



**Assessment of Knowledge Management Practice: The  
case of Federal Democratic Republic of Ethiopia  
Ministry of National Defense**

**A Thesis Submitted to the School of Graduate Studies of Addis  
Ababa University in Partial Fulfillment of the Requirements for  
the Degree of Masters of Art degree in Public Management and  
Policy (Development Management) in the Department of Public  
Administration and Development Management**

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**ADDIS ABABA UNIVERSITY**  
**FACULTY OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT  
MANAGEMENT**

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**Kebede Michael Mengesha**

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## Acronyms

<b>FDRE</b>	Federal Democratic Republic of Ethiopia
<b>MOND</b>	Ministry of National Defense
<b>KM</b>	Knowledge Management
<b>KMS</b>	Knowledge Management System
<b>PSO</b>	Peace Support Operation
<b>UN</b>	United Nations
<b>AU</b>	African Union
<b>HQ</b>	Head Quarter
<b>AAR</b>	After Action Review
<b>AKO</b>	Army Knowledge Online
<b>AFKN</b>	Air Force Knowledge Now
<b>LFC2IS</b>	Land Force Command and Control Information Systems
<b>SAF</b>	Singapore Armed Forces
<b>CLD</b>	Center for Leadership Development
<b>CALL</b>	Center for Army Lesson Learned
<b>BCKS</b>	Battle Command Knowledge System
<b>CADD</b>	Combined Arms Doctrine Directorate
<b>CSI</b>	Combat Studies Institute
<b>CALMIS</b>	Centre for Army Lessons Management Information System
<b>ALE</b>	Army Learning Environment
<b>ADF</b>	Austrian Defense Force
<b>COL</b>	Center of Operational Learning
<b>SAF</b>	Singapore Armed Forces
<b>IDP</b>	Individual Development Process
<b>ALP</b>	Action Learning Process
<b>UTS</b>	Unit Training System
<b>TRADOC</b>	Training and Doctrine Command
<b>CG</b>	Commander guidance

<b>CAOS</b>	Collective Appreciation of Situation
<b>CBL</b>	Competency Based Learning
<b>FSD</b>	Future Systems Directorate
<b>JOD</b>	Joint Operations Department

### Declaration

I, the undersigned, declare that this thesis entitled **Assessment of Knowledge Management Practice: the case of Ethiopian Ministry of National Defense** has not been presented for a degree in any other university and that all source of material used for the thesis have been duly acknowledged.

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This thesis has been submitted for examination with my approval as a university adviser.

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## ***Abstract***

*Knowledge management (KM) has evolved as a significant process for managing and exploiting organizational knowledge. However, the literature relating to KM in Army context is limited. The sustainability of an organization relies on the effective use of the organization's knowledge assets and resources. Knowledge is a key asset in equipping defense personnel to accomplish their mission. KM therefore has a major role in assisting Defense to achieve performance excellence. The purpose of this research is to evaluate the extent and effectiveness of KM and indentify factors that influence KM in Ethiopian Defense Force and to indicate possible recommendations for the future implementation. To achieve expected output qualitative research methodology were used, and probability, random and purposive sampling were used because of fitting of the army units geographical settlement. The research found that the extent and effectiveness of KM was very poor, providing significant and important opportunities for improving KM practice in Ethiopian Defense Force. Lack of incentive mechanism, lack of proper policy and procedures, non conducive organizational culture and structure, lack of resources, lack of leadership support, Army members attitude and not understanding the benefits of KM to bring a sustainable change in the organization were identified as major influences on KM practice in Ethiopian Defense Force .The research also identifies shortfalls in KM practice and offers practical recommendations that should improve the accomplishment of the organizational mission and which brings a continuous change by enhancing the appropriateness, consistency, quality and timely activities by empowering individuals and groups .*

**Key Words:** Knowledge, Knowledge Management, Knowledge Sharing, Leadership, Organizational Change, Organizational Learning.

## **CHAPTER ONE: INTRODUCTION**

This chapter deals with the background of the study that shows the brief description of the study. It also comprises the statement of the problem, with basic research questions, the significance of the study and objectives. In addition to this, it reveals an overall organization of the study.

### **1.1. Background of the Study**

Scholars and practitioners from all over the world are working to understand the value of knowledge management in various countries and organizations. Yet despite all the developments no specific research was conducted to assess or investigate the knowledge management practices in the Ministry of Defense of Federal Democratic Republic of Ethiopia.

In an era where knowledge is increasingly seen as an organization's most valuable resource, many firms and organizations have implemented knowledge management systems in an effort to capture, store, and disseminate knowledge across the firm (Alavi and Leidner, 2001). For instance in an Army context we can see the best empirical Knowledge management experiences like:

In the context of today's military modernization and organizational change efforts, the present is set off from the past by the current heavy reliance on knowledge resources and organizational learning (Proctor and Gubler, 1998). Since a broad range of knowledge potentially affects operations, the commander's information requirements may extend beyond purely military matters. Defining these requirements is an important aspect of KM (CAC, 2010). KM application within military environment requires knowledge processes that are robust and reliable within operational contexts and the knowledge creation and conversion processes must match the pace of the military operations. Elder (2008), in his article stated that KM is about the processes and techniques used to rapidly transfer experience and provide a common understanding from an experienced soldier to an inexperienced soldier. Accordingly, KM can support and improve organizational learning and foster an innovative environment, resulting in an increase in performance.

In military, KM was defined as a strategic approach to achieving defense objectives by leveraging the value of collective knowledge through the processes of creating, gathering, organizing, sharing and transferring knowledge into action (McIntyre et. al., 2003). However, the Army defined KM as a discipline that promotes an integrated approach to identifying, retrieving, evaluating, and sharing an enterprise's tacit and explicit knowledge assets to meet mission objectives. Lambe (2003) testified that KM, intelligence applications, and decision-making skills have been at the forefront of military doctrine over the past decades. The development of KM in military has been accepted and used extensively for thousands of years, the military have been leaders in adopting and advancing KM practices as applied in the military intelligence.

Most of the following countries military documents are confidential thus not readily available to general public; however what is presented is individual Army members of the listed countries residing in Ethiopia referenced herewith attesting of existing strategies on knowledge management in their militaries.

### **Knowledge Management Experience in U.S. Army**

The US Army began to realize that it needed to harness the knowledge of the organization in the mid 1980s. The Army had recently created the National Training Center in the desert of Southern California designed to provide a realistic combat training site for its vast heavy maneuver Army. This training site gave leaders as close to a real combat operational experience as possible. The cadre at the National Training Center gave thorough critical analysis of the actions of these units/leaders thus providing lessons learned for each rotation. The Army realized that it had no mechanism to harness these lessons that individuals and units were learning from this valuable experience.

In its move to realize truly dynamic knowledge management, the Army developed the Combined Arms Center-Knowledge at Fort Leavenworth, Kansas. The mission of this organization is to create, organize, apply and transfer knowledge to enable the force and the vision is a "network of knowledge organizations enabling Operating and Generating forces to share what they know or access what they need to know anytime, anywhere."The goal of knowledge management is to facilitate experiential knowledge transfer between Soldiers. This organization is directed by an

active duty Army Colonel and is the Army's hub for its knowledge management strategy. This organization is broken down into five directorates including: Battle Command Knowledge System (BCKS); Combined Arms Doctrine Directorate (CADD); Center for Army Lessons Learned (CALL); Combat Studies Institute (CSI); and Military Review. This mix of organizations is important for thorough knowledge management. These organizations each play a significant and unique role in the collection of the Army's organizational knowledge, analysis of that knowledge, translation of that knowledge into functional doctrine and the sharing of that knowledge with the right people at the right time.

### **Knowledge Management Experience In Austrian Army**

Army provides the bulk of the ADF's operationally deployed units and Army's lessons process is focused on supporting units deployed in the field. Since 2000, Army has used the Centre for Army Lessons Management Information System (CALMIS) to manage its lessons. CALMIS stores and assists in the analysis of the majority of lessons identified by Army personnel, both short and long term.

Army's current lessons structure derives from the 2006 Army Learning Environment (ALE) initiative. Learning lessons is intended to be central to the concept of ALE, developed in response to a directive from the then Chief of Army to enhance the way in which Army converted lessons into learning.

Endorsed by the then Chief of Army in August 2007, the goal of ALE was to provide a framework for an adaptive learning culture within Army: The integrated ALE is achieved when Army routinely converts lessons into learning in a relevant, effective and efficient manner. This feature is the hallmark of a genuine learning organization. ALE is structured around 'learning loops' aimed at meeting the needs of Army users within specified time frames (immediate, short, medium and long).

- **Immediate Learning Loop:** The focus of the immediate learning loop is on operations force elements that are currently deployed. The lessons processes for the immediate learning loop are rarely documented, as actions to be taken usually need to be implemented on the ground immediately, especially where they affect the safety of ADF personnel.

- **Short Learning Loop:** The focus of the short learning loop is on force preparation, which is the training and equipping of ADF personnel preparing to deploy on operations. The short learning loop is the main focus of activity in the current Army lessons structure.
- **Medium and Long Learning Loop:** The medium loop focus is on force generation, the process of training and equipping forces, and ensuring that readiness and preparation deadlines are met for current and potential future tasks.

### **Knowledge Management Experience in the Singapore Army**

However, we need to move out of the registry mindset and transfer the responsibility for KM systems design to operational communities, through lessons-learnt frames, and leverage on institutions such as the Army Center for Lessons Learnt (CALL) and SAF Center of Operational Learning (COL ).

**Leadership Development (LD).** Military leaders inevitably shape opinions, attitudes, values and ideas in the people they lead. We have made considerable progress in raising the awareness and understanding of the SAF’s leaders across all levels of the need to build individual skills such as coaching, facilitation and reflection. These skills enable us to better engage those whom we lead and to perceive issues from their perspective. Through its partnership efforts with the Services, the SAF Center for Leadership Development (CLD) is beginning to grow these skills into sustainable action on the ground. Such “practice fields” are supported by processes such as the Individual Development Process (IDP) and the Action Learning Process (ALP), which convert skills into practice in training and exercises. When deployed into ops, these skills strengthen insight formulation and generate lessons learnt. These skills form the true bedrock of operational learning.

**Organizational Learning (OL).** The SAF has been at Organizational Learning for the last five years. Nominated senior officers are placed in change agent roles in order to foster new approaches to thinking and doing. These programs have addressed fundamentals such as examining life's purposes, understanding mental models, building personal mastery and seeking

system thinking. The program builds individual capacities and provides a language for bringing about necessary changes for one to lead a life of purpose and significance in the SAF. However, based on anecdotal evidence from several graduates, the demands of the mainstream scuttle all well-intended initiatives that these graduates might deploy on the ground. In its current frame, the OL program is limited in ground implement ability. But it remains promising as a driver for understanding change with the potential to build enduring practices for learning. Hence, the overarching KM system needs to be positioned as an enabler, not as the source or the driver, for such learning to be transformed into knowledge. This means that the system cannot be built without first understanding needs, styles and knowledge seeking behaviors' of different learner groups.

**Rapid Operational learning Cycles.** We are not alone in the desire to learn rapidly. In the Vietnam War, the Americans realized that learning before, during and after any experience considerably shortened learning cycles. CLD has started out with the ALP effort to design the Unit Training System (UTS ) for learning outcomes in the Army Training Institutes. In the process, CLD and HQ Training and Doctrine Command (TRADOC) are attending to knowledge management at the Battalion level (Battalion KM). Over time, these seed efforts will allow CALL and COL to evolve into important institutions that will be key nodes in the systematization of operational learning.

**Inculcating Operational Imagination.** This is probably the hardest to do because we train and educate our people to seek Commander guidance (CG ) and plan based on operational analysis and precedence. Therein lies the burgeoning worry: weak situational awareness detection capabilities. The Collective Appreciation of Situation (CAOS ), deliberately designed to be logical, is paradoxically limiting. Operational imagination tends to be subdued by rational objectivity. Such objectivity, while necessary from a time management point of view, is also responsible for goal fixation. In simple terms, we are restricting imagination by our very own processes. We need to attend to building the capacity for insight and apply this to our strategy, which in turn supports operational learning.

**Leadership Development (LD).** CLD is now at a stage where ground implementation requires clear partnering efforts in process design and continued system support for basic skill building, especially in reflective practice. There will be continued efforts to balance research with implementation but the point of the matter is that the skills such as coaching, facilitation and reflection require specifically designed processes, such as the Individual Development Process (IDP ), Action Learning Process (ALP ) and Competency Based Learning (CBL), which in turn must sit within the larger mainstream entities such as Human Resource (HR ), Operations and Training systems respectively. When we manage to do this, we arrive at practice fields, which include habit forming actions. In the years ahead, CLD will be able to shift into a more mature frame of providing systematic feedback and assessment of effort to management on behavioral trends. In the larger scheme of things, the SAF Battle Planning Process should be reviewed to better accommodate operational imagination. Some of the conceptual models earlier experimented by Future Systems Directorate (FSD) (sense making), Joint Operations Department (JOD) (Effects Based Operations) and Training and Doctrine Command (TRADOC) (System Reframing) could provide input for an effective review effort. CLD has just completed an in-depth study on what would be required to build adaptive leaders. Some of these constructs provide useful input for the review ahead.

There is a growing demand for knowledge-based products and services (Okunoye, 2002). Given the importance of such an asset, it is not surprising that organizations everywhere are paying attention to knowledge, exploring what it is and how to create, transfer, and use it more effectively for the successful accomplishment of the stated mission and vision of an organization.

