop on effective knowledge management initiative as an enabler of development assistance objectives within the not for profit sector in the country. Knowledge management implementation challenges are well defined. There is the absence of proper organizational guidelines on knowledge sharing lack of knowledge of what colleagues need and shortage of time and resources to facilitate knowledge sharing hindering their desire to share knowledge with colleagues within and outside the organization.

As far as the knowledge of the researcher, there were no enough peer learning, experience sharing and similar formal and informal learning interactions through knowledge management initiatives in schools. Most schools do not use of e-mail based e-discussions. In most cases there is no knowledge sharing skills development strategies as well as programs to popularize knowledge sharing among school administrator teachers. This study seeks to identify and to have holistic view of the practice and problems of knowledge management in private secondary schools in Arada sub city, Addis Ababa. Specifically the study attempts to answer the following questions.

Research Basic Questions

- What is the practice of knowledge management in school?
- What are the challenges of schools in promoting knowledge management?
- What should be done in effectively implement knowledge management in the school?

1.3.Objectives of the Study

1.3.1. General Objective

The general objective of this study was to assess the practices of knowledge management in private secondary schools of Arada sub city.

1.3.2. Specific Objectives

- To examine the extent to which schools practices knowledge management.
- To investigate the problems of schools in managing the available knowledge.
- To identify the best ways of knowledge management practice in private secondary schools of Arada sub city.

1.4. Significance of the Study

The researcher believes that the result of this research may have the following significances.

- At large the study might solve problems related with managing the available knowledge for better use.
- This study may be used by policy makers as a vital input as to incorporate the practice of knowledge management for schools.
- This paper might be used as an initiation for those who are keen to conduct a detailed and comprehensive study on such similar topic.
- The study may be employed by schools in maximizing their knowledge management practices for organizational development.
- This study might help the researcher in acquiring the necessary knowledge and skills out of this research..

1.5. Delimitation of the Study

The scope of the study was limited to the practices and problems of knowledge management in private high school in Arada sub city, Addis Ababa. This will enable to assess the existing practices and problems of knowledge management in private high schools. In Arada sub city there are 10 woreda's. Arada sub city is located on the northern part of Addis Ababa. In this sub city there are six private high schools and eight governmental high schools. The study aimed at assessing the practice and problems of knowledge management in these six private high schools. The time of the research was limited to the academic year of 2010 E.C. The methods were used both quantitative and qualitative.

1.6. Limitations of the Study

This study has a number of limitations. The first limitation was lack of relevant local literature on knowledge management practices particularly in educational institutions. The

second biggest problem in conducting this research was that most of the teachers were not cooperating in filling up questionnaires providing that they did not have time. To alleviate these limitations the researcher exerted his utmost effort in gathering the necessary data from key informants by sacrificing his time.

1.7. Operational Definition of Key Terms

Knowledge is gaining facts and information from education, consultation, or reading.

Knowledge management—knowledge management an organizations ability to gather, organize, share and analyze the knowledge of individuals and groups across the institution in ways that directly impact performance Ramanejan and Kesh (2004).

Knowledge management process - implies the creation or acquisition, modification, use, archiving transfer, translation, user access and disposal of knowledge.

Knowledge sharing - can be defined as a social interaction culture, involving the exchange of employee knowledge, experience, and skills through the whole department or organization (Hegel et al, 2003)

Secondary School - it includes grade 9-10^{1st} cycle (MOE 1994) and the 2nd cycle grade 11-12. The latter is known preparatory.

1.8. Organization of the Study

The research paper consists of five chapters. The first chapter contains of introductory part which incorporates the background of the study, statement of the problem, objective of the study, significance of the study, scope of the study and limitation of the study. The second chapter deals about review literature. Chapter three focuses on research design and methodology. Chapter four is all about presentation of the data collected, analysis made and interpretation of data analyzed. The last chapter is dedicated to the major finding of the research, conclusions made and recommendations to the educational institutions.

CHAPTER TWO

Review of Related Literature

2.1.The Concepts of Knowledge and Knowledge Management

2.1.1. Data, Information, Knowledge and Wisdom

The concept of knowledge has been discussed for centuries in the works of the ancient Greek philosophers, knowledge originates with people. Plato, for instance, put forward the idea that correct belief can be turned into knowledge by fixing it through the means of reason or a cause. Aristotle thought that knowledge of a thing involved understanding it in terms of the reasons for it. In Western philosophy, knowledge is seen as abstract, universal, impartial and rational. It is considered as a stand-alone artifact (a physical record) that could be captured in technology and which will be truthful in its essence. This understanding of knowledge affected, to a great extent, the nature of the first KM tools developed during the 90s. Most tools and KM models during this period tried to manage knowledge as an artifact rather than as an element deeply rooted in human understanding, human behavior and social interactions at work (Liebowitz, 2003). According to researches, the majority of the first generation of KM tools failed, or at least did not fulfill their initial aims, due to the lack of focus on human factors. Knowledge has a far more complex nature and requires the active contribution of people to manage knowledge systems.

The relationship between data, information, knowledge and wisdom form a pyramid. The pyramid has data as its base, followed in the hierarchy by information, then knowledge, with wisdom at the top (Liebowitz, 2003). Stewart (2000) mentioned that knowledge is a conclusion drawn from data and information.

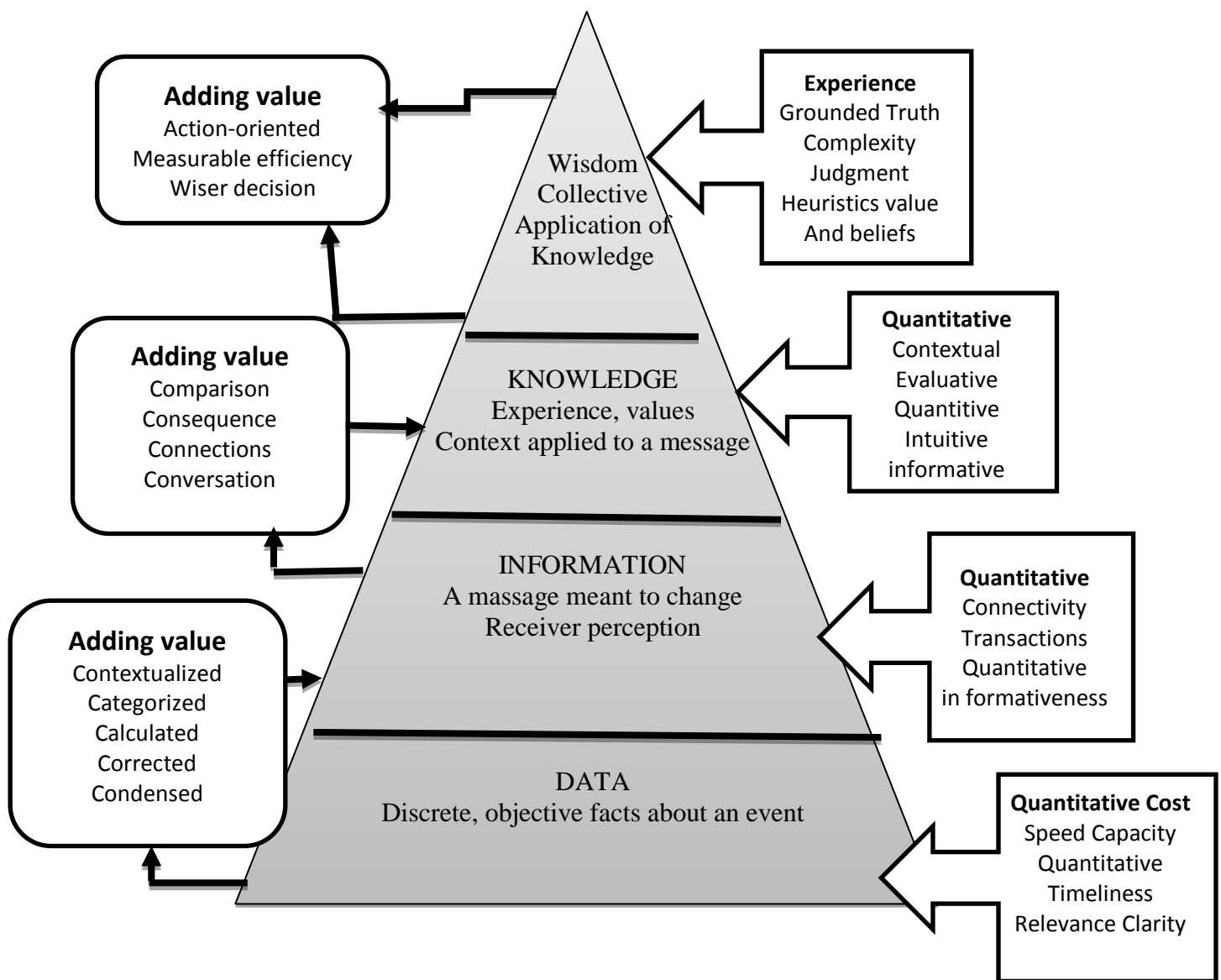


Figure 1. Relations between Data, Information, Knowledge and Wisdom

As stated by Davenport and Prusak (1998) data is a set of discrete objective facts about an event or a process which have little use by themselves unless converted into information. Data provides the raw materials as a set of discrete, objective facts about events. Davenport and Prusak (1998) also defined information as data endowed with relevance and purpose. It has meaning and it is organized for some purpose. Information for example, is a collection of data and associated explanations, interpretations, and other textual material concerning a particular object, event, or process. Unlike data, information informs receivers and impacts on their judgment and behavior.

Davenport and Prusak (1998) mentioned that knowledge is information combined with experience, context, interpretation, reflection and perspective. Davenport and Prusak stated that knowledge is “a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences

and information. It originates in and is applied in the minds of knower's. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms" According to James (2005) wisdom is the judicious application of accumulated knowledge and experience and is the ability to see through complexity and discover the fundamental nature of issues or problems, Ackoff (1989) argued that wisdom adds value which requires the mental function of judgment. From the pyramid and above description of the basic knowledge concepts, one can grasp that the higher we go from bottom to up (from data to wisdom), we move in to a complex and broader concept having a bigger scope. Moreover, the involvement of the human element is the key for the significant difference among them as the relationship is attached to understanding of a given situation and giving clear picture/ analysis of the real situations.

2.1.2 Types of Knowledge

Knowledge is distinguished in different types. In this context, it is very important to realize that there are various types of knowledge, which needs different methods for creation and sharing in organizations. The division of knowledge depends on the purpose of an investigation and / or a description. Knowledge can exist in different ways, which can be divided into tacit and explicit knowledge (Nonaka and Knonno, 1998) as well as into individual, group and organizational knowledge (Nonaka, 1994; Nezafati, Afrazeh and Jalali, 2009).

Tacit Versus Explicit Knowledge

Tacit knowledge is a know-how and learning embedded within the minds of the people in an organization (Kidwell, Jillinda, Karen, Linde, and Johnson, 2000). It involves perceptions, insights, experiences, and craftsmanship. The authors also described its characteristics as being: personal, context-specific, difficult to formalize, difficult to communicate and more difficult to transfer. Tacit knowledge is highly personal and hard to formalize that makes it difficult to communicate and share with others. It is deeply rooted in individuals' action and experience as well as in the principles, values or emotions he/she embraces, subjective insights and intuitions.