According to Mavodza and Ngulube (2011), it is important that an organization has a clear understanding of what KM means to its operations if it has to consider using KM practices. KM practices include knowledge generation, knowledge acquisition, knowledge organization, knowledge storage, knowledge transfer, knowledge sharing and knowledge retention (Mavodza and Ngulube, 2011). Knowledge has become the key to success. It is simply too valuable as a resource to be left to chance (Wenger 2002). Managing knowledge in general has become an

important and valuable input in the management of sustainable development programs (Ngulube, 2002).

Knowledge is information combined with experience, context, interpretation and reflection. It is a high-value form of information that is ready to be used for decisions and actions (Davenport, 1998). Companies need to understand precisely which knowledge will give them a competitive advantage.

Wenger (2002) argues that it is knowledge or the know-how which will give the organization an innovative and competitive edge. Knowledge has become the key to success. It is simply too valuable as a resource to be left to chance (Freeman 2001; Ngulube 2002; Wenger 2002).

Given the importance of knowledge and its management, many organizations are faced with challenges of sustaining themselves considering the demands of the knowledge driven economy. The topic on knowledge management is a vibrant topic today in many companies, academic institutions, and other sectors of the economy. Knowledge has been observed to have an important role among the traditional resources of land, labor, and capital in creating and sustaining economic value. And the main interest of the researcher remains to assess how FDRE-MOND is managing and using organizational knowledge(Tacit and Explicit) to accomplish its missions.

## **1.2.Statement of the Problem**

Ethiopia is more committed than ever to modernize its defense capabilities. Even though the country is much more committed to peaceful developmental efforts, peace cannot be guaranteed without defense capability to pre-empt or avert aggressions and decisively win inevitable wars. Besides, it is now realized that defense capability is an integral part of development in the case of Ethiopia. Thus, to bring development and modernization, it is necessary to ensure peace and security. However, peace and security cannot be guaranteed without strong and modern defense forces that can deter wars, and fight and win decisively in the event of unavoidable war (Internal Legislation of the Holeta Military Academy, 2004).

Strong defense forces in Ethiopia case mean strong deterrent forces, that is to say, strong forces capable of repulsing any attack from any side. Thus, by strong armed forces we mean qualitative, creative, effective, and efficient armed forces at different levels of the army. The role of strong military power is not only targeted to conflict related issues. Rather, it is also crucial to keep the democratic rights of people, good governance, economic growth and development as per the constitution of the country. Hence the demand for strong and dependable defense power is highest than ever. The country requires a high caliber, well experienced, educated, trained and technology oriented military power. To satisfy these needs, the role of managing knowledge towards a learning organization in military profession is indispensable.

The Federal Democratic Republic of Ethiopian (FDRE), Defense Force is established in 1995 by Federal Democratic Republic of Ethiopia Constitution under Article 87/3, this article clearly defined the mission of armed forces in such a manner that “The armed forces shall protect the sovereignty of the country and carry out any responsibilities as may be assigned to them under any state of emergency declared in accordance with the Constitution”.

The establishment of Defense Force proclamation number 27/1996 article 6 number 2 affirmed “Any membership of the defense force who is in active duty shall be trained to develop his/her skill and knowledge in accordance with the individual competences and organizational interest” (Federal Negarit Gazeta: 146).

Practically Ethiopian defense force practiced a lot of experiences for the development of the organization and, contributes a lot on the national development goals through a technology transfer and innovation. Similarly in a pure military profession related sectors rather than protecting national sovereignty, the army became leader on maintain peace universally. But besides these different experiences Ethiopian defense force is not a changing and learning organization through past experiences occurred within the organization. Drucker confirmed that the challenging component of management a large organization and whose operating elements are disparate in terms of mission and geographic location like an army. But best experiences of other nations like US and Canadian Army experienced a knowledge management system like

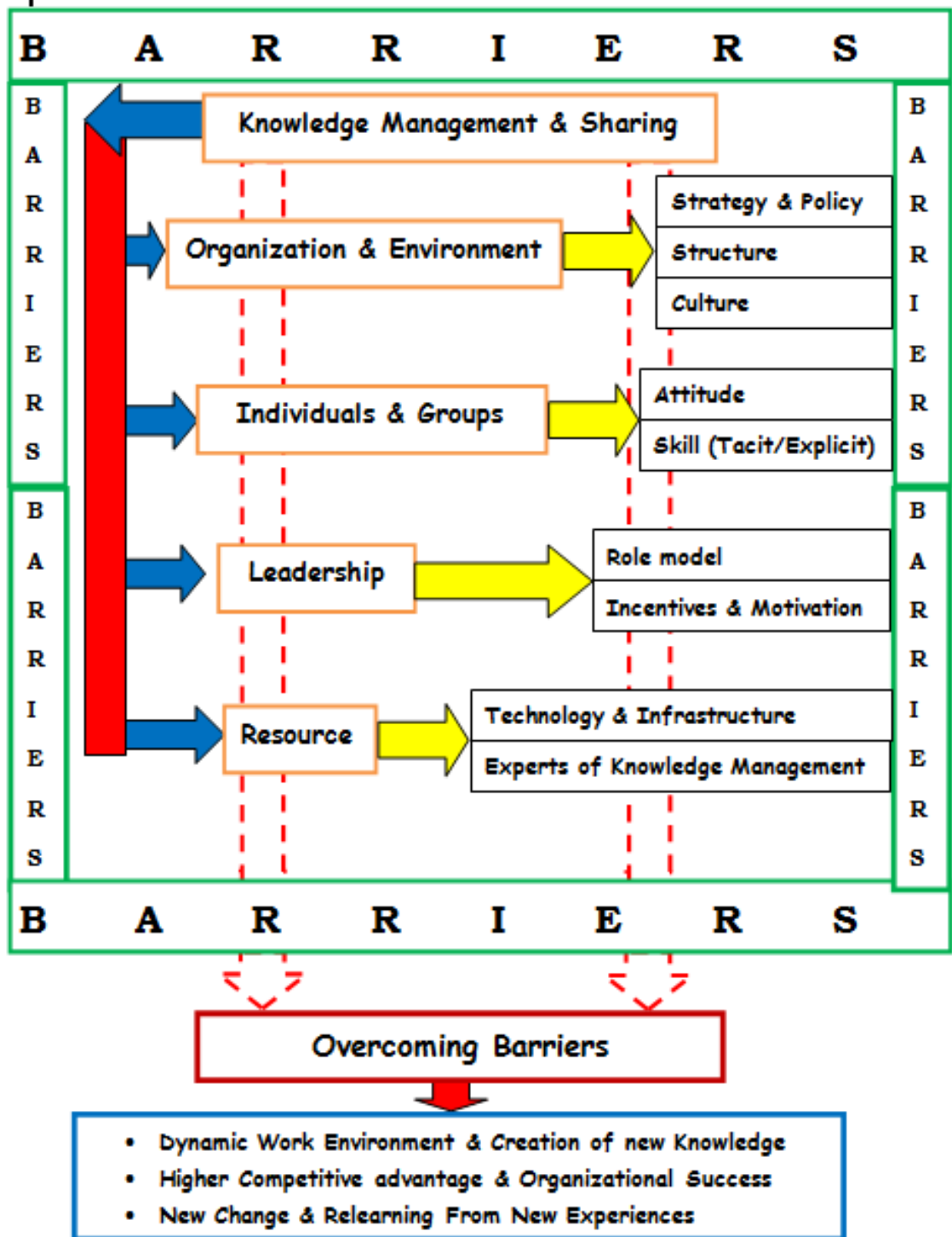
After Action Review (AAR) and Center for Army Lesson Learned (CALL) which facilitates sharing of knowledge within individuals, groups and organization, to create a dynamic work environment which leads to changing and learning organization.

The problem statement in this study would be Department of Defense inability to trace its knowledge and reuse it when needed. The required knowledge is often available somewhere in the organization, but is not accessible when needed. This happens because knowledge in many organizations is often not structured, managed and documented properly.

The present study is an attempt in this regard to fill the gap by investigating how FDRE-MOND is practicing the organizational knowledge management and factors such as the organizational structure and entire environment, technology and infrastructure, other resources and the leadership are important to enhance the organizational capacity through learning.

### 1.3. Conceptual Framework

Fig.1 Conceptual Framework



## **Definitions of Operational Variables**

**Knowledge** :Knowledge is “the fact or condition of knowing something with familiarity gained through experience or association” (Call, 2005:20).

**Knowledge Management** :Armstrong (2009:219) defines knowledge management as “any process or practice of creating, acquiring, capturing, sharing, and using knowledge, wherever it resides, to enhance learning and performance in organizations”.

**Knowledge Sharing** Cummings (2004: 352) describes knowledge sharing as “the provision of receipt of task information, know-how, and feedback regarding a product or procedure”.

**Organization** :The term organization is a very broad term and can be described in multiple ways. Traditionally an organization is intentionally designed social unit that consists of a team or a group of people that work together for the benefits of an organization on a continuous basis to get the organizational targets and goals. For example the manufacturing and service firms are organizations, and so are schools, hospitals, churches, military units, retail stores, police departments, volunteer organizations, start-ups, and local, state and federal government agencies (Hatch 1997).

**Change** : The word change is taken as a result normally. A simple definition of change in the Sansom and Reid Oxford children’s Dictionary (1994:195) defines the change as to become a different. Van der Merwe tells that the word change is obtained from the Latin word to better (Van der Merwe 1991).

**Organizational Change** : Organizational changes mean that organizations are undergoing / and or undergone transformation. It may be define their success story or any type of experience or failure (Hage, 1999). The organizational change is the set of different actions that results shifting in directions and/or processes that affect the way in which organizations work before (Hage, 1999). The need for organizational change starts when organizational management feels dissatisfaction from the current situation. Organizational changes may be planned or unplanned

but in both cases the organizational changes are very important and sometimes become crucial to handle the changes. Leadership planning and vision is most important.

**Leadership:** Leadership and its role are the most concerning issue for the business and organizations now days. The “Leaders are individuals who establish direction for a working group of individuals and who gain commitment from this group of members to established direction and who then motivate members to achieve the direction’s outcomes” (Conger, 1992, p18). The term leadership can be viewed through multiple angles and concepts. Traditionally leadership is a set of feature owned by the leader or it is a social phenomenon that comes from relationship with groups.

**Group:** In the social sciences a group has been defined as two or more people who interact with one another, share similar characteristics, and collectively have a sense of unity or a collection of individuals who have regular contact and frequent interaction, mutual influence, common feeling of camaraderie, and who work together to achieve a common set of goals. (Conger, 1992)

**Attitude:** A predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude influences an individual's choice of action, and responses to challenges, incentives, and rewards (together called stimuli). Four major components of attitude are (1) Affective: emotions or feelings. (2) Cognitive: belief or opinions held consciously. (3) Conative: inclination for action. (4) Evaluative: positive or negative response to stimuli. (Hage, 1999).

**Culture:** Broadly, social heritage of a group (organized community or society). It is a pattern of responses discovered, developed, or invented during the group's history of handling problems which arise from interactions among its members, and between them and their environment. These responses are considered the correct way to perceive, feel, think, and act, and are passed on to the new members through immersion and teaching. Culture determines what is acceptable or unacceptable, important or unimportant, right or wrong, workable or unworkable (Hatch 1997).

#### **1.4. Research question**

In order to provide an appropriate recommendation on how the Ministry of National Defence manage and use its knowledge, the study focuses on the following major questions and some these questions have other sub strengthening and clarifying questions.

- How you rate leadership support to manage and share knowledge in FDRE-MOND.
- How you rate individuals groups and others in FDRE-MOND understanding of the concept knowledge management and sharing.
- Does FDRE-MOND have a motivational incentive system to motivate individuals and groups to share knowledge contribution, exchange or on knowledge sharing with others?
- Rate the existence of barriers to manage knowledge in the FDRE-MOND
- How do you rate the availability of proper technology and Infrastructure to manage knowledge in FDRE-MOND?
- What is/are the possible outcome/s of knowledge management in FDRE-MOND?
- How do you evaluate the overall knowledge management and sharing practice for the benefits of organizational learning and change?

#### **1.5. Objective of the study**

The main objective of the study is to assess the knowledge management practice and change in ministry of national defense, and its contribution on organizational learning. And as specific objectives this study will have different objectives among the most important

- To determine and assess knowledge management policies and strategies in FDRE-MOND.
- To investigate supporting structures, culture and environment that will be/ are assigned to help manage knowledge practices at the FDRE-MOND.
- To determine existence of formal and informal knowledge management practices in the department.
- To determine KM policies present in FDRE-MOND.

- To determine the factors that restrain knowledge creation, retention and sharing in FDRE-MOND.
- To assess the level of understanding of KM and its benefits in FDRE-MOND.
- To identify barriers and challenges to knowledge management in the organization.
- To assess individuals attitude, on the link between knowledge management and organizational Change.
- To assess the extent of organization leadership responses on how to manage knowledge and learn through knowledge and experience.

## **1.6. Scope of the Research**

Ministry of national defense (MOND) was selected as a study area because the researcher has reasonable experience more than 15 years and such research has not been done so far in this level. This lack of research, especially under the Ethiopian defense context, has been a major motivation to carry out this study. This paper can be regarded as the first attempt to explore the existing knowledge management and using for organizational success Ethiopian defense ministry.

To simplify the study selected scenario were used specifically in Ethiopia defense peacekeeping operation and Army the past peacekeeping participation to see the real gap on knowledge Management Practice through on bringing organizational change.

Conceptually this paper investigates basic concepts of knowledge management and its encountering components and the research focuses only the Army departments located in Addis Ababa.

## **1.7. Limitation of the Study**

Whatever an immense output expected from this research, this study faced several constraints. Among these the main one were lack of needed data's the research area on the selected scenario because of over strictness , especially primary data eventually, the resistance of the respondents limiting themselves to respond only the close-end items.