Explicit knowledge is the kind of knowledge readily transmitted between individuals formally and systematically in the organizations (Polanyi, 1966; Nonaka, 1999; Serrat, 2008;

Mcinerney, 2002 and Bhatt, 2000). According to Kidwell et al., (2000), explicit knowledge is packaged, easily codified, communicable and transferable.

In general, Nonaka (1991) argues that most of the knowledge applied by individuals in the organizations is tacit knowledge and new knowledge starts from individuals in tacit form. Then it transforms into organizational explicit knowledge valuable to the company as a whole which in turn changed into tacit knowledge in a spiral way. Tacit and explicit knowledge are dependent on each other to be complete sources of knowledge.

➤ **Individual, group and organizational knowledge**

Depending on the type of knowledge that exists in an organization, knowledge can also be individual, group and organizational knowledge. Knowledge is a critical factor affecting an organization's ability to remain competitive in the new global marketplace (Bollinger and Smith,

2001). Therefore, organizations need to formulate appropriate approaches for organizing the collective intelligence and skills of employees for creating greater organizational knowledge.

Knowledge is not merely considered as know how that exists with individuals mind instead it also exists at group and organizational levels (Nonaka and Knonno, 1998; Nezafati et al., 2009).

Individual knowledge is a knowledge embedded in the mind of individual and an explicit knowledge private to individuals themselves. The knowledge of individual members needs to be shared and legitimized through integrating interactions and IT before it becomes group knowledge (Bontis, 2001).

According to Nonaka (1994), organizational knowledge is created through continuous dialogue (on spiral form) between tacit and explicit knowledge. Organizational knowledge is a knowledge that scattered throughout the organization members. Knowledge creation process enables firms to amplify knowledge embedded internally and transfer knowledge into operational activities to improve efficiency and create value of the organization (Omur et al., 2009). Thus, organizational knowledge is an accumulated and collected knowledge from individuals, subunits or groups. Organizational knowledge enables firms to attain deeper levels of understanding and perception that lead to business intelligence and insight. Instead

of the constant initiatives to extract knowledge from the employees to create new explicit knowledge and artifacts, it might be more productive for organizations to invest on the effort for creating a KS culture in the organization.

KS culture means an organization that offers opportunities to create knowledge and one that encourages learning and KS in the organization. Creating a KS culture ensures the continual creation and sharing of knowledge through an environment of trust and dialogue in organizations (Mcinerney, 2002). Thus, learning in organizations takes place at individual, group and organizational levels, so that they all stores stocks of knowledge which are moved and developed through dynamic knowledge flows between the different levels of the organization (Nonaka, 1994).

2.1.3 Principles of knowledge

According to Allee (1997), it is better to understand knowledge before managing it. The author stated that the new knowledge equation is: Knowledge = power, so share it and it will multiply.

He further underlined that widespread non-competitive benchmarking and best-practice sharing show how eagerly individuals are embracing the concept of KS and mentioned twelve guiding principles of knowledge as follows:

The first principle '**Knowledge is messy**', emphasizes that as knowledge is connected to everything else, one can't isolate the knowledge aspect of anything neatly. The second one '**Knowledge is self-organizing**' tells that the self that knowledge organizes around is organizational or group identity and purpose. The third one '**Knowledge seeks community**' explains that knowledge wants to happen, just as life wants to happen. Both want to happen as community. This concept is better illustrated by the Internet. The fourth principle '**Knowledge travels via language**' states that without a language to describe one's experience, everyone can't communicate what they know. This shows how important language is for the use and transfer of knowledge. The fifth principle '**The more you try to pin knowledge down, the more it slips away**' tells that too much rigidity and formality regarding knowledge lead to the slowness of creativity. The sixth principle '**Looser is probably better**' tells that there will be wastage of resources and energy in trying to control knowledge too tightly. The seventh principle '**There is no one solution**' states that knowledge is always changing. For the moment, the best approach to managing it is one that

keeps things moving along while keeping options open. The eighth one '**Knowledge does not grow forever**' tells that eventually, some knowledge is lost or dies. Unlearning and letting go of old ways of thinking, contribute to the vitality and evolution of knowledge. The ninth principle, '**No one is in charge**' states that knowledge is a social process.

No one person can take responsibility for collective knowledge. The tenth principle, '**You cannot impose rules and systems**', stresses that if knowledge is truly self-organizing, the most important way to advance it is to remove the barriers to self-organization. The last and eleventh principle '**There is no silver bullet**' states that there is no single leverage point or best practice to advance knowledge. It must be supported at multiple levels and in a variety of ways and finally the twelfth and the last principle '**How you define knowledge determines how you manage it**' states that the knowledge question can present itself in many ways. For example, concern about the ownership of knowledge leads to acquiring codified knowledge that is protected by copyrights and patents.

As presented by Allee (1997) above the principles of knowledge helps knowledge users/managers to understand the nature of knowledge and its special characteristics. Understanding of knowledge thus put managers in a better position to implement the appropriate approach and make a sound and rational decision pertaining to knowledge and KM initiatives. Some of these principles such as: knowledge seeks community to happen, the need to be flexible and informal regarding knowledge, the need not to control knowledge too tightly, the concept that knowledge is a social process and it will be lost or die are of much interest and applicable to the work of the researcher.

2.1.4 The Foundation of Knowledge Management

KM is about making the right knowledge available to the right people. It is about making sure that an organization can learn, and that it will be able to retrieve and use its knowledge assets in current applications as they are needed. In other words, it is "the coordination and exploitation of organizational knowledge resources, in order to create benefit and competitive advantage"(Barclay and Murray, 2004). According to Brown (1998), KM has been defined as "the discipline of creating a thriving work and learning environment that fosters the continuous creation, aggregation, use and re-use of both organizational and personal knowledge in the pursuit of new organizational values".

The emphasis in this definition is on use of knowledge and continuous learning. According to Davenport and Prusak (1998), KM 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.

Though there is no universally agreed definition of KM, most agreed that it is the coming together of organizational processes, information processing technologies, organizational strategies and culture for the enhanced management and leverage of human knowledge and learning to the benefit of the company. Drucker (1993) argued that knowledge is not just another resource alongside the traditional factors of production – labor, capital, and land – but the only meaningful resource in the new economy.

2.2 Knowledge Management Perspectives and Approaches

2.2.1 Three Perspectives in Knowledge Management

A study related to KM was conducted by Alavi and Leidner (1999) to ascertain the meaning that managers ascribe to the concept of KM and three perspectives emerged: an information-based perspective, a technology-based perspective, and a culture-based perspective.

Information-based perspective: managers describe KM as it is about characteristics of information, such as readily-accessible information, real-time information, and actionable information. Its focus is concerned with reducing the overload of information by filtering the gems from the rocks.

Technology-based perspective: managers associate KM with various other systems such as data warehousing, enterprise wide systems, executive information systems, expert systems, and the intranet, as well as various tools (e.g., search engines, multi-media, and decision making tools).

Culture-based perspective: managers associate KM with learning (primarily from an organizational perspective), communication, and intellectual property cultivation. And they suggested that the IT component of KM was only 20% of the concept whereas the cultural and managerial aspects accounted for the bulk of the issue. The effectiveness of KM is determined by the knowledge infrastructure such as technology, structure and culture along

with knowledge process architecture that are acquisition, conversion, application and protection (Gold et al., 2001).

2.2.2 Knowledge Management Approaches

One of the most common and indeed, important considerations in establishing an organizational strategy is the type of focus or orientation which it will have. These strategies can, in turn, be described along two different dimensions, which help to reflect and explain their orientation.

The first strategy is referred to as system strategy and reflects a systems orientation or focus in terms of KM. This strategy emphasizes the capability to help create, store, share and use an organization’s explicitly documented knowledge. The strategy as per this dimension emphasizes codifying and storing knowledge. Typically, knowledge can be codified via information technology. Codified knowledge is more likely to be reused. The emphasis is on completely specified sets of rules about what to do under every possible set of circumstances.

The other strategy can be referred to as human strategy and obviously reflects a human orientation or focus in terms of KM. This strategy emphasizes KS via interpersonal interaction. The strategy utilizes dialogue through social networks including occupational groups and teams. It helps share knowledge through person-to-person contacts. This strategy attempts to acquire internal and opportunistic knowledge and to share it informally. Knowledge can be obtained in a number of ways from experienced and skilled people. The following table summarizes the key features of system and human strategies. Hansen, Nohna, and Tierney (1999).

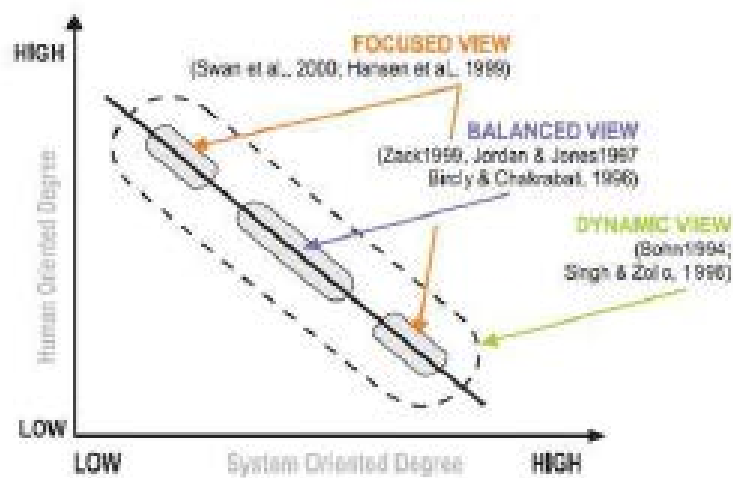
Table 1. Key Features of System and Human Strategy

Strategy	Features
System	<ul style="list-style-type: none"> - Emphasize coded knowledge in KM processes. - Focus on codifying and storing knowledge via information technology. - Attempts made to share knowledge formally.
Human	<ul style="list-style-type: none"> - Emphasize dialogue through social networks and person-to-person contacts. - Focus on acquiring knowledge via experienced and skilled people. - Attempts made to share knowledge informally.

Source: (Choi and Lee, 2000)

Many studies have shed light on guidelines for employing systems oriented or human oriented strategy. These studies can be categorized into three views: focused, balanced, and dynamic.

Figure 2 below compares these three views. The system oriented axis corresponds to the degree of codifying and storing organizational knowledge, its level of access and use. The human-oriented axis corresponds to the degree of acquiring and sharing tacit knowledge through interpersonal interaction.



Source: *KM Strategy and its link to Knowledge Creation Process* (Choi and Lee, 2002)

Figure 2. Three Perspectives of Knowledge Management Strategies

Studies propose that companies should pursue one strategy predominantly. Hansen suggests that companies pursue one strategy while using another to support it, while Swan argues that a human oriented strategy is superior to system-oriented strategy.

The balanced view suggests that companies should strike a right balance between the two strategies. Bierly and Chakrabarti(1996) found that firms, which acquire and share knowledge by combining system and human oriented strategies, tend to be more profitable. Jordan and Jones emphasize the balance between explicit and tacit knowledge based strategies for encouraging the development of more innovative knowledge. Zack (1998) states that firms with an aggressive strategy, which integrates system-oriented strategy with human oriented strategy, tend to outperform those of less aggressive strategy.