## **1.8. Significance of the Study**

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

- At large, the study may be employed by Ethiopian Ministry of National Defense in addressing of the problems related to knowledge management.
- The study may contribute to create awareness among the armed force members, military leaders, and any other concerned body on the knowledge management practice of defense to the success of military vision.
- This paper could be used as an initiation for those who are interested to conduct a detailed and comprehensive study on such similar topics.

## **1.9. Structure of the Research Paper**

The research paper consist five chapters. The first chapter contains introductory part; which introduces the background of the study, statement of the problem, objective of the study, scope and limitation, and definition of terms. The second chapter focuses on the review of literature, which is relevant to the topic under investigation. Chapter three deals about research design and methodology and Chapter four deals with the data presentation, analysis and interpretation; and the last chapter, chapter five, deal with summary of findings, conclusion and recommendation.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. Defining Knowledge**

Knowledge is “the fact or condition of knowing something with familiarity gained through experience or association” (Call, 2005:20). Smith and Bollinger (2001) define knowledge as the individual’s ability to interpret information according to one’s own experience, expertise and skills. Knowledge is a highly contentious concept and infinitely extensible (Spender, 1996). This means that the use of knowledge by an individual does not restrict another to take advantage of it. Among other characteristics of knowledge are its intangibility and its inherent difficulty to measure (Wiig, De Hoog & Van Der Spek, 1997).

Knowledge in organizations is the extent to which employees know about customers, techniques, products and success (Grayson & O’Dell, 1998; Smith & Bollinger, 2001). Knowledge provides organizations with an opportunity to gain the ability to innovate and compete with others in the market. In order to achieve competitive advantage, strategic assets are considered the most critical for a company and knowledge is one of the important parts of these strategic assets. Knowledge from within organizations can be gained from databases, by sharing experiences with co-workers or by other available means to the organization.

Scholars have divided knowledge into two forms – explicit and tacit – when it comes to the nature of the knowledge (Nonaka, 1994; Spender, 1996; Nonaka, Toyama and Nagata, 2000; Smith, 2001; Lindvall & Rus, 2002). Explicit knowledge is generally saved in codified form in databases and can be easily conveyed to the receiver without any misunderstanding (Smith, 2001). Furthermore, it is knowledge which can be presented in words and numbers and has the ability to be shared in manuals, specifications and scientific data (Nonaka et al., 2000). Thus, this type of knowledge can be understood as the information and individual expertise which can be stored in different types of media, thereby providing the opportunity to reuse it for different purposes within the organization (Lindvall & Rus, 2002). As explicit knowledge can be presented in a codified form, it is often referred to as ‘know-what’ rather than ‘know-how’ (Nonaka, 1994).

Tacit knowledge is ‘know-why and ‘know-how’ and can be referred to as experimental knowledge (Spender, 1996). Smith (2001) describes tacit knowledge as the unarticulated part of knowledge residing in an individual’s mind. This type of knowledge, unlike explicit knowledge,

is hard to present in a written format thereby making it difficult to transfer to others or store (Smith, 2001). Grayson and O'Dell (1998) go further to describe its complication to record, by defining tacit knowledge as a lesson learned by individuals, know-how, judgment, rules of thumb and intuition (Smith, 2001). The tacit knowledge depends upon personal skills and expertise and develops through training and experience, therefore making it difficult to communicate with others (Nonaka, 1994).

## **2.2. Levels of Knowledge**

Based on the literature research there are two levels of knowledge; organizational knowledge and individual knowledge – that organizations deal with today (Lindvall & Rus, 2002; Lowendahl, Revang & Fosstenlokken, 2001; Ipe, 2003). These two types of knowledge, which are either tacit or explicit in nature, have to be managed in today's organisations in order to gain competitive advantage.

### **Organizational Knowledge**

Organizational knowledge reflects organizational culture and defines organization (Smith, 2001). Organization knowledge consists of its current and past employee's tacit and explicit knowledge and is considered to be a strategic, non-tangible asset (Cabrera, 2002). Given that knowledge is viewed as a key resource, companies invest considerable time and money ensuring they make the most of the potential competitive advantage. There are several other reasons behind implementing knowledge management strategies in organizations, the main being to gain core competencies. These competencies are dependent upon the expertise and skills of the employees working for the organization. To maintain and build upon core competencies it is necessary for organizations to develop systems whereby knowledge can be preserved. Demarest (1997) states that cumulative knowledge within organizations results when knowledge is shared by employees in an organization (Smith 2001).

Smith (2001) states that the intention with knowledge sharing should be to enhance organizational knowledge and suggests that effective communication and networking channels are essential ingredients. Organizational knowledge contains the following characteristics (Smith, 2001):

- Inimitable: meaning that the organizations knowledge is unique.

- Rare: due to its dependence on experience and knowledge of current and past employees.
- Valuable: due to the ability to add value in products and gaining strategic advantage.
- Non-substitutable: due to the synergy of employees which cannot be replicated.

### **Individual Knowledge**

The individual knowledge held by employees, either explicit or tacit, can add value to the product, customer and in turn the organization (Ipe, 2003). The individual knowledge is one source of organizational knowledge. The knowledge sharing process among individuals provides even more knowledge not only to the organization but also to the employees themselves (Ipe, 2003). An individual's inability to interact with others within a group or organization restricts the knowledge sharing (Ipe, 2003). For an organization to maximise the benefit of its knowledge asset it is reliant on knowledge being shared between employees. Without the involvement of employees sharing their individual knowledge the ability of the organization to maximize its key knowledge asset is greatly reduced (Cabrera 2001).

'Know-how', 'know-what' and dispositional knowledge are three kinds of individual knowledge which create value for an organization (Lowendahl et al., 2001). Dispositional knowledge is described as personal abilities, talents and aptitude (Ipe, 2003). Sharing of individual knowledge can occur in large settings through external training, education and publications or small settings through private face-to-face meetings (Liu & Lie 2008). Individuals are a part of organizations and the knowledge held by individuals represents an important source of knowledge for organizational knowledge.

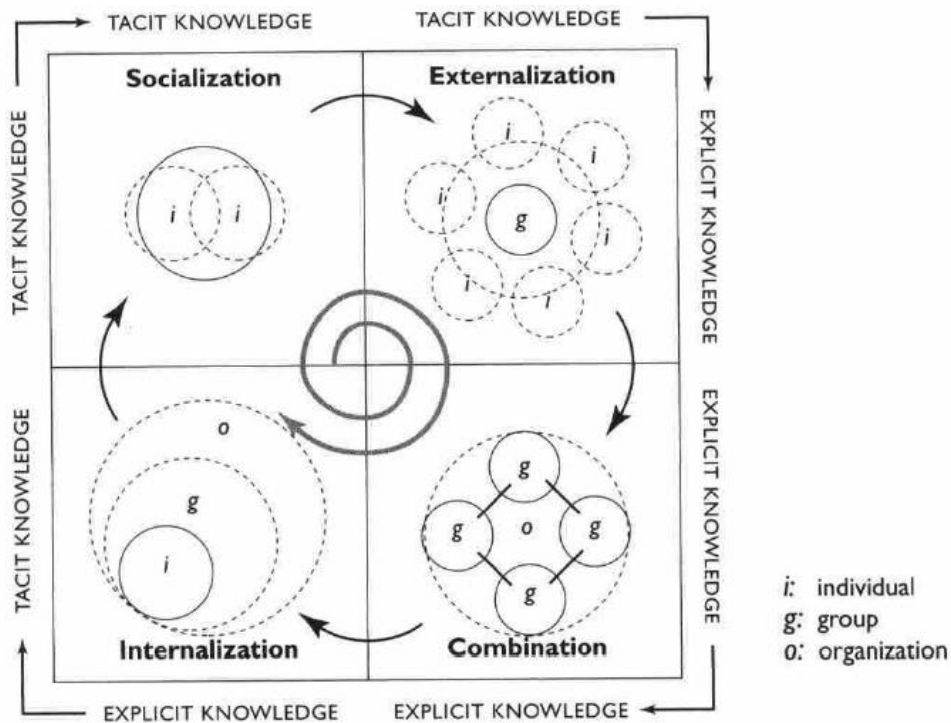
### **2.3. Forms of Knowledge**

Scholars have divided knowledge into two forms – explicit and tacit – when it comes to the nature of the knowledge (Nonaka, 1994; Spender, 1996; Nonaka, Toyama and Nagata, 2000; Smith, 2001; Lindvall & Rus, 2002). Explicit knowledge is generally saved in codified form in databases and can be easily conveyed to the receiver without any misunderstanding (Smith, 2001). Furthermore, it is knowledge which can be presented in words and numbers and has the ability to be shared in manuals, specifications and scientific data (Nonaka et al., 2000). Thus, this type of knowledge can be understood as the information and individual expertise which can be

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**Fig. 2 Knowledge Sharing and Creation Model (Nonaka, 1994)**



## 2.4. Pillars Model Of Knowledge Management

This section presents information from the literature review regarding the key elements within Dr. Stankosky's four pillars model. Stankosky's model is based on four pillars, or key elements. The four pillars or key elements are: Leadership, Organization, Technology and Learning. These four pillars represent key elements critical to Knowledge Management programs, where all four key elements form a disciplined systems approach to an integrated framework encompassing all facets of enterprise-wide Knowledge Management programs.

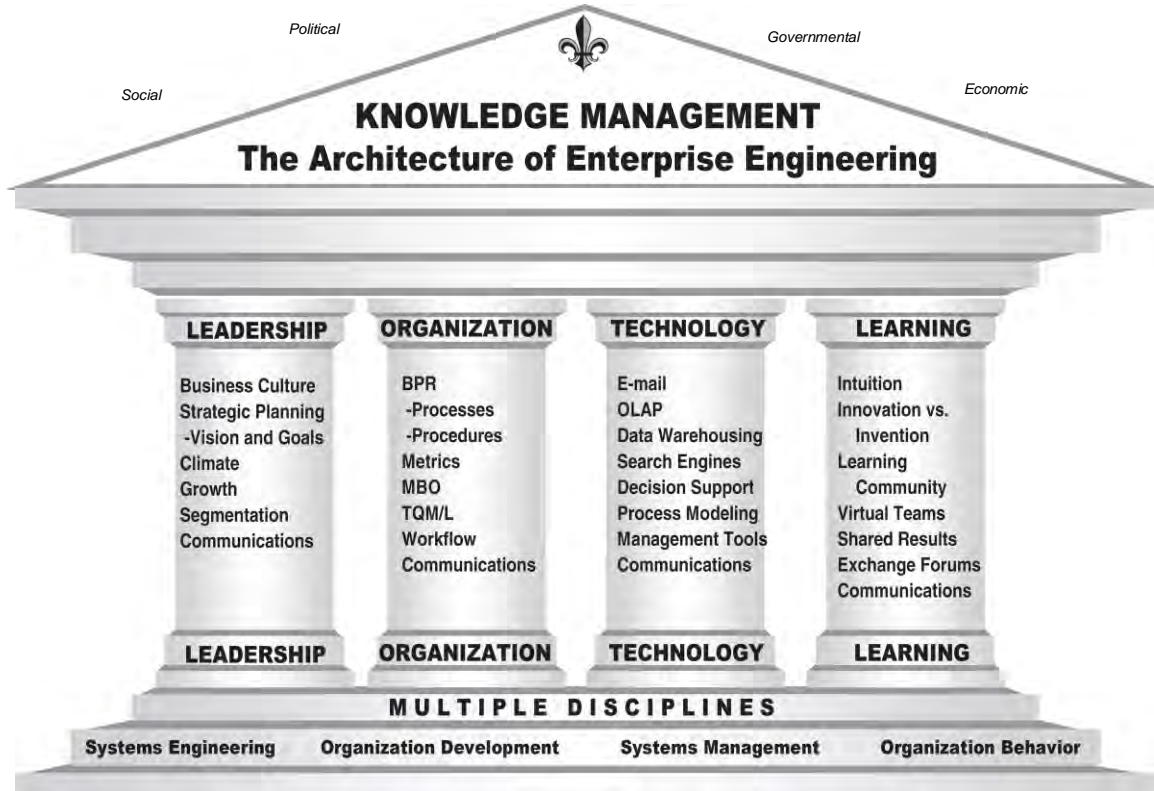
**Leadership/management:** Deals with the environmental, strategic, and enterprise-level decision-making processes involving the values, objectives, knowledge requirements, knowledge sources, prioritization, and resource allocation of the organization's knowledge assets. It stresses the need for integrative management principles and techniques, primarily based on systems thinking and approaches.

**Organization:** Deals with the operational aspects of knowledge assets, including functions, processes, formal and informal organizational structures, control measures and metrics, process improvement, and business process reengineering. Underlying this pillar are system engineering principles and techniques to ensure knowledge assets.

**Learning:** Deals with organizational behavioral aspects and social engineering. The learning pillar focuses on the principles and practices to ensure that individuals collaborate and share knowledge to the maximum. Emphasis is given to identifying and applying the attributes necessary for a "learning organization."

**Technology:** Deals with the various information technologies peculiar to supporting and/or enabling KM strategies and operations. One taxonomy used relates to technologies that support the collaboration and codification KM strategies and functions. (p. 5)

**Fig. 3 Stankosky's four pillars model of Knowledge Management (1994)**



**Fig. 2 Stankosky's four pillars model of Knowledge Management (1994)**

## 2.5. Knowledge Management Process

The most current literature on knowledge management considers knowledge management as a process of creation (acquisition, or generation, or identification), storage (codification), transfer (dissemination, or sharing, or distribution), utilization (application, validation) and renewal of purposeful knowledge that: (i) is needed by knowledge workers and aligned with an organization's business goals and strategies, (ii) addresses a problem or an opportunity for the organization; and (iii) is provided to the right person, at the right place and time (Bhatt, 2001; Alavi and Leidner, 2001, Moteleb and Woodman, 2007).