The dynamic view suggests that firms align their strategies with the characteristics of knowledge. For example, Bohn (1994) states that managers should align KM strategies along with the spectrum from pure expertise to pure procedure. Singh and Zollo(1998) argue that firms should align knowledge strategies along with task characteristics. The focused view proposes that a company should focus on one strategy. In contrast, balanced and dynamic views insist that a company should utilize both strategies. Focused and balanced views fail to consider the dynamic nature of knowledge. Although knowledge should be analyzed as an active process that is inherently indeterminate and continually changing, these two views are static. The dynamic view proposes that the choice can vary depending upon knowledge characteristics.

2.3 Knowledge Management Principles and System

Many companies already know that the knowledge of their employees is their most valuable asset. Davenport (2001) the opinion that KM has thus far been addressed at either a philosophical or a technological level, with little discussion of how knowledge can be managed and used more effectively on a daily basis. According to Davenport, the most appropriate form of dialogue is not detailed tactics, but high-level principles. When an organization decides what principles it agrees upon with respect to KM it can then create detailed approaches and plans based upon those principles. There are ten principles that summarize many of the challenges that are faced by knowledge-based organizations, managers and employees. They are discussed below.

2.3.1 Knowledge Management Principles

The first principle is KM is expensive. Knowledge is an asset, but its effective management requires investment of money and labor, including the following: knowledge capture, e.g. creation and moving of documents onto computer systems, adding value to knowledge through repackaging and editing, developing IT infrastructures for the distribution of knowledge and educating people on the creation, sharing and use of knowledge.

The second principle emphasized that effective KM requires hybrid solutions of people and technology. While computers and communications technology help with the capture and flow of knowledge, humans come into their own in interpreting it within a broader context for problem solving and decision-making.

The third principle stated that KM is highly political. “Knowledge is power” thus, a highly political undertaking. Davenport (2001) argues that if knowledge is associated with power, money and success, then it is also associated with lobbying, intrigue and backroom deals.

The fourth principle stated that KM requires leadership. Knowledge will not be well managed unless some senior person or group is given responsibility for it (as with other resources like finance and human resources). Managing knowledge and learning necessitates a type of leadership that differs fundamentally from the customary view of leader as central actor. The new types of leaders are seen as facilitators that promote KS and learning by their own personal action and behaviors (Davenport, 2001).

The fifth principle emphasized KM benefits more from maps than models, more from markets than hierarchies. Sharing and using knowledge are often unnatural acts. If knowledge is a valuable resource, why should people share it? If an employee’s job is to create knowledge, why should he/she put the job at risk by using someone else’s knowledge instead of his/her own (Nonaka, 1998). To enter knowledge into a system and to seek out knowledge from others is threatening and employees have to be highly motivated to undertake such work. Davenport (2001) suggested that encouragement for individuals to share knowledge can solve the problem.

The sixth principle is KM means improving knowledge work processes According to Davenport (2001) if real improvements are to be made in KM, improvements must be made in the key business processes.

The seventh principle is Knowledge access is just the beginning. Knowledge access is important, but successful KM also requires attention and engagement. More active involvement with knowledge can be achieved through reporting it to others, through activities based on usage of the knowledge, and receiving the knowledge through close interaction with other providers of knowledge. This is particularly important when the knowledge to be received is tacit (Nonaka, 1998).

The eighth principle is KM never ends. The tasks of KM are never-ending. Like human resource management or financial management, there is never a time when knowledge has been fully managed. It is not a once-off initiative: it is an ongoing management task. One

reason that KM never ends is that the required knowledge is always changing. New managers and new professionals have new needs for knowledge (Wiig, 1995).

The ninth principle is KM requires a knowledge contract.With much knowledge in employees' heads, and increasing mobility, companies must clarify who owns and who has rights to employee knowledge. Many organizations have held employee knowledge (at least that developed between nine and five) to be the property of the corporation. Many environmental changes make such an approach difficult. As knowledge becomes a more highly valued resource, organizations can expect to see more attention to the legalities of KM (Davenport, 2001).

2.3.2 The Knowledge Management System

The term 'system' is more than a simple collection of components; it could be defined as a set of objects forming a whole, together with the links between them and the links to their environment. The system must also have a goal or objective and characteristics. Knowledge Management Systems (KMS) are often viewed from a technological point of view; however, they emerged fundamentally as systems of human activity. KMS are based on human activities in relation to KM. However, they contain subsystems that are technological or organizational. The purpose of these technological and structural elements is simply to better enable the human activity system to function. From socio-technical perspectives the following three layers of KMS are considered: Infrastructure provides the physical components for communication between the network members. An info structure provides the formal rules that govern the communicational exchanges within the actor-network. It provides the cognitive resources such as metaphors and common language that are used to make sense of the communicational exchanges and the third Info culture provides the background knowledge that is taken for granted and embedded in the social relations and work processes. This info culture provides constraints on knowledge and information sharing.

2.3.3 Principles of Knowledge Management System

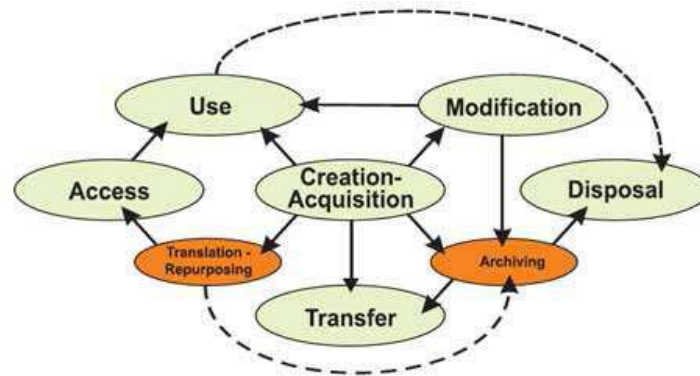
In designing a KMS, some eight principles of KM should be taken into account. The first one is about the need for having hybrid solutions involving both people and technology for the effective management of knowledge. The second one is about the need to have committed knowledge managers and emphasis is on leadership. The third one emphasizes on the need to

improve knowledge work processes. The fourth aspect is that stresses that KM is an endless process and never ends as long as an organization exists. The fifth one is states that KM requires a knowledge contract. The six one emphasizes on the need to have training on KM. The seventh point stress that KM is technology dependent and the last one emphasized that KM is a process and not a product. The above principles of KMS go with the researchers understanding and assumption of a KM system Davenport (1996). The researcher believes that for an effective KM implementation the role of people/employees and the technology being employed is of paramount importance. Leaders however, have the ultimate power and vital role as they can play a make or break decision on the fate of every organizational-wide initiatives such as KM. As a process KM never ends and is a continuous process that occurs as long as the organization exists as an entity. The other aspect that should not be neglected is the need to have properly trained personnel to manage knowledge at an organizational level. Because it is relatively a new and emerging concept, especially in developing countries like Ethiopia, proper understanding of the concept and processes to be followed have a significant impact on the success of the initiative. Appropriate training and adequate attention also contributes to the sustainability of the KM endeavor.

2.4 Knowledge Management Processes

Many authors have proposed different models for KM ranging from two to more than eight different processes. According to Bergeron (2003) KM contains the following eight processes: The process starts with creation or acquisition where knowledge is created or gathered by knowledge workers. The second one, modification: is about modifying knowledge in order to suit immediate or future needs. The third part is use: is usage of the knowledge for some specific, useful purpose. The fourth one is archiving: is about storing knowledge in a form and format that will survive in time and will still be accessible and usable for knowledge workers. The fifth one, transfer: is about transfer or communication of knowledge. The six stage, translation/repurposing is a stage whereby knowledge is translated from its original form into a new form more suitable for some new purpose. The seven which is user access: deals with the provision of limited access to knowledge workers according to their position in the company and their needs. The last and eighth stage of the process is disposal: is about identifying which information/knowledge to keep and which to destroy.

From the above brief explanation of the KM process one can grasp that KM is not a one-off activity rather a process that has to be carried out throughout the life of the organization and each of the steps in the life cycle requires special attention.



Source: (Bergeron, 2003)

Figure 3. Knowledge Management Processes

Bergeron (2003) provides a detailed and useful description of KM processes. He used the concept of Knowledge Management Life Cycle (KMLC) including eight processes (creation and acquisition, modification, use, transfer, archiving, translating/repurposing, access, and disposal). The eight elements of the KM process as described by Bergeron are interrelated to each other. As in life cycle of plants and animals the eight processes which can be considered as life cycle are related and one follows the other. As old and existing knowledge are disposed new once emerge and the life cycle continues and the management of KM is a continuous process occurring throughout the life time of the organization.

2.4.1. Knowledge Creation

Knowledge creation, also called knowledge generation, formation, or construction (Alavi&Leidner 2001, Grover & Davenport 2001, and Foss et al. 2009), is usually portrayed as the initial step of the knowledge management process. It is arguably the most important, as the management of knowledge is impossible without first creating it (Puga&Trefler 2003). Knowledge creation has indeed been recognized as a vital and strategic element of learning and innovation for organizational success and survival (Soo et al. 1999).

Knowledge originates in an individual's intuition (Polanyi 1966, Nonaka& Takeuchi &Umemoto 1996). But it is often the interactions between individuals that play a critical role

in developing individual thoughts and creating new knowledge (Nonaka 1994).“The individual does not think in isolation and is not an autonomous origin of knowledge” (Boland & Tenkasi 1995, p. 355). As one conceptualizes a new idea, others may explore its various uses through dialogue, thus making it a social process (von Krogh 1998). This dialogue not only helps in the development of the original idea, but it may also spawn the creation of more ideas. From the exchange and integration of individual ideas, knowledge emerges (Nonaka & Johansson 1985, Shrivastava 1983, Duncan & Weiss 1979, Boland & Tenkasi, 1995). Although previous studies have focused on micro-level aspects, knowledge creation also incorporates environmental (macro-level) and organizational factors (Soo et al. 1999). Knowledge is created through the interactions amongst individuals or between individuals and their environment (Nonaka et al. 2000).

The creation of knowledge refers to creating new knowledge, not merely learning what another person already knows or acquiring knowledge from the outside (Nonaka & Takeuchi & Umemoto 1996). In this research, knowledge creation is viewed as the generation of a new personal belief that can be justified. The knowledge creation process involves such steps as sharing tacit knowledge, creating concepts, justifying concepts, building a prototype, and cross-leveling the knowledge (Von Krogh et al. 2000).

Individuals involved in creating knowledge face different challenges at the different steps of knowledge creation. While the knowledge creating individual shares his/her personal true belief about a situation with other team members during the second and third steps (sharing tacit knowledge and creating concepts), s/he is faced with the challenge of justifying his/her true belief in presence of others at the justification step (von Krogh 1998). Thus, knowledge creation, which enables individuals to create and justify their true beliefs, needs favorable environment. The process of knowledge creation can be influenced by different barriers and enablers (Roth et al. 1999). The SECI model and the associated “ba” of Nonaka and his colleagues is the most frequently used model of knowledge creation.

2.4.2. Knowledge Sharing

Knowledge exists in the minds of employees, which cannot be clearly observed, then how to manage this knowledge has become a particularly difficult problem in KM. Knowledge in the mind of individuals or tacit knowledge is essentially an unconscious cognitive ability, and it is highly personalized knowledge that is acquired by individual experience. Therefore, it is

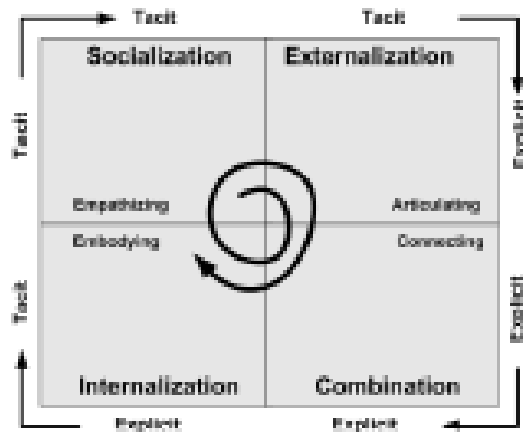
through sharing that enterprises manage this knowledge well, and promote its sharing among staff to enhance competitive advantages.

The old paradigm, which is, knowledge is power is changed, and it needs to be explicitly understood that sharing knowledge is power (Green, 1999). Performing activities in an organization requires a collaborative effort. If you try to work alone you are likely to fail, you need not only the input from other people but also their support. Therefore, being open with them, and sharing with them helps you achieve your objectives.

According to Al-Hawarden (2003), KS is the communication of all types of knowledge including explicit knowledge (information, know-how) and tacit knowledge (skills and competency). KS can be defined as a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization (Hegel et al., 2003). The authors also explained that KS occurs at the individual and organizational levels. For individual employees, KS is talking to colleagues to help them get something done better, more quickly, or more efficiently. For an organization, KS is capturing, organizing, reusing, and transferring experience-based knowledge that resides within the organization and making that knowledge available to others in the business.

KS is, the process that, intended to exploit existing knowledge. To enhance the reusability of knowledge, first the KS process identify existing and accessible knowledge, in order to transfer and apply this knowledge to solve specific tasks better, faster and cheaper than they would. It is also about bridging situations of organizational interdependencies and thereby supporting ongoing organizational activities. The goal of KS can either be to create new knowledge by differently combining existing knowledge or to become better at exploiting existing knowledge (Christensen, 2007). According to Riesenberger (1998), KS is very important in organizations success since it enables: to learn about customers, to seek best practices, to recognize internal competencies and products, to discover emerging market trends, and to find competitive intelligence. As per Nonaka et al., (1995), the organizational knowledge creation / conversion process is based on a simple framework that contains two dimensions. The first dimension shows that only individuals create knowledge while the other dimension relates to the interaction between tacit and explicit knowledge. These two dimensions constitute the base for defining the four knowledge creation / conversion processes – Socialization, Externalization, Combination and Internalization (SEIC).

Socialization: tacit knowledge is converted into tacit knowledge during discussions, communications, meetings, etc. **Externalization:** tacit knowledge is converted into explicit knowledge, and embodied in documents, manuals, etc. **Combination:** explicit knowledge is converted into another form of explicit knowledge. **Internalization:** explicit knowledge is converted by individuals into tacit knowledge.



Source: (Nonaka and Takeuchi, 1995)

Figure 4. SEIC Model

The four different modes of knowledge conversion build a knowledge spiral without a start or an end. This continuous and dynamic process has its roots in the behavior of the main knowledge creation agent – the human being.

2.4.3. Knowledge Capture

Knowledge capture could span the whole set of activities performed by an organization, starting with the organization of customers and market information, to the collection of examples of best practice or lessons learned or the development of a mentoring programme. It is important to capture both explicit and tacit knowledge even though the latter creates more difficulties.

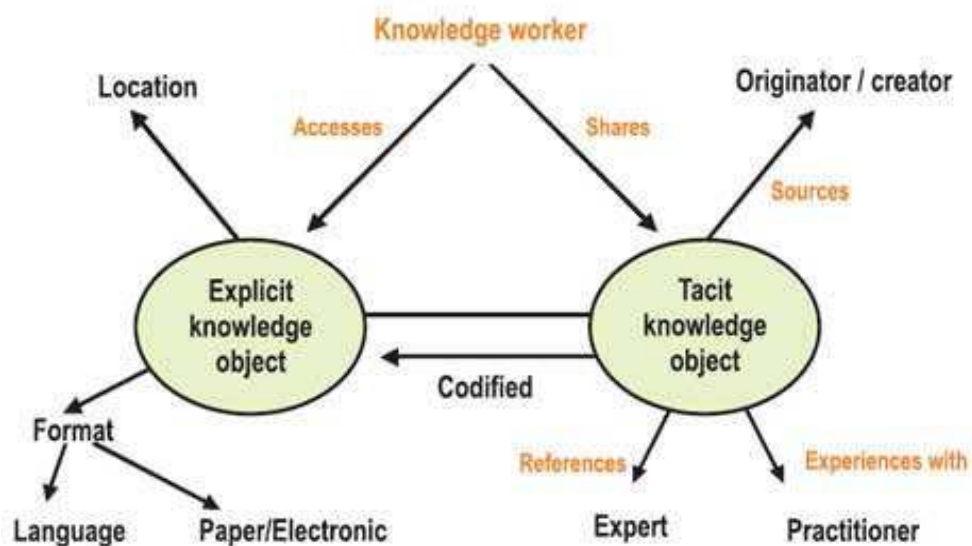
The capture of explicit knowledge is the systematic approach of capturing, organizing, and refining information in a way that makes information easy to find, while also facilitating learning and problem solving. Tacit KM is the process of capturing the experience and expertise of the individual in an organization and making it available to anyone who needs it.

Knowledge acquisition from individuals or groups can be characterized as the transfer and transformation of valuable expertise from a knowledge source.

2.4.4. Knowledge Codification

Knowledge codification serves the pivotal role of allowing what is known in the organization to be shared and used collectively. By converting knowledge into a tangible, explicit form such as a document, knowledge can be communicated much more widely and with less cost. Knowledge must be codified/ organized in order to be understood, maintained and improved upon as part of corporate memory. People always use some type of knowledge codification during their everyday activities to make communication and discussions more effective. The codification of explicit knowledge can be achieved through a variety of techniques such as cognitive mapping, decision trees and knowledge taxonomies.

Cognitive Maps – Once expertise, experience, and know-how have been rendered (made) explicit, the resulting content can be represented as a cognitive map. A cognitive map is a representation of the "mental model" of a person's knowledge and provides a good form of codified knowledge. In the map, the nodes represent the key concepts, while the links between them show the interrelations between concepts.



Source: (Dalkir, 2005)

Figure 5. Model of a Concept Map

Decision Trees typically is the form of a flowchart, with alternate paths indicating the impact of different decisions being made at that juncture point. A decision tree can represent many "rules," and when you execute the logic by following a certain path, you are effectively by passing rules that are not relevant to the case in hand. Knowledge Taxonomies concepts can be viewed as the building blocks of knowledge and expertise. Taxonomies are basic classification systems that enable us to describe concepts and their dependencies – typically in a hierarchical fashion. The higher up the concept is placed, the more general or generic the concept is. The lower the concept is placed, the more specific an instance it is of the higher-level categories. This approach allows lower or more specific concepts in the taxonomy to directly incorporate the attributes of the higher level or the parent concepts.

2.5. Enablers of Knowledge Management

The success of KM implementation will not take place without the collective work of various enablers in the organizations. According to Yang et al., (2006), KM enabler refers to the key factors that determine the effectiveness of executing KM within the organization. KM enablers among others include the extent that the management believes in KM effects, IT used, HR management and the culture of the organization (Al-Mabrouk, 2006). In fact, any KM system will include these variables to make knowledge related organizational functions practical. In order to ensure the success of KM implementation, it is crucial to acquire the key enablers. In order to make it possible for effectively utilizing an organization's limited resources, reduce the use of work force, material, time and still be able to achieve the expected results.

For effective KM to take place, organizations should create conducive KM environment. In addition, organizations are required to improve the organizational culture that enhance collaborative teamwork culture; network and virtual organization; learning, research and discovery culture. Moreover, organizations should give encouragement and promotion for creativity rather than mere adaptation and emphasis on leadership roles rather than administrative position (Alavi and Leidner, 1999).

Organizational enablersThe first phase of implementing KM is working to gain the support of the senior managers and to reach a common understanding about the concept of KM. An organizational structure reflects the

organization's policy in discussing with its employees and in absorbing new ideas and experience within and outside its capacity (Alrawi and Elkhatib, 2009). Organizations have to maintain a balance between intrinsic and explicit rewards in order to encourage employees' behavior of KS.

The most effective use of explicit rewards has been to encourage sharing at the onset of a KM initiative (Hasanali, 2002). Adequate training in KM implementation enabled by adequate technology and people who knows how to use it.

Financial support, human resources and time are significant resources for successful KM adoption. Financial support is undoubtedly required if an investment in technological capabilities is made. Human resources are required to coordinate and manage the adoption of KM process, as well as to take up knowledge related roles (Al-Mabrouk, 2006).

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In the process of carrying out KM, enterprises have to face the varying conditions of corporate culture, workflow processes and the integration of group members' knowledge (Yeh, 2006). According to Yeh, corporate culture is the combination of value, core belief, behavioral model and symbol. It represents the value system of the company and will become

the employees' behavior and norm. Corporate culture is the important part in forming a culture of KS. It might need to be supplement by IT. Thus, management should promote the corporate attitude that focuses on co-operation and KS across the organization.

Process enablers Many authors have suggested a number of activities or processes associated with KM implementation in the organization (Alavi and Leidner, 1999). Thus, it is important that organizations to adopt a process-based view to KM based on the structure and infrastructure of the organization context.

Technology enablers Technology is a basis for effective KM progress and implementation in organizations (Hasanali, 2002). IT is a vital factor to support the process of storing and distributing knowledge for sharing among employees. Technology provides tools and techniques to capture, create structure, communicate and effectively exploit knowledge. The main role of technology is seen as an enabling and facilitating interaction among people for the purpose of KS (Handzic et al., 2004).

When we say technology, it includes e-mail, bulletin boards, chat rooms and whiteboards, audio and video-conferencing. It also covers various specialized groupware applications: CustomerRelationship Management (CRM), data mining, integrated portals, e-learning, intranets and extranets (Handzic et al., 2004 and Malhotra, 2005).

2.6. Knowledge Sharing Barriers

In any organizations, in the implementation of KMS emphasis is given for knowledge-sharing behavior of the employees. Since the success of KM initiatives largely depends on the willingness of organizational members to share their tacit knowledge (Chatzoglou and Vraimaki, 2009). Organization to be a knowledge creation organization it should focuses on KS activities. As a result, understanding the factors that influence individuals' behavior toward KS in the organizational context is essential. Moreover, the breadth and depth of a KM system (KMS) depends on the magnitude of knowledge contributed to the system and shared with colleagues. Thus, knowledge contribution (sharing) is a critical KM process.

Therefore, examining the factors that affect the individual KS behavior is essential to the success in the deployment of organizational KM system (Al-Busaidi et al., 2010). Generally, implementing KS practice in the work environment is limited by a number of factors such as

culture, policies, strategies, technologies and even the personality of workers (Al- Busaidi, 2010; Chatzoglou and Vraimaki, 2009).