### Knowledge Creation

Knowledge creation refers to the development of new organizational expertise and capability (Nonaka et al., 2001). Knowledge originates within individuals or social systems. At the

individual level, knowledge is created through cognitive processes such as reflection and learning. Through social and collaborative processes as well as individual's cognitive processes, knowledge is created, shared, amplified, enlarged, and justified in an organizational setting (Nonaka and Toyama, 2002). Social systems generate knowledge through collaborative interactions and joint problem solving.

### **Knowledge Storage**

Knowledge storage or knowledge codification refers to development of organizational memory (i.e., stocks of organizational knowledge) and the means for accessing its content. It is “the capture and representation of knowledge so that it can be re-used either by an individual or by an organization” (Ruggles, 1998). There are two types of organizational memory: internal and external. Internal memory refers to the stocks of knowledge that reside within individuals or groups of individuals in an organization. It consists of individuals' skills and organizational culture. External memory contains codified and explicit organizational knowledge databases. Knowledge storage and retrieval seek to overcome the problem of knowledge loss through employee departure, by capturing and storing knowledge so that it survives the “knower”, and can be retrieved easily and efficiently. This process involves organizing, identifying and accessing relevant knowledge from the organization's memory, which may be in the form of written documentation, organizational procedures and structured information (Alavi and Leidner, 2001). Knowledge storage is a valuable process as it promotes knowledge re-use and prevents organizations from having to “reinvent the wheel” due to lost or inaccessible knowledge, thereby saving money, time and other resources (Davenport and Prusak, 1998).

### **Knowledge Transfer**

The knowledge transfer process involves the transmission of knowledge from the initial location to where it is needed and is applied. It is considered as an important facet of knowledge management. Some scholars have argued that it provides a firm grounding for developing a sustainable competitive edge in a business environment characterized by high levels of turbulence and innovation (Argote et al., 2000). There is a growing realization that knowledge

transfer is critical to knowledge creation, organizational learning and performance achievement (Bartol and Srivastava, 2002).

Knowledge transfer enables knowledge to be accessed beyond the originating person or department to locations in the organization, where it is required and can be used (Alavi and Leidner, 2001). This can be accomplished through channels such as communication processes, information flows, informal seminars, conversations and the like. The effectiveness of these channels is contingent on the perceived value of information, the richness of transmission channels, and the motivational disposition and absorptive capacity of the people involved. Knowledge transfer adds value simply by enabling knowledge to be leveraged organization-wide.

### **Knowledge Utilization**

This is an activity of manipulating existing knowledge to generate new knowledge or produce an externalization of knowledge. This also refers to the use of knowledge for decision-making and problem solving by individuals and groups in organizations (Holsapple and Joshi, 1998). Through this process, knowledge gains value in the eye of the recipient (Grover and Davenport, 2001).

## **2.6. Knowledge Sharing Process In Organizations**

There are several ways in which knowledge can be shared and for organizations to create value inform knowledge sharing all of the ways need to be taken advantage of. Nonaka (1994) explored the process of knowledge sharing in organizations and have created a model that present how different knowledge sharing phases transform the knowledge between explicit and tacit; the authors named it the knowledge sharing spiral. The concepts of the different phases are widely used in research regarding knowledge sharing. The knowledge sharing spiral is initiated by individuals sharing tacit knowledge between each other in a tacit manner. Personal skills and experiences are shared through observation, imitation and practice and is regarded as a very social process, which is reflected by its name; socialization.

Although tacit knowledge is highly important, the socialization phase on its own does not create value for an organization as the knowledge is not made explicit and therefore cannot be shared with individuals outside the process. It is not until the next phase in the cycle the tacit knowledge is made explicit, during the externalization phase. Transforming the knowledge from tacit to explicit is commonly a result of dialogues and collective reflections, and the process can be achieved through metaphors, analogies and models. It is recognized as a complex task as it is difficult to explain a craft or a skill with words, but also since some tacit knowledge might never be possible to express.

The process continues with the combination phase where the value for the organization is starting to form. In this phase several explicit knowledge sources are combined into a whole, which initiates the creation of new methodologies and practices in the organization. The last phase consists of using the combined knowledge and sharing it throughout the organization so that the employees start to use and practice it; this phase is referred to as internalization. Once the people in the organization start using the combined knowledge, their personal tacit knowledge base will be broaden and readjusted which will start the cycle once again by sharing this new tacit knowledge through socialization (Nonaka, 1994).

## **2.7. Factors Affecting Knowledge Sharing**

Although knowledge sharing is considered to be of a vital importance to organizations, it will not be achieved if there is a lack of knowledge sharing culture, trust and motivations (Andrews & Delahaye, 2000; Gold, Malhotra & Segars, 2001; Stenmark, 2001; Smith, 2001; Levin, Huber, 2001; Abrams, Lesser & Cross, 2003; Bartol & Srivastava, 2002; Ipe, 2003; Hsiu-Fen & Gwo-Guang , 2004; Riege, 2005 and Wang & Noe, 2010). After analyzing these articles, three main factors – culture, motivations and trust – have been identified. Each group consists of sub-factors which are either enablers or barriers of knowledge sharing within organizations. Trust and sub-factors related to motivations are connected to an organization’s culture or culture within specific departments or units (Ipe, 2003). The sub-factors have been grouped so as to provide clarity to the reader and have only been included in one main group, even if they are potentially relevant to more than one. For example, technology could be considered under motivation and trust; however it is discussed only as a part of an organization’s culture.

## **Culture**

Organizations are becoming increasingly interested in promoting knowledge sharing culture because it is seen as way of gaining competitive advantage (Gold et al., 2001). Organizational culture refers to an organization's values, norms and expectations. According to Field Manual (FM) 22-100 Army Leadership, culture is "a group's shared set of beliefs, values, and assumptions about what's important." An organization's culture can be understood as the sum total of its members' assumptions, beliefs, and values and is expressed through "what is done, how it is done, and who is doing it" (Farmer, 1990). According to De Long and Fahey (2000) culture is reflected in the values of an organization, where values are reflected in norms that influence specific practices. Management within an organization influence these cultural elements through the rules and regulations they instill and also the example managers personally set in the workplace e.g. praising certain behaviors such as knowledge sharing (Huber, 2001; Ipe, 2003). Organizational culture affects how individuals judge the importance of knowledge and determines the social interactions (formal/informal methods) through which it will be shared (De Long & Fahey, 2000). In addition, Ipe (2003) believes that culture also determines the norms regarding the sharing of knowledge between organization and employees. Furthermore, Ipe (2003) claims that culture shapes what individuals choose to do in regards to knowledge sharing and communication in organizations. Thus, different cultural aspects, namely norms and values, affect knowledge sharing within the organizations. Norms and values shape communication, language, formal and informal ways of communicating, rules, regulations, routines and the technology which directly impacts knowledge sharing.

The tendency for a knowledge sharing culture to exist within a company is largely dependent on the attitudes of its senior managers. This is supported by research carried out by Hsiu-Fen and Gwo-Guang (2004) who found that senior manager's intentions to encourage knowledge sharing behavior positively influences the knowledge sharing behavior of the organization. The willingness of the senior managers within an organization to promote knowledge sharing effects its overall knowledge sharing behavior because of the influence and status generally held by senior managers.

Organizational culture relating to communication is another important factor that can enable knowledge sharing within an organization. Communication in the broader sense affects knowledge sharing in that a lack of which can significantly hinder knowledge sharing or make it virtually impossible. According to Al-Alawi (1997) communication between individuals is a critical factor for knowledge sharing and is largely dependent on the opportunities employees have for face-to-face communication. Furthermore, from an organizational perspective, communication may flow vertically or horizontally within a company which may encourage or discourage individuals to share knowledge. Hierarchical companies tend to be highly competitive which often leads to impaired flows of communication or information being shared on a 'need to know basis' (Riege, 2005). Furthermore, a less hierarchical structure can lead to increased collaboration between employees. This can create an environment which is conducive to knowledge sharing. A company which is less hierarchical tends to positively influence knowledge sharing because individual advancement is less important and there are fewer reasons to withhold knowledge from co-workers (Wang & Noe 2010).

Another factor which affects the knowledge sharing process from a cultural aspect, particularly communication, is the corporate language. This plays a significant role in the process of sharing knowledge. According to Husted and Michailova (2002), the importance of language becomes even more critical when the company's employees or partner's native languages differ from each other increasing ambiguity. The lack of fluency in corporate language is the greatest single possible obstacle for knowledge sharing and is the core of communication difficulties and misunderstandings in multicultural and multi-national settings. It also affects the process of learning and knowledge sharing heavily (Husted and Michailova, 2002). In addition, Riege (2005) believes that obstacles related to language have little relevance on a domestic scale but are certainly important factors that cannot be ignored by multi-national corporations when dealing with their international subsidiaries and partners.

Organizations and individuals need technology to communicate and share knowledge.

This technology aspect can be understood from a cultural perspective, in this case connected to the norms and values in the organization. Furthermore, technology is central to knowledge

sharing. The level of its usage is reflected in an organization's norms and values related to knowledge management and the importance it places on it (Davenport, Beers & DeLong, 1998; Rowley, 1999; Armstrong, 2009). Technologies such as Intranets, Lotus Notes, Group Wise, data warehouses, video conferencing systems, document scanning and sharing tools, and telecommunications networks are considered vital to facilitate knowledge sharing (Davenport et al., 1998; Davenport and Prusak, 1998; Rowley, 1999; and Armstrong, 2009). Although, Davenport et al., (1998), Rowley, (1999) and Armstrong (2009) emphasize the importance of these technologies in knowledge management, Davenport and Prusak, (1998) downplay the role of technology without human support and warn that technology has its limitations. In other words, knowledge sharing requires support from the whole organization and should not only be based upon technological developments. Husted and Michailova (2002) believe that technology can increase the risk of the knowledge being spread to competitors.

Also, it can be taken for granted that learning new technologies can increase knowledge sharing within organizations. Technology can also be introduced as a way to motivate and ease the process of sharing knowledge between employees. Moreover, Perry, Votta and Staudenmayer (1994) state that while solving a problem in the software development process a developer puts great effort into finding the person who knows the best solution for the problem in the organization. Henninger (1997) agrees with Perry et al. (1994) and claims that employees may lose 3-4 days just finding the person with expertise to help them in the absence of knowledge.

Technology has its limitations and requires human support (Davenport & Prusak, 1998), however knowledge sharing in modern organizations also occurs through formal and informal ways and the availability of these can point to organizational values and norms. Formal ways include the regulation, routines and practices to archive knowledge in databases in an attempt to share it with others (Riege, 2005). Conferences, seminars, magazines, brochures, guidelines, training programs, structured group works and even the technical tools to share knowledge are also included in the formal ways of knowledge sharing (Davenport & Prusak, 1998; Riege, 2005; and Wang & Noe, 2010). Informal ways of sharing knowledge includes coffee breaks during

conferences or seminars and relaxed physical environments in an organization such as coffee corners and couches in the corridors facilitate this (Riege, 2005; Davenport & Prusak, 1998).

Informal ways are considered the most effective way to share knowledge among employees. Regarding the importance of informal tacit knowledge acquisition by an individual within an organization, Armstrong (2009:220) states “this individual knowledge may be crucial to the interests of the business and could be lost if it remains locked up in the minds of employees or taken elsewhere by them if they leave the organizations. This can be achieved in informal and relaxed atmospheres such as coffee rooms, where according to Davenport and Prusak (1998), people can talk informally about current problems, exchange ideas and give advice to each other. Informal ways of sharing knowledge help individuals develop respect and friendship leading to building of trust which in turn is critical for knowledge sharing (Wang & Noe, 2010). A culture which promotes knowledge sharing in these settings will tend to be less hierarchical and competitive as hoarding knowledge provides less benefit (Wang & Noe, 2010).

Rules, regulations and routines are an essential part of any organization which reflects an organization’s value and norms and play a major role in knowledge sharing (Michailova & Husted, 2003). In fact, a strong focus on hierarchies and internal regulation creates a business environment and workplace climate where employees are expected to rigorously perform according to organizational rules and procedures, thereby constraining knowledge sharing practices by, for example, punishing mistakes and failures (Michailova & Husted, 2003).

Norms and values of an organization in the form of rules, regulations and routines relating to knowledge sharing are an integral part of knowledge management and an organization’s lack of attention to knowledge sharing may be a result of its lack of awareness or interest in knowledge management. In order to exploit and facilitate the creation and sharing of organizational knowledge, processes related to the rules, regulations and routines should be implemented which support the organization’s knowledge management strategy. These processes could stipulate that a department must share certain knowledge with certain employees after the completion of a project. Without systematic processes such as this the outcomes of the knowledge management

initiatives will be negative (Conley & Zheng, 2009). It is vital that the whole organization is familiar with these processes (Conley & Zheng, 2009). In addition, Davenport et al. (1998) argue that excessive emphasis on developing complex and detailed processes are not preferable. According to Conley and Zheng (2009) the best processes are those which clearly define the knowledge that is expected to be shared by employees of the organization.

### **Motivations**

Organizations need to motivate employees in order to promote a knowledge sharing culture within the organization. Individuals are less interested to share their knowledge without strong motivation (Stenmark, 2001). To ensure the flow of knowledge across an organization is not an easy task and requires intensive efforts by management. Knowledge can be bound both inextricably and intimately connected to an individual's ego and preoccupations (Davenport et al., 1998).