2.7. The Historical Development of Knowledge Management

The study of knowledge dates back to ancient Greece. Even before that, knowledge was at least implicitly managed as people performed work. Early hunters, for example learned the best skills and practices for a successful hunt. These skills and techniques transferred from one generation to the next. This illustrates the transfer of knowledge, a KM activity (Wiig, 1997). The actual study of KM as a separate discipline is much more recent. Like the study of communication, it has roots in many other areas of study - business, management, sociology, and economics to name just a few. Drucker (1999) argues that KM is based largely on the work of Frederick Winslow Taylor, who studied manual workers.

During the 19th century, economists argued about differences in the skill level of workers. When considering productivity, they categorized workers as either hard workers or lazy workers. Taylor did not agree with this line of thought and examined the inefficiencies in how workers performed their jobs. He did this by recording motions necessary to accomplish the task and then eliminating unnecessary steps and then designing or redesigning tools, if necessary, to assist the worker in accomplishing his task. Taylor pointed out that very little skill is involved in production. He claimed that what makes workers productive is knowledge (Drucker, 1999). While the names for this emerging discipline have changed and the concepts and theories have evolved over the years from Taylor-Task Analysis to Task Management to Scientific Management to Industrial Engineering, Drucker argues that Taylor's work is the foundation of KM.

2.8. The Practice of Knowledge Management in Ethiopia

Despite the existence of rich indigenous practices related to knowledge creation and sharing, like Qinea, modern Ethiopia faces three problems regarding its management of knowledge. First, Ethiopia has lost documented knowledge of what enabled its earlier civilization. The ignorance of this local, indigenous knowledge has dispossessed the country in particular (and the world in general) of a rich knowledge base (Nkrumah 2003). Second, Ethiopia has not been able to develop a modern educational system that produces students who are able to solve problems and that enables the country to be competitive in the contemporary world.

The 1994 Education policy of Ethiopia requires diploma, degree and graduate level education to be practice-oriented, enabling students to become problem solving professional leaders in their fields of study and in overall societal needs (UNESCO 2004). However, classrooms are still dominated by the traditional lecture methods in which teachers talk and students listen (Serbessa 2006), memorizing the facts conveyed by the teacher. Modern education in Ethiopia does not provide education that enables instructors and students to solve practical problems creatively going beyond learning what is currently known in the text books.

Third, there is little effort put forward by modern business organizations and educational institutions to foster knowledge management. Most Ethiopian businesses have neither a strategy for managing knowledge, nor initiatives to create or use knowledge management systems. Likewise, knowledge management has not yet gained much attention within academic institutions. Thus, when the time comes to undertake knowledge management in Ethiopia and similar countries, organizations have two choices: either they implement the best world practices in knowledge management without customization, or they adapt such best practices to work within their culture (Mariye and Marie-Claude 2010). The first choice is ill-advised, as it ignores the socio-cultural value of a country. The second option, where best practices are combined with traditional practices, is more likely to be successful (Mariye and Marie-Claude 2010). Indeed, many believe that world best practices must embrace local technologies, local systems of knowledge, and the local environments in order to be successful (Grenier 1998). Therefore, for a country to advance in the knowledge economy, it must learn to adapt world best practices regarding knowledge management to the traditional practices that have been effective in its culture. However, the traditional practices have been understudied and largely undocumented, making it difficult to combine them with modern knowledge management practices. There is a need, therefore, to study how traditional knowledge management practices can benefit modern business organizations in particular in terms of knowledge creation and sharing (Mariye and Marie-Claude 2010).

2.9. Knowledge Management for School Leaders

In a climate of increased external and internal pressures for improvement, the information needs of school teachers and administrators have never been greater, yet the perils of information overload are real. Schools, like most organizations, should learn and gain knowledge so as to enhance teacher competency. There are many sorts of knowledge, which need to be managed in schools. Cochran-Smith and Lytle (1999) provide a valuable

distinction in the types of knowledge that inform practice: knowledge of practice, or information about student performance, and knowledge for practice, or information about best practice. Teachers develop and acquire different kinds of knowledge in school where KM should be applied to facilitate managing teachers' knowledge (Chu, K.W., Wang, M., & Yuen, A.H.K. 2011).

KM in schools can be conceptualized as strategic management activities that support teachers to collect information or make use of the organization's knowledge resource to carry out their teaching and tasks effectively. These knowledge management practices can help capture, codify and distribute knowledge in school through the application of information and communication technologies or human interaction so that it can be shared by all teachers. Therefore, KM provides schools with adequate communication channels for teachers to discuss school issues with management. Teachers can reflect on and review feedback from others and develop further strategies and plans for improving school-based policy and teaching effectiveness. School policies can be adjusted in light of teacher feedback for maximizing student learning.

Leung (2010) conducted a KM study on schools in Hong Kong. He found that KM not only provides a platform for teachers to discuss different ideas for teaching and to post resources for student learning, but also retains the expertise of experienced teachers, increases their effectiveness in terms of teaching and learning performance, supports the development of a knowledge community in schools, and fosters the culture of learning. KM helps to capture and retain experienced teacher knowledge in the school and strengthen the novice teacher's knowledge through knowledge transfer in administrative work and teaching. KM can strengthen the knowledge-sharing culture and build collegiality into the school organization.

KM supports innovative teaching and effective learning. Through conducting data mining in student test scores, teachers can identify students' strengths and weaknesses for effective instructional design. A few communities of practice on lesson study can be cultivated by the KM system for capturing, sharing, storing and creating pedagogical knowledge and pedagogical content knowledge. As a result, teachers' professional development can be enhanced (Cheng 2009). With the building of a knowledge repository for student affairs services, KM provides one-stop service to teachers and students to achieve information on student study advancement and career guidance, and teachers can be better equipped to provide student guidance and counseling. Applying KM in school education is a new

concept; thus, we need a KM model to help us conceptualize the disparate elements of the complete picture in a way that leads to a deeper understanding of how the knowledge process works within the school organization. For example, it is important to have a solid foundation of understanding about what KM is, what the key KM cycle processes are, and how these processes feed into a model, in order to interpret and set up a causal relationship (ERIC C.K., 2015). Moreover, KM can also be used to manage knowledge for schools not only by building up people networks but by also enriching knowledge in school communities by processes and technologies to improve school's competitive performance (Chu, K.W., Wang, M., & Yuen, A.H.K. (2011).

2.10. Countries Experience in Knowledge Management

Different countries in the world implemented and have a robust experience in applying KM in different aspects of their organizations. For instance, Conscious introduction of knowledge management practices have been integrated into Chinese management since the new millennium (Saidi, 2007, Zhao et al., 2012). Although Chinese companies increasingly encourage their employees to apply knowledge management practices in workplaces, no Chinese companies were considered managing knowledge effectively (McKellar, 2006). In 2007, a survey conducted by China Market Intelligence Centre (CMIC) and China Computer Users showed 50% of surveyed people claimed their enterprises are at the initial stages of enabling knowledge management, 32% of surveyed people claimed that their enterprises still did not have plans for knowledge management. Most enterprises only had 20% of experience and knowledge stored and documented. Much knowledge related to profitability and competitiveness inside and outside enterprises continued to be incomplete. Meanwhile, majority of surveyed enterprises considered knowledge management to be merely a knowledge sharing process, which could be easily enabled by appropriate use of IT (Zhao et al, 2013). In other case, the novelty of knowledge management was recently-introduced in the Middle East, transferred by professionals and masters from the Western Community. This delay was incurred due to the era of political unrest, social conflicts, and economic bottlenecks covering the Middle Eastern countries since 1990s. These started with The Gulf War (Historical Events on 30th November), and did not end until the recent era of Arab Spring uprisings in the latter part of 2010 (Ruthven, 2016). Countries such as Germany, Korea, Norway, Spain, UK and USA that are on stage 3 on the stages of development (Stage 3-(innovation-driven):GDP per capita \$17,000 and more), use different KM techniques to

increase their efficiency in different aspects of their organization--from kindergarten schools to the highest military offices (Kassab, 2016). The majority of the countries in the African continent are in the early stages of implementing different knowledge management strategies to achieve knowledge-intensive development in the context of the specific community of the country.

Knowledge Management in China

Conscious introduction of knowledge management practices have been integrated into Chinese management since the new millennium (Saidi, 2007, Zhao et al., 2012). Although Chinese companies increasingly encourage their employees to apply knowledge management practices in workplaces, no Chinese companies were considered managing knowledge effectively (McKellar, 2006). In 2007, a survey conducted by China Market Intelligence Center (CMIC) and China Computer Users showed 50% of surveyed people claimed their enterprises are at the initial stages of enabling knowledge management, 32% of surveyed people claimed that their enterprises still did not have plans for knowledge management. Most enterprises only had 20% of experience and knowledge stored and documented. Much knowledge related to profitability and competitiveness inside and outside enterprises continued to be incomplete. Meanwhile, majority of surveyed enterprises considered knowledge management to be merely a knowledge sharing process, which could be easily enabled by appropriate use of IT (Zhao et al, 2013).

Cultural issues may be attributed to the ineffectiveness of knowledge infrastructure across organizational boundaries for facilitating knowledge management activities. And fourth is the leadership issue concerning a context that promotes knowledge management activities. In reviewing the literature on knowledge management and innovation, Lu et al (2008) have observed that the four issues seem to have been examined through both internal and external factors. Internal factors include 'organizational structures, control and coordination, mechanisms, communication channels, and organizational culture' (p363). External factors concern knowledge management across businesses, industrial and national entities, and the role of government to facilitate R&D and technology development. It is obvious that the external factors focus on improving knowledge management in industrial and national levels, whereas internal factors are more closely related to individual organization's performances in light of knowledge management contributions, and the relationship between knowledge management and organizational performance can be examined through these internal factors.

In a study investigating knowledge management contributions to organizational performance, Gold et al (2001) proposed that effective knowledge management can be examined by way of a couple of perspectives, 'a knowledge infrastructure consisting of technology, structure and culture, along with a knowledge process architecture of acquisition, conversion, application and protection' (p186), as these may be taken to be essential preconditions for effective knowledge management. Such a framework is illustrated in figure 1 below

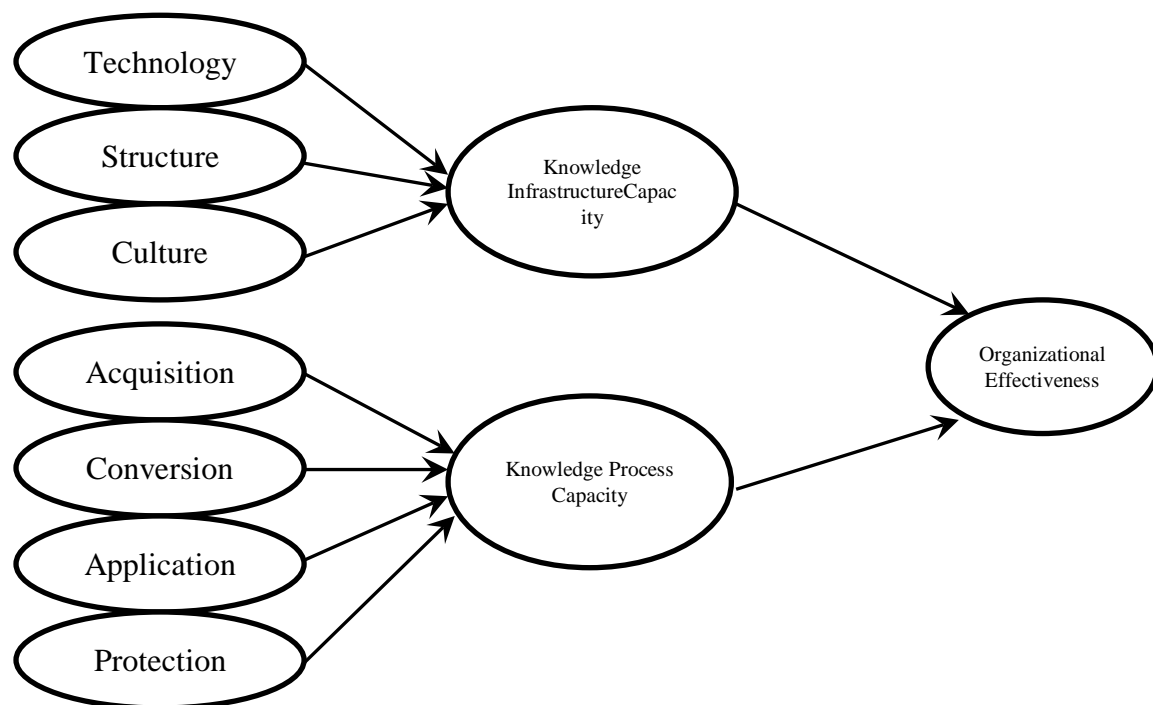


Figure 6. Model of a knowledge management infrastructure

CHAPTER THREE

THE RESEARCH DESIGN AND METHODOLOGY

3.1. Research Design

In this study, the researcher preferred to use a mixed method research approach. A mixed research design is a procedure for collecting, analyzing and ‘‘mixing’’ both quantitative and qualitative methods in a single study or a series of studies to understand a research problem (Creswell and Plano Clark, 2011). The basic assumption is that the researcher used both quantitative and qualitative methods in combination and provides a better understanding of the research problem and question than either method by itself.

A mixed approach was used to collect a relevant data in this study. To achieve the desired purpose and to answer the basic questions of the study, a descriptive research design was used. According to Burns and Grove (2003), descriptive research is designed to provide a picture of situation as it naturally happens. It may be used to justify the current practice and to make judgment and also to develop theories.

3.2. Sources of data

Both primary and secondary data were used to undertake this study. In order to get primary data, close ended survey questionnaires were prepared and distributed to selected school principals, department heads and teachers of private high schools in Arada sub-city. An interview was conducted with selected school principals and department heads using semi-structured interview guide. In addition to this, the researcher reviewed available documents, books, journals and problems of knowledge management in private secondary schools in Arada sub-city.

3.3. Sample and Sampling Techniques

3.3.1. Sample

The determination of the population and sample of schools was based on the information have gathered from Wereda 5 Education office. According to the information there were 10

Weredas and 6 private high schools in Arada sub-city. In these 10 Weredas, the number of teachers is 165. For the target population all Weredas were taken.

Regarding respondents, among 13 schools, 68 teachers out of 165 selected using a random sampling method. All 6 principals were selected based on purposive sampling technique. This created good opportunity for the researcher to get more relevant and resourceful individuals (Bugen and Biklen, 2007). In general this study includes 68 teachers and 6 principals.

Table 2. Target population and Sample size

Types of respondents	Target population	Samples	Sampling techniques	Data gathering instruments
Teachers	165	68	Simple Random sampling	Questionnaires
Principals	6	6	purposive sampling technique	Interviews

3.4. Instruments of Data Collection

In this research three instruments were used in the process of gathering the necessary quantitative and qualitative data. They are questionnaires, semi-structured interview and document analysis.

3.4.1. Questionnaires

The first data collecting instrument employed in the study was questionnaire. Self-developed questionnaires were prepared based on review literature in English language. The questionnaires were distributed for key informants teachers, and principals.

In this study, open ended questions were included since it gave respondents every freedom to give their extended views on the issue. Close ended questions were used for their easiness in tabulation, objectivity and sustainability to keep respondents on the subject of discussion. Respondents from participants were taking using rating and the respondents were expected to express their responses on five rating scale that was relevant to the issue.

3.4.2. Interview

Interview was other vital data gathering instrument to undertake this study. The main reason why this instrument was employed is with the belief that deeper information was obtained on issues critical to the study under way. In order to get deeper information related to the practices and challenged of knowledge management. In the study area, a semi-structure interview was held with school principals to cross-check the responses obtained through questionnaire.

3.4.3. Document Analysis

Document Analysis was equally important data collecting tool .various documents including guidelines of MOE, minutes that shows the practices of knowledge management were explored in the process of the study.

3.5. Procedures of Data Collection

The first thing that the researcher did was, he visited the Wereda Education office and informed them the objective of the research and showing them the letter of cooperation from Addis Ababa University. The researcher collected the necessary information from the Wereda Education Office. Next, the researcher visited the schools principals asked them their willingness to be interviewed and distribute the questionnaires to the selected teachers and department heads.

3.5.1. Pilot test

Validity is based on the view that it was essentially a demonstration that a particular instrument infact measures what it was supposed to measure (Louis et al, 2007). In order to assure the validity of the instruments in this study, certain expert individuals were asked their opinion on the content and the formats of the questionnaires. This tremendously helped to identify errors and gave considerable opportunity to modify and improve the instruments. The researcher immediately takes the appropriate corrections on some terminological words and sequences of the instruments.

And also reliability, according to Louis et al, (2007), is a measure of consistency over time and over similar samples. A reliable instrument for a piece of research would yield similar

data from similar respondents over time. Franken and Wallen (2003), reports that reliability refers to the consistency of the scores obtained how consistent they are for each individual from one administration of an instrument to another and from set of item to another. Relatively speaking the more reliable a test is the more valid data. To measure the consistency of the result from the research, a pilot study was made in secondary school of “**JIVA**” that not participate in the actual study. The participants in the pilot test were 10 teachers and 2 department heads and 2 vice principals. The result showed that some errors were identified which helped the researcher to modify and improves the instruments. After this all the instrument of the main study were used by the researcher and the data was collected.

3.6. Methods of Data Analysis

In this study, the researcher used different statistical techniques on the basis of the nature of the data that was collected. The researcher analyzed the given data by using tables, according to similarity of issues raised in the questionnaires. The data that was collected from the respondents analyzed quantitatively and qualitatively. In analyzing the quantitative data, the respondents were categorized under different groups in terms of the practices of knowledge management in the school. Different characteristic of the respondents were analyzed by using frequency and percentage.

Descriptive statistics like arithmetic mean, waggled mean and average mean were calculated for those items using rating. A five point rating ranging from very low to very high were used for the sake of data gathering on the questionnaires. That was; - 5- very high, 4- high, 3- medium, 2- low, 1- very low. The qualitative data that were collected through interviews was analyzed through narrations of events.

Data collected from the respondents using structured questionnaires were organized in to tables and figures provided below. Moreover, the response were gathered through questionnaires using the five rating scales of Very Low (VL) =1, Low (L) = 2, Medium (M) = 3, High (H) = 4 and Very High (VH) = 5 and those through interview interpreted on the base of idea raised. The mean achieved from the data analysis were interpreted as $1.00 \leq VL < 1.50$, $1.50 \leq L < 2.50$ $2.50 \leq M < 3.50$ $3.50 \leq H < 4.50$ and $4.50 \leq VH \leq 5.00$.

3.7. Ethical Considerations

The researcher gave special attention to make the study professional and ethical. The researcher attempted to explain the real objective of the research to the respondents i.e. academic. As he introduced its purpose in the introduction part of the questionnaire and interview guide to respondents, he confirmed to subjects, confidentiality was protected. The participants were told full information about the research including the reason they have been chosen to participate. Participants' privacy, confidentiality and anonymity have also been guaranteed.

CHAPTER FOUR

Presentation, Analysis and Interpretation of Data

This chapter of the thesis deals with the presentation, analysis and interpretation of the data. It has nine parts. The first part presents the demographical characteristics of the respondents while the second part describes about the practices of knowledge management in school. The third part deals with knowledge management strategies. The fourth part is all about knowledge management culture in the school and the fifth part describes about technology on knowledge management. The sixth part deals with knowledge management process in the school. The seventh part describes about the practice of knowledge management sharing in the school. The final part deals with challenges of knowledge management in the school.

Quantitative data was gathered using semi structured questionnaires and the qualitative using semi-structured interviews with selected school principals and open-ended questions on the questionnaires made are incorporated here. Finally the qualitative data gathered from the oral interview made with school principals presented separately.

4.1. Table 3. Demographic Characteristics of Respondents

Demographic Characteristics of Respondents								
No.	Items	Category	Teachers		Leaders		Total	
			No.	%	No.	%	No.	%
1	Sex	Male	60	88.23	6	100	66	89.18
		Female	8	11.77	-	-	8	10.82
		Total	68	100	6	100	74	100
2	Academic Qualification	12+ 2 Diploma	-	-	-	-	-	-
		BA/BED/BSC	68	97.14	-	-	68	97.14
		MA/MSC	2	2.86	4	97.14	6	2.86
		Total	70	100	4	100	74	100
3	Service Year	1-5	17	25	-	25	17	25
		6-10	45	66.17	-	66.17	45	66.17
		11-15	6	8.82	-	8.82	6	8.82
		16-20	-	-	1	16.66	1	16.66
		21-25	-	-	1	16.66	1	16.66
		26 and Above Years	-	-	4	66.66	4	66.66
		Total	68	100	6	100	74	100

Source: own computation

Table 3. Demographic characteristics of respondents

As shown in table 3 item 1, 60 (88.23%) of the teacher respondents, 6 (100%) of the principals were males, while the remaining 8(11.23%) were female respondents. According to this data 66 (89.18%) of the respondents were males and only 8 (10.8%) were female respondents. This reveals that the number of female teachers in Arada Sub city Private secondary school is limited.

With regard to the level of education, as shown in item 2 of the above table most of the teachers 68(97.14%) of them were BA/BED/BSC holders whereas the remaining 2 (2.86%) of the teachers were holders of MA/MSC. Regarding to principals 4 (97.4%) were MA/MSC holders.

Finally as it can be shown from Item 3 of table 3, 17(25%) of the teachers were under five year service in their current position; 45 (66.2%) of the respondents have served 6 to 10 years in their current position. The remaining 6 (8.82%) of the teachers have served 11 to 15 years in their current position. Concerning to school principals 1 (16.7%) principal has served 16 to 20 years in his current position. 1 (16.7 %) principal has served 21 to 25 years in his current position. 4(66.7 %) of the principals have served 26 and above years in their current position.