In order to motivate individuals to share knowledge, organizations often use reward systems. Rewards can be monetary or non-monetary incentives to encourage employees. Non-monetary rewards could be a dinner gift or praising certificates to acknowledge services publically. Monetary rewards include cash bonuses. These rewards could either have intrinsic or extrinsic value. Organizations have different perceptions about the value of reward systems. Although reward systems are controversial they are still considered to be an effective tool for management to encourage knowledge sharing among employees (Bartol & Srivastava, 2003). However, an organisation which values individual advancement tends to have less knowledge sharing due to employees being driven by self-advancement rather the advancement of their co-workers (Wang & Noe, 2010).

In addition, mutual give-and-take of knowledge or reciprocity can be a motivating factor for an individual to share knowledge with a co-worker. Simply, individuals within an organization exchange knowledge with each other if the perceived value brings positive change to their status. If the resulting exchange adds value to their own knowledge, the individual will be motivated to share more knowledge in the future (Wang & Noe, 2010). This factor of motivation for knowledge sharing implies that individuals can improve their level of information and

knowledge through mutual knowledge sharing (Ipe, 2003). Reciprocity as a motivator means that individuals must be able to anticipate that sharing will prove worthwhile, even if the exact outcome is uncertain (Wang & Noe, 2010).

From the social exchange theory's perspective, the knowledge sharing intention of individuals depends upon the post-exchange situation. This implies that individuals will be reluctant to share knowledge if the exchange is not favorable. A major element which can limit the reciprocity cycle is the fear of exploitation in the knowledge sharing process among individuals (Ipe, 2003). The main challenge for management here is to motivate employees to share knowledge even if the perceived return for individuals does not balance.

Knowledge holds a certain power and an individual's desire to part with this knowledge and thus reduce its possible value can demotivate the individual to share the knowledge. Employees who hold unique knowledge are often favorably treated within organizations. Therefore, knowledge sharing is less motivating as individuals potentially lose their distinctiveness in relation to co-workers (Wang & Noe, 2010). Due to the increasing importance of knowledge in the new economy, an individual possessing required knowledge tends to create a notion of power around knowledge (Ipe, 2003). Individuals consider professional knowledge as a source of power. The uniqueness of certain types of knowledge held by individuals within organization provides special status. If an individual shares knowledge, his/her status may be reduced (Wang & Noe, 2010). Smith (2001) believes that this sense of power creates hurdles in knowledge sharing at an individual level and decreases the motivation of sharing knowledge. Employees value their knowledge power as an important factor for job security and position within the organization and avoid sharing it with others (Smith, 2001). This implies that in an organization where employees are hoarding knowledge, strong motivational efforts can promote knowledge sharing culture and reduce such tendencies.

### **Trust**

Trust is an integral part of knowledge sharing due to the inherent value in knowledge. A person holding unique knowledge within a company can better be placed in relation to coworkers as

they may be seen as more capable or experienced in the eyes of management. This may lead to financial rewards, promotions or salary increases for the individual.

The level of trust that exists between the individual and the recipient of the knowledge will influence whether or not the knowledge is shared and how it is received. According to Levin et al. (2003) benevolence-based and competence-based trust are two important types of trust which effect knowledge sharing. Benevolence-based trust relates to individuals trusting that each party intends good-will. Competence-based trust refers to the trust that the recipient of the knowledge has about the provider of the knowledge. Levin et al. (2003) found that benevolence and competence based trust are based on the provider and the recipient sharing a common language, common vision and that the provider demonstrates discretion. A common language is vital for the recipient to understand the knowledge which is being shared with them. Similarly, a common vision is important as it builds an affinity between the co-workers which can in turn lead to trust. Also, if discretion is shown then it may demonstrate integrity and lead to the development of trust.

If knowledge is being shared by someone that the recipient regards as capable and trustworthy then they can be confident they are not being deliberately misled or simply being given erroneous information. In this sense, trust on the behalf of the recipient is required. It is important that the recipient is able to trust the source and know that it is credible. If the source of the knowledge has low credibility then the knowledge will not be accepted by the receiver (Andrews & Delahaye, 2000).

According to Andrews and Delahaye (2000) trust is one of the key determinants for the existence of knowledge sharing. Their study found that trust was crucial because employees were concerned about others claiming credit or plagiarizing ideas or knowledge which came through sharing. This is supported by Bakker et al. (2006) who found that knowledge is more likely to be shared to a co-worker who is considered honest rather than capable. It is therefore important that trust is present on both the recipient and provider's behalf; otherwise it is difficult for knowledge sharing to occur. Furthermore, the level of trust that exists between the individuals knowledge

sharing significantly influences whether the exchange will occur. Wang and Noe (2010) researched the influence of trust and found that individuals were less likely to share with those who were perceived as capable and more with those perceived to be honest and fair.

### **Organization and its Environment**

The term organization is a very broad term and can be described in multiple ways. Traditionally an organization is intentionally designed social unit that consists of a team or a group of people that work together for the benefits of an organization on a continuous basis to get the organizational targets and goals. For example the manufacturing and service firms are organizations, and so are schools, hospitals, churches, military units, retail stores, police departments, volunteer organizations, start-ups, and local, state and federal government agencies (Hatch 1997).

Since an organization is a system it can be affected by different internal and external environment also knowledge management also affected by directly the affection of the organization, which can be expressed as follow, All of the Political like government legislation, rules and regulations, Economic, Socio-cultural and Technological) PEST factors illustrated will exist as part of the organization's internal and external environments, and these would impact on the organization's formal and informal subsystems, as well as their related components, such as their products and services offered to the market (Bendix, 2010; Senior, 2002).

### **2.8. Organizational Change**

Organizational changes mean that organizations are undergoing / and or undergone transformation. It may be define their success story or any type of experience or failure (Hage, 1999). The organizational change is the set of different actions that results shifting in directions and/or processes that affect the way in which organizations work before (Hage, 1999). The need for organizational change starts when organizational management feels dissatisfaction from the current situation. Organizational changes may be planned or unplanned but in both cases the organizational changes are very important and sometimes become crucial to handle the changes. Leadership planning and vision is most important.

The planned changes are more related to the management in which management put deliberate effort to make something happen. Strong commitment and systematic approach is required in planned change and the most important thing in planned changes are based on the vision of leader and stated objectives. Changes may affect the strategies, tasks, or factions within the organizations.

There are different kinds of changes according to the nature of organization and its environment, some organizations adopts small changes (incremental changes) while others may go deep towards the organizational transformation usually known as corporate transformations (radical changes) which requires the changes in broader scale and are difficult to handle. (Boston.MA, 2000) There are further three phases of organizational change which organizations usually adopt. These are unfreezing, moving and refreezing. (Senior & Fleming, 2006) Unfreezing is about changing the attitudes and behavior of the employees and working environment. This is very important type of change because while going through any type of change it is important to create a need of change among all the participants.

The leader's role is also very important in unfreezing because it requires a well structured way of implementation the change by managing the behavior and attitudes of people working together. It also requires strong commitment of all the people to work together for a stated common vision. Moving is the next phase in which organizational top management identifies, plan, and implement the appropriate strategies. In this phase it is also decided that either organization has to go for incremental or radical changes. The vision of the leader is also very important for planning and implementing the strategies. All the strategies are shaped in the moving phase. The next step is to refreeze the change situation in which leader assists in stabilizing the changes so that it becomes integrated into status quo. This is most important to understand for the leaders that how to refreeze the changes because if refreezing is incomplete or not manage properly the change will be ineffective and the pre-change behaviors will be resumed. Refreezing always encourages the possibilities of the further changes.

The leadership qualities are very important for organizational changes because it is most important to handle the resistance, confusion, exploration and commitment of management. There are some predictable behaviors associated with the change stages and the effective leader always perceive these changes in efficient manner and respond appropriately to get the teams commitment. Change leader is always associated with the planned change and constructively deals with the human emotions (Senior & Fleming, 2006).

The organizational change in brief, is an intentional effort made by organization leader/leadership/manager to take the organization towards betterment. There could be many reasons or motivations behind the change process, including external or internal pressures for change, technological, social or economical factors. Moreover the vision of an organizational leader/leadership and its innovative ideas can also be reason behind the organizational change process.

## **2.9. Importance of Organizational change**

In order to improve the internal and external functionality the organizations need changes and it is the demand of time (Caetano, 1999). An organization that does not adopt changes cannot survive or cannot be competitive long in market (Boston.MA, 2000).Organizational changes provide different significant benefits e.g. it improves competitiveness, improves financial performance, enhances employees and customer satisfaction and most important is that it leads organization towards continuous improvement and sustainability. These are organizational benefits and not every individual in any organization can get benefits personally from these changes but every individual working in an organization, usually have common goals and objectives and these changes made the organization as a whole stronger (Boston.MA, 2000).

The change process is very challenging and important for organizations and can lead an organization towards a path of success. It can also make them capable to meet future demands and to compete with other market player in effective way. (Robbins, 1999) Ulrich also highlight that change for organizations is necessary to deal with the diversities and the complex market situations (Ulrich, 1998). There are different forces that influence organization for change and

these forces may create expectations of improved efficiency and better services, usually external forces leads towards innovation.

When organizational changes are well planned and carried in a structured way it leads to continuous improvement and organizational innovation (Boston.MA, 2000). Organizational change process must be managed in order to keep organizations moving toward organizational new vision and its stated goals and objectives (Boston.MA, 2000). Nowadays business trends are changing rapidly and quickly in the globe and the organizations that don't change cannot survive (Hage, 1999). Now organizations are facing both internal and external forces pressure that makes change inevitable. There is always a pressure on organizations to balance these forces (Senior & Fleming, 2006). It is also very important for the organization to manage the demands and expectations of the customers, employees and management; therefore there is always a need for change to meet these expectations.

We can see in the above debate that organizational changes are necessary to stay in the business. It's an era of high competition and ever changing technologies and global trends. To respond these changes accordingly and to remain compatible with them it is good for organizations to understand, adopt and implement changes. It is the need of the time, to become successful in business and get the level of sustainability.

## **2.10. Learning Organization**

The term 'learning organization' is defined by organizational practitioners in a variety of ways. While a single definition is elusive, most experts view a learning organization as a constantly evolving, "living" system focused on "knowledge acquisition and improved performance" (Garvin, 1993, p. 80). Many researchers have defined organizational learning in different ways. Some of the definitions as a representative sample are listed as follows:

- Organizational Learning is a process in which members of an organization detect errors or anomalies and correct it by restructuring organizational theory of action, embedding the results of their inquiry in organizational maps and images. (Argyris, 1977, p. 116), which has

a direct relation to the research purpose on Organizational Learning prevents companies from repeating past mistakes.

- Organization Learning means the process of improving actions through better knowledge and understanding. (Fiol and Lyles, 1985, p. 803), which has a direct relation to the research purpose on Contribution of Knowledge to Organizational Learning.
- Learning Organizations are organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspirations are set free and where people are continually learning how to learn together. (Senge, 1990, p.3), which has a direct relation to the research purpose on Organizational Learning, promotes continuous learning of individuals and groups.
- Organizational learning is the set of actions (knowledge acquisition, information distribution, information interpretation and organizational memory) within the organization that intentionally and unintentionally influences positive organizational change. (Templeton et. al, 2002, p. 189), which has a direct relation to the research purpose on Knowledge acquisition and transfer play an important role in achieving Organizational Learning.

## **2.11. Characteristics of Learning Organizations**

In his book of *The Fifth Discipline* (1990), Peter Senge championed the ‘Learning Organization’ as the vehicle to maintain competitiveness into the twenty first-century. Senge advocated the building of learning organizations, and described them as places “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (1990, p. 3).

The learning organization philosophy has been adopted by many organizations as a strategy to meet future challenges (Goh & Richards, 1997; Gephart & Marsick, 1996; Bennett & O'Brien, 1994). “As the world becomes more interconnected and business becomes more complex and dynamic, work must become more ‘learningful’. It is no longer sufficient to have one person learning for the organization...” (Senge, 1990, p. 4).

A learning organization doesn't just happen. It is carefully and deliberately designed (Goh & Richards, 1997). A learning organization takes a proactive approach, by formulating a course of action to enhance systems-level learning, which incorporates a multi-faceted strategy (Gephart & Marsick). According to Bennett & O'Brien, "no continuous learning practice is effective unless it is adopted as part of a system" (p. 42). Successful organizations create systems and process, which support key activities and weave them into the fabric of the day-to-day business operations (Garvin, 1993).

Even after the concept of a learning organization was first advocated, organizations' experiences in understanding and applying these principles were quite limited. In the ensuing years, a number of researchers began to identify specific practices and processes that supported the philosophy of a learning organization. Goh indicates, "more important is the need to explain how to become a learning organization, not what it is" (Gravin,1998). Gephart and Marsick assert, "Becoming a learning organization implies a proactive shift from letting events unfold toward putting in place a course of action to enhance systems-level learning. Instead of a single prescription for success, learning organizations use many different approaches".

The remainder of this section will discuss and highlight multiple viewpoints related to the characteristics of learning organizations. Table 1 provides an overview comparison matrix of the characteristics of learning organizations by the various works cited in this research paper.

According to Senge (1990), a learning organization embraces five key elements or disciplines: shared vision, team learning, personal mastery, 'mental models' systems thinking. Senge, Kleiner, Roberts, Ross, and Smith (1994, p. 6-7) further define the five elements or disciplines:

(1) Personal Mastery – "learning to expand our personal capacity to create the results we most desire, and creating an organizational environment which encourages all its members to develop themselves toward the goals and purposes they choose" (p. 6).