4.2. Table 4. Responses on Knowledge Management Practices

	Statement	5	4	3	2	1	Mean
1	The extent to which you practice knowledge management	5	16	25	15	0	2.85
2	The extent to which your usage of knowledge networks such as email, internet/intranet for knowledge /skills sharing within your school	6	11	29	13	5	2.82
3	The extent to which your practice of documenting and sharing your own work to colleagues	9	8	26	17	1	2.79
4	The extent to which your practice of knowledge sharing on regular base	5	22	26	8	3	3.09
5	The extent to which the level of development and promotion of knowledge sharing in your school	7	7	31	15	17	2.99
6	The extent to which your KM practices helps you to improve your performance in your school	7	10	29	13	4	2.82
7	The extent to which the practices of KM brought changes in the result of your students	2	21	23	13	3	2.82
8	The extent to which the use of KM practices help employees to share the best practices there by reducing the learning curve	0	12	28	21	2	2.59
Average mean							2.85

As shown on table 4 with regard to the practices of knowledge management, teachers responded medium (mean=2.85) while concerning to usage of knowledge networks teachers replied medium (mean = 2.82). Concerning to the practice of documenting and sharing of one's network to colleagues, teachers responded medium (mean= 2.79). Teacher's responded as they practice knowledge sharing on regular bases which is 3.09 mean. The item on the development and promotion of knowledge sharing is weighted 2.99 which is medium. As teachers responded for item 6 regarding to knowledge management practices that helps employees (teachers) in improving their performance it is medium (mean=2.82) on the same table item 7, knowledge management practices brought changes in the result of student results, teachers responded medium which is a weighted mean of 2.82. The last item which is the use of knowledge management practices that helps employees to share the best practices,

teachers replied medium (mean = 2.59). Thus, knowledge management practices were moderate.

- Similarly the data obtained from open ended items showed that the practice of knowledge management is at medium level. Below the analysis results are shown in a chart form for simplicity and ease of understanding. An interview was conducted with six school principals regarding to the practices of knowledge management in the school: Is there knowledge management practices in the school? Three of the interviewee replied that

“Yes, there is but it is not an organized practice of knowledge management in the school”.

The other three school principals replied that:

“The practice of knowledge management is none existence”

- As the result revealed that in some private secondary schools there is the practice of knowledge management in other schools do not.

4.3. Table 5. Responses on Knowledge Management Strategies

	Statement	1	2	3	4	5	Mean
1	The extent to which manuals and best practices are used regularly	8	17	20	8	9	2.63
2	The extent to which meetings are conducted in the departments where important events are discussed/shared	3	18	21	9	9	2.69
3	The extent to which internet facilities are available for employees for looking up any information	24	21	14	2	5	2.07
4	The extent to which members of the school are actively involved in looking for better ways of teaching	2	21	26	13	2	2.71
Average mean							2.53

As shown on table 5 item 1, the use of manuals and best practices used regularly, teachers responded medium (mean = 2.63). On the same table item 2, regarding to the conduct of meeting and discussion of important events, teachers replied medium (mean = 2.69). Teachers responded for the item 3 concerning to the availability of internet facilities it is medium (mean =2.07). On the last item is which is about school members involvement in

applying better ways of teaching, the teachers responded medium (mean= 2.71). Figure that shows a chart presentation of the analysis results is given below.

4.4. Table 6. Responses on Knowledge Management Culture

	Statement	5	4	3	2	1	Mean
1	The extent to which KM helps you learn new things in your school	5	12	15	28	4	2.62
2	The extent to which KM helps you to store learning from each new job experience	4	14	20	24	3	2.75
3	The extent to which knowledge sharing helps you to learn something new everyday	2	13	16	30	3	2.54
4	The extent to which KM culture helps you to reduce mistake by sharing the best practices and problems	4	11	20	25	3	2.60
5	The extent to which KM culture helps staffs in making better and informed decisions	3	12	19	24	26	2.85
Average mean							2.67

As shown on table 4.4, item 1 knowledge management helps teachers to learn new things, teachers responded medium (mean =2.62). On the same table item 2, concerning to knowledge management contribution to store learning from each new job experience the respondents replied medium (mean=2.75). With regard to item 3 on the same table, knowledge sharing helps employees learn something new every day, teachers responded medium (mean=2.54). For item 4, knowledge management culture helps teachers to reduce mistakes, teachers responded medium (mean=2.60). On the last item which is about knowledge management culture helps staff in making better and informed decisions, teachers responded medium (mean=2.85). Generally speaking the knowledge management culture in private high school is medium. Like previous sections, a figure that shows a chart presentation of the analysis results is given below.

4.5.Table 7. Responses on Technology on Knowledge Management

	Statement	5	4	3	2	1	Mean
1	The extent to which technology links all members to one another and to all relevant external parts	3	6	14	28	13	2.21
2	The extent to which technology creates an institutional memory that is accessible to the entire school	1	6	15	29	13	2.13
3	The extent to which the school fosters development of human centered information technology	1	6	14	35	9	2.21
4	The extent to which the information system are real-time, integrated and smart	1	7	15	28	12	2.15
5	The extent to which KM helps to bring New ideas to the school	2	7	14	29	13	2.22
6	The extent to which Information Technology helps the staff by keeping them updated regarding their filed by facilitating knowledge sharing across the school	0	7	11	33	13	2.06
Average mean							2.16

As shown in table 7 item 1, technology links all members to one another, teachers responded low (mean=2.21). Regarding item 2, technology creates an institutional memory that is accessible to the entire school, teachers replied low (mean=2.13). On the same table item 3, the school fosters development of human centered information technology, teachers responded low (mean=2.21). Teachers responded for item 4 which is about information system are real-time, integrated and smart, they confirmed low (mean=2.15). On the same table item 5 knowledge management helps to bring new ideas to the school teachers responded low (mean=2.22). Regarding the last item, information technology helps the staff by keeping them updated regarding their field by facilitating sharing across the school, teachers responded low (mean=2.06). Concerning to technology on knowledge management the result showed low.

4.6. Table 8. Responses on Knowledge Management Process

	Statement	1	2	3	4	5	Mean
1	The extent to which successful practices and cases from other department are studied and lessons incorporated in the processes to improve efficiency	12	14	33	5	0	2.34
2	The extent to which important updates regarding new procedures regarding new procedures help to teach students in a better manner	9	23	22	10	0	2.37
3	the extent to which using KM processes improves knowledge which helps individual to perform better	8	24	18	12	2	2.47
4	The extent to which innovating work process by shared learning helps to improve decision making processes	8	24	20	11	1	2.43
Average mean							2.4

Table 8. Analysis result regarding Knowledge Management Process

As shown on table 8 item 1 successful practices and cases from other department are studied and lessons incorporated in the process to improve efficiency, the teachers responded low (mean=2.34). Regarding to item 2, important updates regarding new procedures help to teach students in a better manner, teachers replied low (mean=2.37). On the same table item 3 using knowledge management processes improves knowledge which helps individual to perform better, teachers responded low (mean=2.47). The last item innovating work process by shared learning helps to improve decision making processes, teachers responded low (mean=2.43). In general it is concluded that the knowledge management process is low in private secondary school in Arada sub city.

4.7. Table 9. Responses on Practice of Knowledge Management Sharing

	Statement	5	4	3	2	1	Mean
1	The extent to which senior teachers in the school use KM platforms to share new ideas	1	11	15	30	7	2.37
2	The extent to which senior teachers and staff share their experiences and advice through KM practices	2	12	20	25	3	2.51
3	The extent to which new coming teachers are encouraged to use knowledge portal to learn how things are done	1	12	14	33	3	2.41
4	The extent to which sharing practices help teachers to provide useful feedback that helps to increase learning	1	14	26	20	4	2.69
5	The extent to which seniors in the school encourage others to share best practices and learning experiences	1	10	30	21	3	2.65
6	The extent to which KM portals are used to coordinate with other teams to meet your school objective	1	10	24	20	11	2.47
7	The extent to which knowledge sharing platforms are used to get all the relevant work information from others	3	10	20	27	4	2.54
8	The extent to which the knowledge sharing platforms helps to create awareness and support for schools mission statement	1	10	21	28	7	2.51
9	The extent to which the knowledge gaps are systematically identified and well-defined processes are used to cause them	3	8	25	25	4	2.59
10	The extent to which the school has formalized the process of transferring best practices including documentation and lessons learned	2	6	27	29	6	2.63
11	The extent to which knowledge sharing are used to share problems and errors so that corrective action can be taken	3	6	20	21	14	2.28
Average mean							2.51

As shown in table 9, item 1 senior teachers in the school use knowledge management platforms to share new ideas respondents replied low (mean=2.37). On the same table item 2, teachers and staff share their experiences and advice through knowledge management practices, teachers responded medium (mean=2.51). For the items new coming teachers are

encouraged to use knowledge portal to learn how things are done (mean=2.41), knowledge management portals are used to coordinate with other teams to meet the school objective (mean=2.47), knowledge sharing are used to share problems and errors so that corrective actions can be taken (mean=2.28), teachers responded low where as for the items sharing practices help teachers to provide useful feedback that helps to increase learning (mean=2.69), seniors in the school encourage others to share their best practices and learning experiences (mean=2.65), knowledge sharing platforms are used to get all the relevant work information from others (mean=2.54), knowledge sharing platforms helps to create awareness and support for school mission statement (mean 2.51), knowledge gaps are systematically identified and well-defined process are used to close them (mean=2.59), the school has formalized the process of transferring best practices including documentation and lessons learned (mean=2.63), teachers responded medium. As the result prevailed that the practice of knowledge management is at medium and low level.

4.8. Table 10. Responses on Challenges of Knowledge Management

	Statement	1	2	3	4	5	Mean
1	The extent to which there is limited interactions between experts and knowledge users	5	3	15	25	15	3.40
2	The extent to which the school uses knowledge management strategy (policy) for transfer of knowledge among existing and employees leaving your school	6	5	19	22	11	3.18
3	The extent to which staff with expert knowledge are not willing and motivated to share	3	7	21	26	8	3.29
4	The extent to which the school environment and the nature of the work being performed is not conducive for knowledge transfer (Sharing)	4	9	23	17	10	3.07
5	The extent to which time is not sufficient to acquire or learn new knowledge	8	5	17	26	7	3.06
6	The extent to which there is lack of trust among knowledge workers and dominance of "knowledge is power" attitude	4	5	25	19	10	3.16
7	The extent to which the existence if fear of job security and loss of credit if one shares knowledge /skills to others	9	4	23	25	3	2.96
8	The extent to which reward or recognition for knowledge sharing initiatives	9	9	22	21	3	2.82
9	The extent to which lack of information on whom to consult on specific knowledge areas and where to look for information/guidance	5	7	29	20	2	2.88
10	The extent to which cultural factors blocks opportunities to learn from each other	5	3	34	16	5	2.97
Average mean							3.1

As shown on table 10 for the items describing limited interactions between experts and knowledge users (mean=3.40), use of knowledge management strategy/policy for transfer of knowledge among existing and employees leaving the school (mean=3.18), staff with expert knowledge are not willing and motivated to share (mean=3.29).

School environment and the nature of the work being performed is not conducive for knowledge transfer (mean=3.07), time is not sufficient to acquire or learn new knowledge (mean=3.06), lack of thrust among knowledge workers and dominance of “knowledge is power attitude” (mean=3.16), the existence of fear of job security and loss of credit if one shares knowledge/skills to others (mean=2.96), reward or recognition for knowledge sharing initiatives (mean=2.82), lack of information on whom to consult on specific knowledge areas and where to look for information (mean =2.88) cultural factors blocks opportunities to learn from each other (mean=2.97), teachers responded medium.