(2) Mental Models – "reflecting upon, continually clarifying, and improving our internal pictures of the world, and seeing how they shape our actions and decisions" (p. 6).

(3) Shared Vision – “building a sense of commitment in a group, by developing shared images of the future we seek to create, and the principles and guiding practices by which we hope to get there” (p. 6).

(4) Team Learning – “transforming conversational and collective thinking skills, so that groups of people can reliably develop intelligence and ability greater than the sum of the individual members’ talents” (p. 6).

(5) Systems Thinking – “a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behavior of systems” (p. 6-7).

## **2.12. Organizational Learning Cycle**

Organizational Learning is a cycle and it can be classified as (Sanchez, 2005). The Five Learning Cycles Model consists of five levels of learning that are described as follows:

### **Individual Learning Cycle**

The premise for learning originates at the individual level. An individual’s capacity to interpret information and gain knowledge depends on the individual’s interpretive frameworks and personal sense making processes. However, an important aspect is to extract tacit knowledge from individuals in order to allow further dissemination of information to various cycles. This aspect helps in propagating Organizational Learning. (Sanchez, 2005)

### **Individual – Group Learning Cycle**

The individual/group cycle considers the interaction between an individual and his/her team members or the network of peers. This cycle encompasses the intermediate process of sharing both the individual’s knowledge and learning with peers within a group. At this stage an individual’s knowledge is validated by the group before it is accepted as a coherent and coordinated action. Therefore, the thin demarcation between an individual’s personal sense making process and sharing of his/her knowledge between peers is accounted for. (Sanchez, 2005).

### **Group Learning Cycle**

This form of learning takes place when individuals in a group perform their tasks in a coordinated fashion and share the same set of core beliefs (Sanchez, 2005). This cycle also involves learning capabilities to improve a group's current routines for performing its tasks. (Sanchez, 2005).

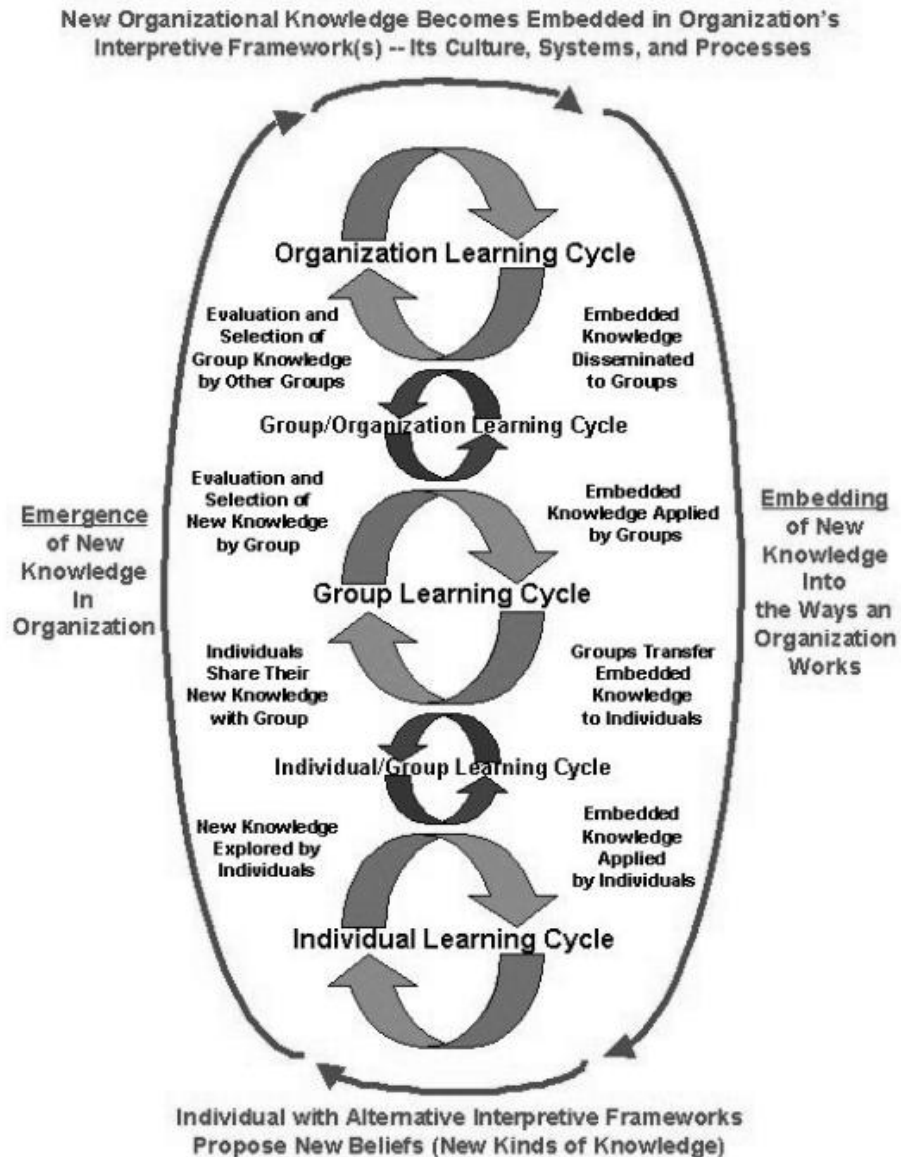
### **Group-Organization Learning Cycle**

This cycle represents the formation of knowledge by a group that can be further used to communicate with other groups in the organization. The group/organization cycle is significant as the basis of know-how knowledge (learning how to do a task by repeatable actions) and know why knowledge (analyzing the task further to understand why a certain task can be accomplished through coordinated actions) which give rise to know-what knowledge (new tasks that can be performed with current or new capabilities). A group communicates either of these types of knowledge to other groups in order to achieve organizational assets to put these ideas into action at the organizational level. (Sanchez, 2005).

### **Organization Learning Cycle**

This learning cycle involves collaboration of all the groups within an organization. Interaction between various groups leads to an exchange of group knowledge. Thereafter group knowledge that is accepted as valid is extracted and appropriate action is taken to allow the influence of this knowledge to the organizational processes. (Sanchez, 2005).

Fig. 4 Learning Cycles of Learning Organization (Sanchez, 2005)



### 2.13. Role of Leadership in Organizational Change

Most of the organizations agree now a day that effective leadership is one of the most important contributors to the overall organizational performance and change. Intelligent leaders are those who have a store of skills and knowledge gained from experience that allows them to manage effectively and efficiently the tasks of daily life. Effective leadership is always required to bring

effective changes (Kennedy, 2000). Brookfield highlight the importance of culture while addressing the issue of organizational change, he mentions some roadblocks which can affect the change management efforts, which include the secrecy culture, the individualism culture and silence culture (Brookfield, 1995). The competent leadership can handle and manage such problems. According to Gruban (2003) the competence is an ability to manage knowledge and other skills and capabilities.

There are some leadership competences that have been proven and are mandatory for effective and successful leadership (Bennis, 1987). There are different competences which are very effective for leaders and which also have connection with the successful organizational change. Virtanen highlights some competencies of leaders and relates them to successful organizational change in his model of leader competencies (Virtanen, 2000). According to the different authors the leadership competences are strongly connected with the successful organizational change, “the leadership competences have a great relation with the organizational success and change” (Gruban 2003).

It is evident from the literature that initiating and coordinating change always requires well developed leadership skills. This is also true that any change process mostly face the certain level of resistances, the effective leader is one who can manage the resistance and implement successful changes. Recognizing, addressing and overcoming the resistance is always lengthy and not an easy process. People resist changes and especially they resist most to radical changes and it is only the leader’s ability to overcome. A strong leader is required to solve the problem as the physician is required to solve medical problem (Heifetz 1997).

Incremental changes often do not require the formal launch because they are introduced in small doses. These are normally easy to handle and adopt and are non resistible by the employees and are normally for a limited time period, and people working in organization are usually familiar with these kinds of changes. Radical changes at the other end are difficult to adopt and also have more resistance, which requires more than mere leadership competences. Radical changes require private acceptance and it is a role of senior leaders to aware people to realize the need of

change and therefore to create willingness to relinquish old style of working in favor of new ones (Reardon 1998).

The different types of leadership qualities are required at different level of change. There are basically four types of leadership styles, Commanding leadership style, Logical leadership style, inspirational leadership style and supportive leadership style. These all leadership styles have strong relation with the development of change (Bennis, 1995).

The effective leaders have clear and straight vision about future and the successful change needs to have a clear picture of future. Without vision the successful changes are very difficult. Kotter claims that it is very important for the leaders to communicate the vision (Kotter, 1995). The above table also mentions that the logical leaders are focused on innovation and they communicate the vision by explaining it. The role of leader/leadership is also very important for developing and managing change in any organization by creating the suitable atmosphere within the organization to adopt change. Organizational culture has also role in development of changes in any organization, and it is the leader who brings new strategies for developing or managing culture. Top management can make the strategies to interconnect people working in organization and its process (Appelbaum, 1998). The culture of organization may include its beliefs and values and may lead organization from conservative to innovative. These are may be unwritten rules, disciplines, and external orientation, and the leadership role may be instructive, consultative or supportive. According to the author the most important leadership role for managing and developing culture is supportive (Appelbaum, 1998).

## **CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY**

The research was aimed at assessment of practices and challenges of Knowledge Management on bringing organizational change in Ministry of National Defense (with Special Case Scenario on Peacekeeping Mission Learned Experiences). Hence, this chapter has described the research design and methodology that has been used while carrying out this study. Under this chapter, design of the study, Participants and setting of the study, sample size and sampling technique, instruments and procedures of data collection, method of data analyses were treated.

### **3.1. Study Area and Scenario Presentation**

The Ethiopian National Defense Forces are structured on the basis of the principles of Article 87 of the Constitution that stipulates that composition of the national armed forces should reflect equal representation of the Nations, Nationalities and Peoples of Ethiopia.

In addition, the Constitution states that the armed forces should protect the sovereignty of the country and carry out such responsibilities as may be assigned to them under any state of emergency declared in accordance with the Constitution. The Constitution also clearly lays down the duty of the Armed Forces to carry out its functions free of any partisanship for any political organization, and that they should obey and respect the Constitution.

The Defense Forces were established according to Proclamation Number 27/88 and since then they have strengthened their unity through extensive training in different areas, including measures taken to familiarize members of the Defense Forces with the Constitution. Various military training institutions have been established to enhance the military capacity, skills and technical ability of the Defense Forces.

Coming to the selected scenario of the project; The term “peacekeeping” was used for the first time after the Second World War in 1956 G.C for the UN to preserve peace between states. Since that time, peacekeeping expended significantly in international approach to maintaining ceasefires and stabilizing situations on the ground. For the accomplishment of peace stability, United Nations peace operations began in 1947 in Greece and Indonesia as international observer mission.

During the cold war, the UN undertook 13 peace operations of varying scope and duration, since 1948, there have been 61 United Nations peace operations. The Security Council (Sc) created 48 peace operations in the years between 1988 and 2006. There are currently 16 peace operations under way involving 96,682 peacekeepers. UN peacekeepers are currently involved in Ethiopia is one of some few nations should this history.

Ethiopia was admitted into the League of Nations in 1923. Ethiopia was a character member of the united an active role in world and African peace and stability affaire. This time Ethiopia is on the top of the continent and fourth rank in world wide. The following table gives a general figure about Ethiopian army since 1950 to date.

**Table 1. Own Table Ethiopian Amy Peacekeeping Participation**

<b>No</b>	<b>Year</b>	<b>Mission</b>	<b>Participates</b>
1.	1951-1953	United nations missions in Korea (5 Rounds) UNCK	6037
2.	1959-1962	United nations missions in Congo (4 rounds) ONUC	10,425
3.	1993-1995	United nations missions in Rwanda (2 Rounds) UNAMIR	1696
4.	2003-2010	United nations mission in Liberia (4 Rounds) UNMIL	17,714
5.	2004-2006	United nations mission in Burundi (4 Rounds) ONUB	2,789
6.	2007-2014	United nations mission in Darfur UNAMID	13,242
7.	2011-2014	United nations mission in Abiye UNISFA	12,245
8.	2014	United nations missions in South Sudan UNMISS	1262
9.	2014	Africa union mission in Somalia AMISOM	4395
			<b>69,805</b>

### **3.2. Research Design**

The qualitative survey method was employed in this study. A qualitative survey design was used to undertake this study because the intention of the study was to assess the existing situation and to describe opinions that are held on Knowledge Management practices by participants of the study and to look into Knowledge Management challenges. The qualitative methods (approach) were employed with the assumption that the qualitative data collected through interview and document review would supplement the data gathered through survey questionnaire. In the same line of argument, Best and Kahn,(2003: 14) have argued that qualitative study is concerned with

conditions or relationship that exist, opinions that are held, process that are going on, effects that are evident or trends that are developing.

Thus, the method is preferred on the ground that practices and challenges of Knowledge Management are better perceived from the judgment survey of Army members.

### 3.3. Sampling techniques and sample size

The total target population of the study was all officers Army members, from this target populations because of manageability and availability of the personals 150 of them are selected to complete this study, (50 Colonels & Lieutenant Colonels, 50 Majors, 25 captains and 25 Lieutenants & Second Lieutenants). The selection of the participants was carried out using the techniques of Purposive sampling, simple random sampling and availability sampling according to the geographical settlement of the Army units. Since the organization has different Front Units, Head Quarters, Departments and Colleges. Usually a department in MOND has different ranked personnel from the rank of colonel to second lieutenant.

**Table 2. Respondents Sample Quota**

No.	Unit/Department	Total Population	Sample Size
1	Logistic Head Quarter	50	10
2	Joint Operation Head Quarter	50	10
3	Intelligence Head Quarter	50	10
4	Engineering Head Quarter	50	10
5	Human Resource Head Quarter	50	10
6	Health Head Quarter	50	10
7	Training Main Department	50	10
8	Command and Staff College	50	10
9	Indoctrination Head Quarter	50	10
10	Officers From Unknown Unit	Unknown	60

All participants of this study had general work experiences especially in military experience and purposely selected army members with minimum Experience of 15 years in the Army and at the same time all are also ranked of colonel, Lieutenant Colonel, Major, Captain , Lieutenant and Second Lieutenant . This can be seen as an opportunity for the case study to fine the output of the project.

### **3.4. Instruments and procedures of data collection**

Both primary and secondary data were used to undertake the study. In order to get primary data, close ended survey questionnaires were prepared and distributed to selected Officer Army members (Rank category of colonel, Lieutenant Colonel, Major, Captain , Lieutenant and Second Lieutenant). An interview was conducted with top and middle level leaders of FDRE-MOND and Peacekeeping Participated army members for the selected Research scenario using semi structured interview guide. Moreover, the investigator has reviewed reports, manuals and policy documents of the Ministry related to practices and challenges of Knowledge Management. Furthermore, the researcher tried to review different documents including journals, articles and research papers on the selected theme.

Initially, the survey items were prepared in English. Then, the draft questionnaires were given to five senior researchers of MOND to review the items for clarity and completeness. By incorporating the suggestions and comments given, the instruments were handed to the advisor for the same purpose. After the refinements of the instruments, the investigator administered it using small pilot samples other than the research site identify ambiguities and misunderstanding and to consider other unforeseen issues to the data collection procedures.

As a result modifications on some of the questionnaire items were made. Then, participants were informed about the research (its purpose, benefits, risks and what was expected of them in the research process) and be aware that they would not be obliged to participate in the study and if they wish to participate, their responses would be anonymous and confidential. Besides, the investigator would explain how the questionnaires would be filled and what care should be taken. After the completion of data collection through the questionnaire, an interview with the

top and middle level leaders of MOND and Peacekeeping Participated Army members for the selected Research scenario were conducted by the investigator on agreed up on schedule.

Having completed the data collection, the investigator checked and verified the completeness of the collected questionnaire. Then, the data were tabulated to facilitate the analysis process.

**Questionnaire:** Questionnaires were used to collect relevant and first hand information from respondents (Army members). The questionnaire was prepared in English. With the questionnaires, closed ended questionnaire included. The researcher preferred questionnaire as the main data gathering instrument because, it is easier to handle and simpler for respondents to answer within a short period of time. Besides, it allows respondents to respond to questions confidentially and independently without any interference so as to minimize biases because of the presence of other persons, though it limited further explanation on the questions.

**Interview:** Structured and Semi- Structured interview was conducted with top and middle level leaders of Peacekeeping Coordination Center and Peacekeeping Participated army members for the selected Research scenario, to enrich and cross check the knowledge management practice data obtained through questionnaire. The reason why structured interview was used is that it is based on strict procedure and this structured interview guide is not as such different forms open-ended question.

**Document Review:** The investigator has reviewed legislation of the Ministry, and other essential documents. This review was believed to substantiate the data collected through interview and questionnaire.

### **3.4. Ethical Considerations**

As Punch (2000) asserts, “all social research involves consent, access and associated ethical issues, since it is based on data from people about people”. Interviews of participants met the general protocols and procedures for interviewing and oral history (Douglas, Roberts & Thompson (1988)). The proposed study was ensured informed consent there obtained from

participants. They were told full information about the research including the reasons they have been chosen to participate. Participants' privacy, confidentiality and anonymity have also been guaranteed.

## CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

All data are presented, analyzed and interpreted in this chapter. The chapter is divided in two different parts: part one, which deals with general characteristics of the respondents ranks (position) and work experience.

Part two deals with analysis and interpretation of the knowledge management practice in MOND. The relevant data and information collected through questionnaires, interviews and documents were analyzed and interpreted. Hence the basic questions raised in this chapter were given appropriate treatment.

Out of the total 150 questionnaires distributed 150 (100%) were filled and returned because in Army the units are organized in a formal way and this facilitates the investigator to manage easily the data collection process. Based on the responses obtained from the sample respondents, the analysis and interpretation of the data are presented below here.

### 4.1. Demographic Characteristics of Respondents

**Table 3. Demographic Characteristic of Respondents**

<b>Year of Experience</b>			
<b>10-15 years</b>	<b>16-21</b>	<b>22-27</b>	<b>28 and above</b>
42	59	28	21
<b>Educational Background</b>			
<b>Below Diploma</b>	<b>Bachelor</b>	<b>Master</b>	<b>Phd</b>
14	103	33	XX
<b>Military Rank Category</b>			
<b>Second Lt. &amp; Lieutenant</b>	<b>Captain</b>	<b>Major</b>	<b>Lt. Colonel % colonel</b>
19	87	23	21

The above table gives a detail of the selected respondents' profile, in this table three basic and important items were asked, year of experience in the army because the majority of the peacekeeping mission starts in the year of 2005, so our respondents minimum are already engaged in the Army and they can have the minimum information about the past activities, from this point the fact from the table above all the respondents fit he intentionally selected age

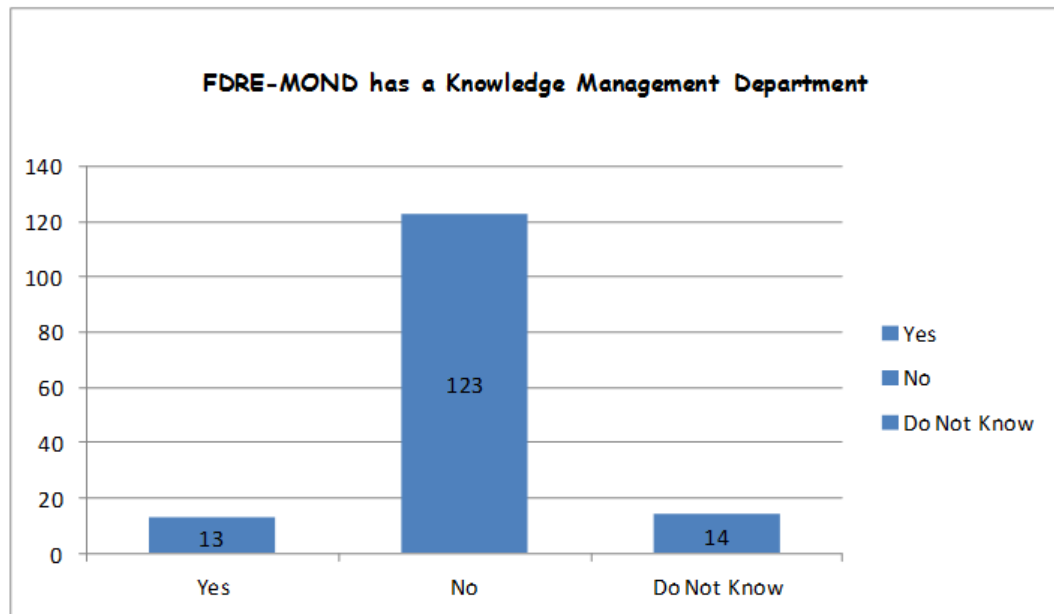
category to give their opinion, the other point is the educational background 136 of 150 are a university degree holders 103 Bachelor and 33 master the remaining 14 are diploma level, which means again within this academic status the respondents are capable to give an appropriate feedback.

## 4.2. Presentation and Analysis of Data

### 4.2.1. Organization Related Items

#### 4.2.1.1. FDRE-MOND has a Knowledge Management Department

**Chart 1. FDRE-MOND has a Knowledge Management Department**



As the presented perception of Army members on the first item Defense has Knowledge Management Department in the above table 80 in number or 53.33% of the respondents gave their opinion on strong disagreement and 33 in number or 22% of them agreement on that MOND haven't a knowledge management department from the upper to lower part of the organization. As Barton and Martin (1991), defines organizational structure as a formal pattern of working relationship and coordination designed by management to link the activities and assignments of individual and group so as foster achievement of organizational goals. From this

definition we can conclude that only 22% of the total respondents gave an opinion on existence of a knowledge management department in MOND.

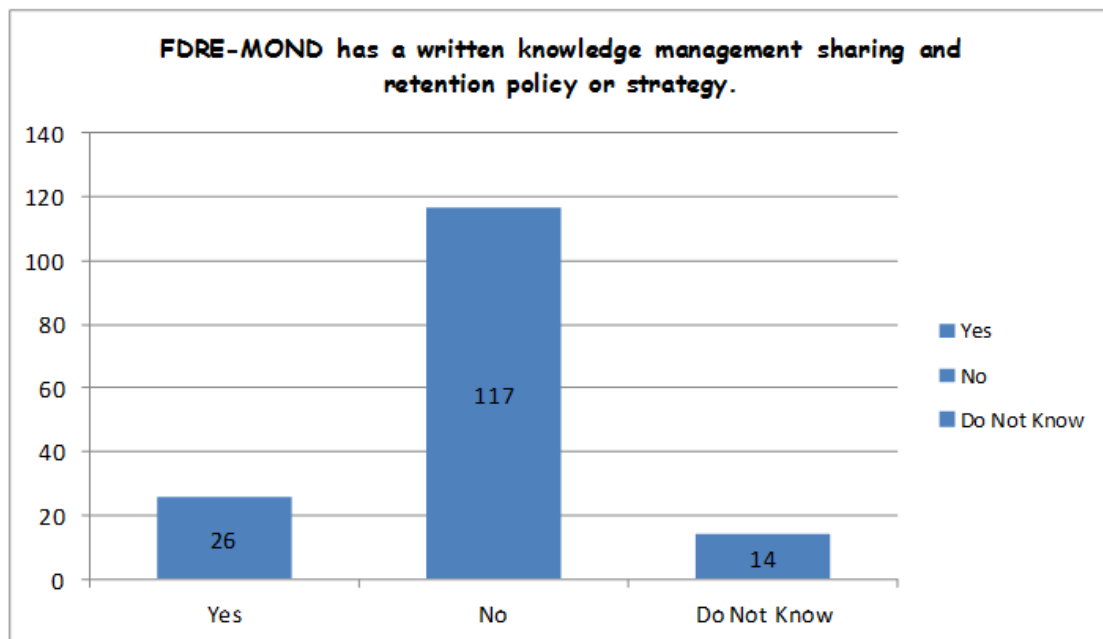
To strengthen this idea an interview was done with strategic and operational level officers, the questions were;

- Defense has Knowledge Management Department?

These questions forwarded intentionally to cross check the response collected by questionnaire and to get some detail points, and as of their feedback in MOND there is no knowledge management department, knowledge is sometimes managed in a temporary based assigned committee. Their understanding on the term knowledge management itself, their response clarifies that the term by itself is not a clear ideology within the organization.

4.2.1.2. FDRE-MOND has a written knowledge management sharing and retention policy or strategy.

**Chart 2. FDRE-MOND has a written knowledge management sharing and retention policy or strategy**

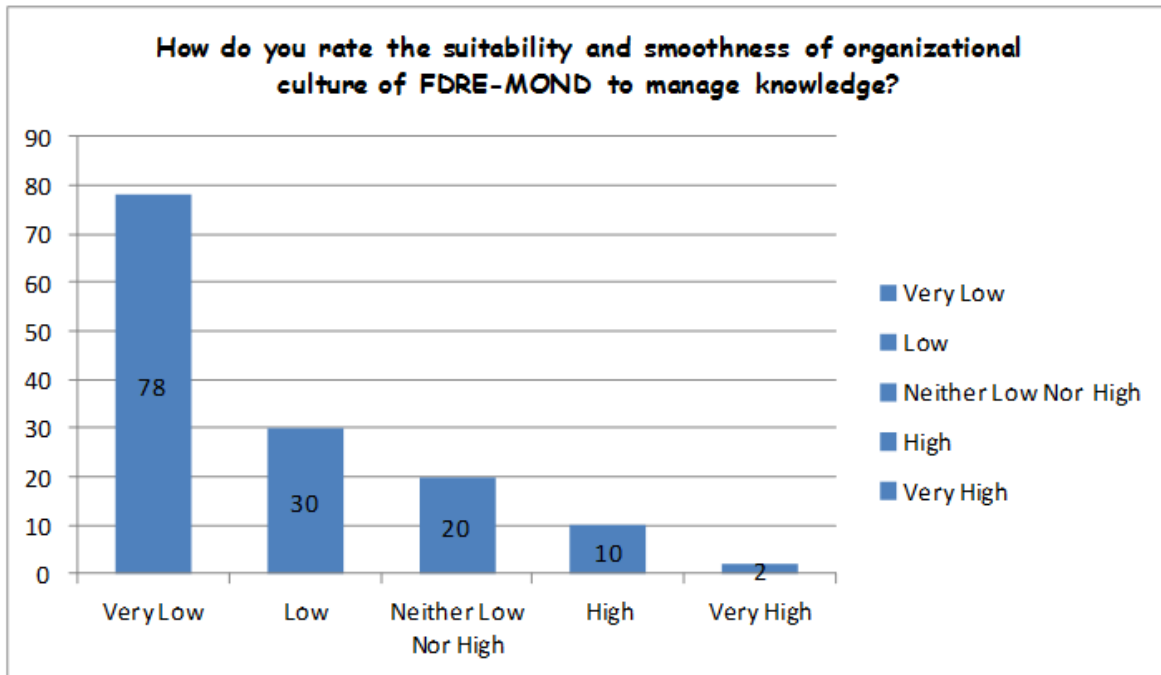


The main purpose of the above table is to assess if MOND has any necessary rule, procedure, strategy and policy to manage knowledge, as a result the we can observe from the above table,

117 in number or 78% of the total respondents gave their strong disagreement and 14 in number 9.33% disagreement, which implies that 87.33% of the total believes that there is no formal policy documents encouraging knowledge management and sharing, generally concluding from the above result institutionalizing knowledge management and sharing in MOND is impossible and non existing.