Thus, it can be concluded that the challenges of knowledge management in private schools is at medium level.

Regarding to challenges of knowledge management, all principals were asked: what problems have you encountered in the process of practicing knowledge management all interviewee replied that

Lack of internet facilities, shortage of sufficient time for knowledge, experience and skill plus inadequate manuals were some of the problems they encountered in the school.

CHAPTER FIVE

Summary of the Major Findings, Conclusions and Recommendations

Knowledge is considered as one of the main sources of competitive advantage and essential element for survival of almost all organizations, the aim of this research was to assess the practices of knowledge management in private secondary school Arada Sub city in Addis Ababa.

Both primary and secondary data sources were used to answer the research question of this study. The primary data were collected using questionnaires from teachers of private secondary schools of Arada sub city, Addis Ababa, selected based on random sampling method. In addition to this, interviews were conducted with purposively selected principals of the school.

This chapter presents summary of findings, conclusions and forward recommendations derived from the previous data presentation and analysis.

5.1. Summary of Major Findings

Based on the investigation conducted throughout the research process and the result of the analyzed data, the research has come up with the following major findings regarding to the practices and problems of knowledge management in private secondary schools of the Arada Sub City.

This study attempted to answer the following basic questions

1. What is the practice of knowledge management in school?
2. What are the challenges of schools in promoting knowledge management
3. What should be done in knowledge management implementation better in school?

5.1.1. Characteristics of Respondents

- Concerning the characteristics of respondents, it was found that, almost 65 (88.23%) of the respondents were males and only 8 (11.23) were females. This shows that the females' participation, as compared to their male counter parts, hence, very low.

- Regarding level of education, the majority of the teachers 68 (97.14%) were BA/BSC/BED degree holders respectively this implies that the majority 97.14% of the teacher respondents was equal to or better than that of school leaders by level of education.

5.1.2. Knowledge Management Practices Regarding to knowledge management practices, the average mean of all items 2.85. This implies that the practice of knowledge management was moderately applied in secondary schools.

Knowledge Management Strategies According to teachers' responses on knowledge management strategies revealed that with the average mean of all items 2.53. This shows that knowledge management strategies were moderately applied in secondary schools

Knowledge Management Culture Regarding knowledge management culture school teachers' respondents revealed with the average mean values 2.67. This implies the practices of knowledge management culture in secondary schools were moderately applied.

Technology on Knowledge Management regarding knowledge management culture school teachers' respondents revealed with the average mean values 2.67. This implies the practices of knowledge management culture in secondary schools were moderately applied.

Concerning to technology on knowledge management teacher respondents revealed with the average mean value of 2.16. This implies that technology on knowledge management was low.

Knowledge Management Process Regarding to knowledge management process teacher respondents was rated as low with the mean average of 2.40, which indicated that knowledge management process in secondary school was weak.

Knowledge Management Sharing Concerning to knowledge management sharing the study revealed that knowledge management sharing was moderately applied in secondary schools with the average mean of 2.5. Hence this implies that teachers' secondary schools were sharing knowledge at medium level.

Challenges of Knowledge Management Regarding to challenges of knowledge management the study revealed with an average mean of 3.01. This implies that challenges regarding to knowledge management were moderate.

5.2. Conclusions

As it has been stated, the study focused on the practices of knowledge management in private secondary schools in Arada Sub City, Addis Ababa. Concerning teachers and principals of the school, for this reviewed relevant literatures and documents, and collected data from teachers and principals the teachers concluded the following points based on the analysis.

The medium level of knowledge management practices in private secondary schools showed that knowledge management practice was not new to private secondary schools.

The low level of internet facilities and shortage of time to share knowledge hindered the practices of knowledge management in private secondary schools.

The absence of clear knowledge management standards that defines how KM will work for the schools contributed for the medium level of knowledge management in private secondary schools.

5.3. Recommendations

In general words, it is important that educational institutions should consider the importance of knowledge management practices.

- Initiating formal trainings (including e-learning bases) peer learning, experience sharing and similar other formal and informal learning interactions, through knowledge management initiatives to meet the knowledge needs of the majority of the staff (teachers).
- The schools should have standards to promote the practices of knowledge management.
- The schools administration should create conducive environment for teachers in sharing knowledge among each other.

- The schools administration should make internet facilities available for teachers. In addition to this, the school management may provide different books related with knowledge management.
- The management should reward those teachers who involved in sharing their knowledge experiences and skills for colleague.
- Different interventions like training and awareness reaction workshop should be used in order to maximize the practices of knowledge management in schools.

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ANNEXES

Annex I: Questionnaire
ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
COLLEGE OF EDUCATIONAL BEHAVIORAL STUDY
DEPARTMENT OF EDUCATION PLANNING AND MANAGEMENT

This Questionnaire is prepared for the study entitled:

“Practices and problems of knowledge management in Private Secondary School of Arada Sub City”

I am a post graduate of Addis Ababa University specializing in the field of Educational leadership and management. Currently, I am conducting a research on the Practices and problems of knowledge management in Private **Secondary School of Arada Sub City of Addis Ababa**. The main objective of this questionnaire is to collect primary data for the Practices and problems of knowledge management in **Private Secondary School of Arada Sub City of Addis Ababa**. This questionnaire to be useful and accurate, it is important that you answer each questions thoroughly and frankly as possible.

Dear respondents! Please note that:

- You do not need to write your name on the questionnaire
- You need to respond all of the item
- Put a tick mark (√) or **encircle** inside the box provided

Thank you in advance for your cooperation!

Dear respondent if you want to receive the final output of this study please put your e-mail address here on the space provided or call +251-911-486286.

E-mail

Instructions to fill the questionnaire:

Dear respondents please put a “√” sign inside the box that describes you.

Part I: Background Information

- Gender Female Male
- Name of the School
- Educational Status
 - PhD Diploma
 - BA/BED/BSC TTI
 - MA/MSC/MED Others

. Total years of service.

- 1 – 5 6 – 10 11 – 15
- 16 – 20 21 – 25 Greater than 26

• Educational Role in School

- Principal
- Deputy Principal
- Supervisor
- Department head
- Lead Teacher
- Unit Leader
- Coordinator

Part II: Please read each item carefully and give your opinion or ideas for the questions below by marking in the box against the choice.

5- Very High 4- High 3- Medium 2- Low 1- Very low

2.1 Questions on Knowledge Management Practices in your School

	Statement	5	4	3	2	1
1	The extent to which you practice knowledge management					
2	The extent to which your usage of knowledge networks such as email, internet/intranet for knowledge /skills sharing within your school					
3	The extent to which your practice of documenting and sharing your own work to colleagues					
4	The extent to which your practice of knowledge sharing on regular base					
5	The extent to which the level of development and promotion of knowledge sharing in your school					
6	The extent to which your KM practices helps you to improve your performance in your school					
7	The extent to which the practices of KM brought changes in the result of your students					
8	The extent to which the use of KM practices help employees to share the best practices there by reducing the learning curve					

2.2 Questions on Knowledge Management Strategies

	Statement	1	2	3	4	5
1	The extent to which manuals and best practices are used regularly					
2	The extent to which meetings are conducted in the departments where important events are discussed/shared					
3	The extent to which internet facilities are available for employees for looking up any information					
4	The extent to which members of the school are actively involved in looking for better ways of teaching					

2.3 Question on Knowledge Management Culture in your School

	Statement	5	4	3	2	1
1	The extent to which KM helps you learn new things in your school					
2	The extent to which KM helps you to store learning from each new job experience					
3	The extent to which knowledge sharing helps you to learn something new everyday					
4	The extent to which KM culture helps you to reduce mistake by sharing the best practices and problems					
5	The extent to which KM culture helps staffs in making better and informed decisions					

2.4 Question on Technology on Knowledge Management

	Statement	5	4	3	2	1
1	The extent to which technology links all members to one another and to all relevant external parts					
2	The extent to which technology creates an institutional memory that is accessible to the entire school					
3	The extent to which the school fosters development of human centered information technology					
4	The extent to which the information system are real-time, integrated and smart					
5	The extent to which KM helps to bring New ideas to the school					
6	The extent to which Information Technology helps the staff by keeping them updated regarding their filed by facilitating knowledge sharing across the school					

2.5 Question on Knowledge Management Process in the School

	Statement	1	2	3	4	5
1	The extent to which successful practices and cases from other department are studied and lessons incorporated in the processes to improve efficiency					
2	The extent to which important updates regarding new procedures regarding new procedures help to teach students in a better manner					
3	the extent to which using KM processes improves knowledge which helps individual to perform better					
4	The extent to which innovating work process by shared learning helps to improve decision making processes					

2.6 Questions on the Practice of Knowledge Management Sharing in the School

	Statement	5	4	3	2	1
1	The extent to which senior teachers in the school use KM platforms to share new ideas					
2	The extent to which senior teachers and staff share their experiences and advice through KM practices					
3	The extent to which new coming teachers are encouraged to use knowledge portal to learn how things are done					
4	The extent to which sharing practices help teachers to provide useful feedback that helps to increase learning					
5	The extent to which seniors in the school encourage others to share best practices and learning experiences					
6	The extent to which KM portals are used to coordinate with other teams to meet your school objective					
7	The extent to which knowledge sharing platforms are used to get all the relevant work information from others					
8	The extent to which the knowledge sharing platforms helps to create awareness and support for schools mission statement					
9	The extent to which the knowledge gaps are systematically identified and well-defined processes are used to close them					
10	The extent to which the school has formalized the process of transferring best practices including documentation and lessons learned					
11	The extent to which knowledge sharing are used to share problems and errors so that corrective action can be taken					

2.7 Question on Challenges of Knowledge Management in the School

	Statement	1	2	3	4	5
1	The extent to which there is limited interactions between experts and knowledge users					
2	The extent to which the school uses knowledge management strategy (policy) for transfer of knowledge among existing and employees leaving your school					
3	The extent to which staff with expert knowledge are not willing and motivated to share					
4	The extent to which the school environment and the nature of the work being performed is not conducive for knowledge transfer (Sharing)					
5	The extent to which time is not sufficient to acquire or learn new knowledge					
6	The extent to which there is lack of trust among knowledge workers and dominance of "knowledge is power" attitude					
7	The extent to which the existence if fear of job security and loss of credit if one shares knowledge /skills to others					
8	The extent to which reward or recognition for knowledge sharing initiatives					
9	The extent to which lack of information on whom to consult on specific knowledge areas and where to look for information/guidance					
10	The extent to which cultural factors blocks opportunities to learn from each other					

Part III: Open Ended Questions

- What is the common practice of knowledge management in the promotion of your performance? Give a brief account.

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- What problems have you encountered in the process of practicing knowledge management in your school?

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- What solutions have you given to the problems encountered?

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Annex II: Interview Questions with School Principals

Addis Ababa University

School of graduate studies

College of Educational and Behavioral Studies

Department of Education Leadership and Management (ELM)

Interview Guide Question for School Principals

The purpose of this interview is to gather information about the practices and problems of knowledge management in private secondary schools of Arada sub-city of Addis Ababa.

1. Is there any KM (knowledge management) practice in your school? What are those KM practices?
2. Have you encountered problems regarding to the practices of KM?
3. What solutions have you suggested to improve the practices of KM in your school?