4.2.1.3. How do you rate openness and suitability of FDRE-MOND organizational structure to manage knowledge.

**Chart 3. Openness and suitability of FDRE-MOND organizational structure to manage knowledge**



The above table focuses to evaluate the organizational structure openness and suitability; respondents believe that 78 out of 150 gave their feedback that it is an always problem by giving a rank very low and 30 of them low total 108 out of 150 believe that the openness and suitability access structure to manage knowledge within the organization is low. This has an implication that there is a great deal of bureaucracy that haunts the tacit knowledge sharing process in the organization. Different scholars believes that bureaucratic factors such as the inflexible organizational structure and hierarchical chain of command that are major barriers for tacit

knowledge sharing. Organizational structure and hierarchies hinder communication, therefore hampering the tacit knowledge transfer process (Joia & Lemos, 2010).

On the above item an interview was made with Strategic and Operational Leaders' to poof the result obtained by the following question;

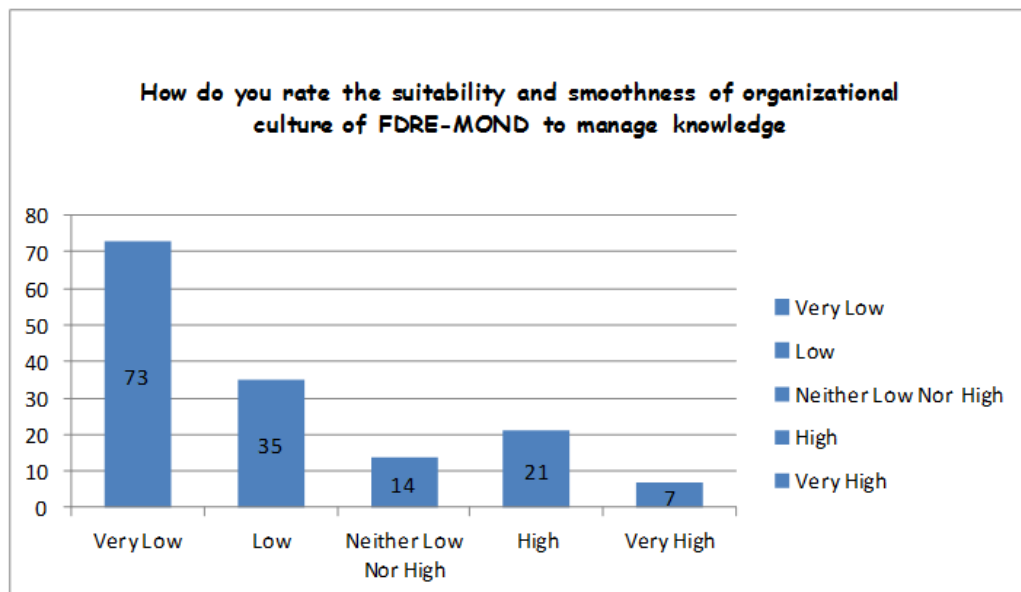
- MOND has an open and suitable organizational structure to manage knowledge?
- If no, How you mange knowledge within the organization?

For the interview question the leaders perception was similar with the respondents of the questionnaire, no structure is existing within the organization but they gave a simple clarification on how they are managing knowledge is by creating a temporary based teams or committees to work on a specific knowledge for a short period of time.

To summarize this item MOND doesn't have a defined organizational structure exhibited by a department and an assigned responsible including knowledge management team and experts, at the same time there is a lack of understanding the term knowledge management by itself.

#### 4.2.1.4. How do you rate the suitability and smoothness of organizational culture of FDRE-MOND to manage knowledge?

**Chart 4. suitability and smoothness of organizational culture of FDRE-MOND to manage knowledge**

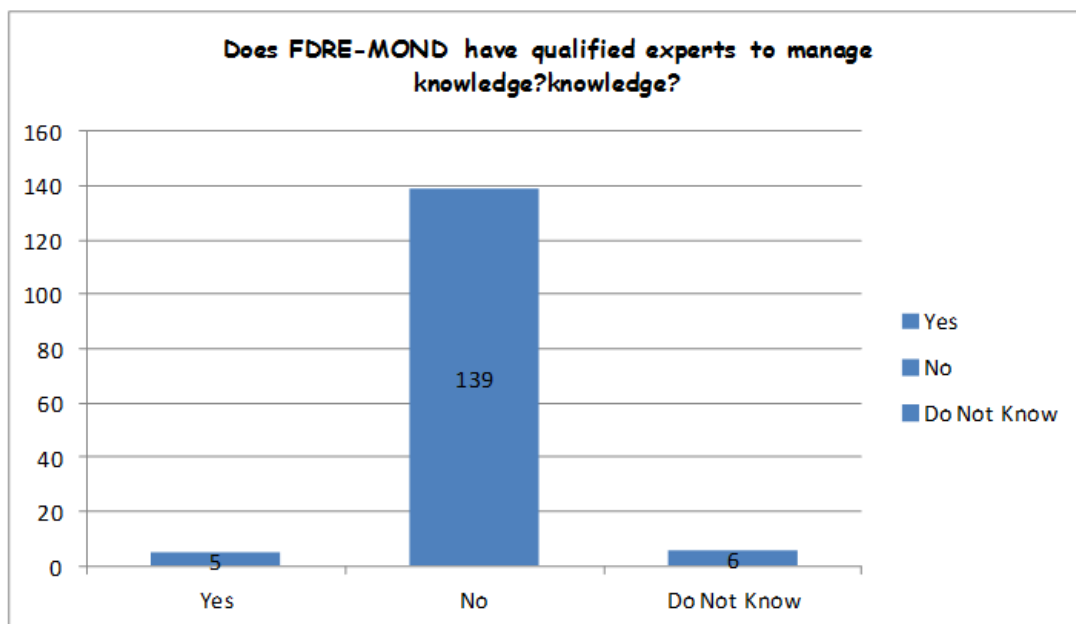


On the item Organizational culture; as a barrier 73 in number or 48.66 % of the respondents believe the organizational environment and culture is very low appropriate to manage knowledge

and 35 in number or 23.33% proof it is very low, the remaining 35.66% gave a neutral opinion. This means that Army members in defense hoard knowledge because they worry that they will lose their competitive advantage in the organization. Developing an organizational culture that is based on trust should be the priority for defense. By doing so the Army members will be able to change their attitude and create a culture that is based on openness. Organizational culture is also important as it ensures there will be tolerance, acceptance of diversity and flexibility. These aspects will create trust among the employees, and foster teamwork and make tacit knowledge sharing attractive within the organization.

4.1.1.5. Does FDRE-MOND have qualified experts to manage knowledge

Chart 5. qualified experts to manage knowledge



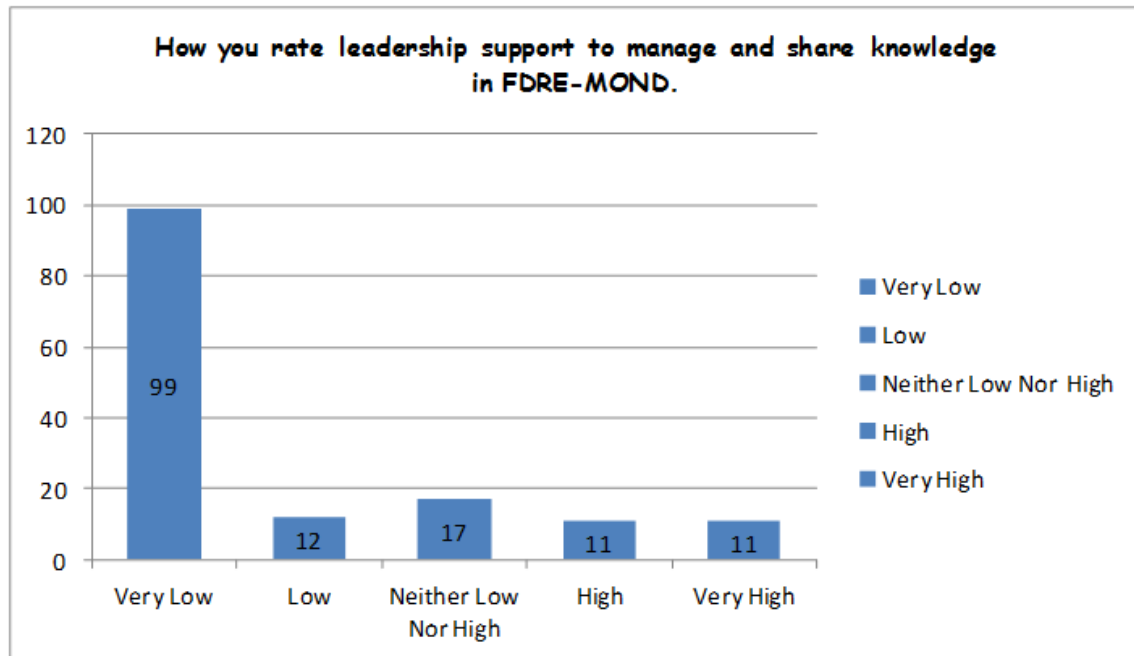
There is no knowledge without someone being able to manage it (De Giovanni 2009; Gottschalk 1999). Barley and Hunda (2004) suggest that knowledge experts are professionals, practitioners or experienced persons in communities of practice with critical skill and know-how providing specialized knowledge or task in a community or company. Knowledge transfer among the members of an organization is a basic necessity. The longer a person works in a field, the more expertise that person develops in that field (Wilkesmann and Wilkesmann, 2011). Ward and Wooler, (2010) suggest that knowledge is the lifeblood of an organization and therefore knowledge and information managers have a key role to play in keeping knowledge flowing,

used and retained in their organizations. All the above theories give an emphasis on the importance of knowledge management expert in an organization for the successful accomplishment of their mission. But the above graph represents the inexistence of a knowledge management expert in MOND by 139 respondents out of 150 which means 92.66% of the total population proofed that there is no expert assigned and accountable to manage tacit or explicit knowledge within the organization. This indicates that MOND is loosening its resource.

#### 4.2.2. Leadership Related Items

##### 4.2.2.1. How you rate leadership support to manage and share knowledge in FDRE-MOND.

Chart 6. Leadership support to manage and share knowledge in FDRE-MOND.



Today’s dynamic organizations require equipped leaders with good communication and planning skills to supervise the interaction between strategy, people and systems (Zeffane, 1996). The required change cannot be achieved unless there is strong leadership (Beer, Eisenstat and Spector, 1990b). Zeffane (1996) notes that top managers can adopt change by exemplifying it in their own behavior and efficient leadership is required to blend system, employees and procedures. The above table summarizes defense leaders supportiveness on managing knowledge within the organization, the result obtained from this item represents, 99 in number or 66% of the

total respondents believe that there is a very low support of leaders at all level and 12 in number or 8% of them gave low rank, cumulative feedback of respondents represents 74% of total respondents feeling proof that in MOND leaders are not supportive on managing knowledge in the organization.

For this item the an interview question was forwarded to strategic and operational leaders;

- What is your opinion on strategic and operational leaders' openness and willingness to manage knowledge in MOND?

Leadership style is the combination of attitude and behavior of a leader, which leads to certain patterns in dealing with the followers (Dubrin 2004). It is the result of the philosophy, personality and experience of the leader. There are several leadership styles such as: autocratic, bureaucratic, charismatic, democratic, participative, situational, transformational, transactional and laissez faire leadership (Mosadeghrad, 2003a). Leadership style has been the deciding factor of more than one facet of employee behavior in organizations.

An open question also forwarded for strategic and operational leaders to fine barriers and factors existing in MOND affecting knowledge management and sharing;

- Can you give any other existing barriers of knowledge management in MOND?

For the above question strategic and middle level leaders also share the opinion of gathered through questionnaire Respondents have also identified the following factors as not major barriers KS practices: "the working environment and the nature of work being performed", "Fear of job security", "Cultural factors", "Lack of trust among knowledge workers and dominance of "knowledge is power" thinking", and "Lack of commitment and support by the top management." The absence of these factors affecting Knowledge Sharing within the organization.

4.2.2.2. Give a value or the listed item on leadership support to manage and share knowledge in FDRE-MOND.

For the items below respondents were asked to give their feeling as follows Always (A), Frequently (F), Sometimes (S), and Never (N)

**Table 4. Leadership support to manage and share knowledge in FDRE-MOND.**

<b>Item to be Evaluated</b>	<b>A</b>	<b>F</b>	<b>S</b>	<b>N</b>	<b>Total</b>
• Lack of role models on Sharing Experiences and Knowledge	91	23	36	XX	150
<b>Percentage</b>	60.66%	15.33%	24%	XX	100%
• Lack of leadership commitment to consistent and ongoing communication	59	48	26	17	150
<b>Percentage</b>	39.33%	32%	17.33%	11.33%	100%
• Lack of awareness of the skills of each Army members possesses	49	53	42	6	150
<b>Percentage</b>	32.66%	35.33%	28%	4%	100%
• Lack of empowerment and encouragement	84	41	18	7	150
<b>Percentage</b>	56%	27.33%	12%	4.66%	100%
• Leaders are aware of and recognize the power of intellectual capacity individual Army members and groups knowledge.	8	37	44	61	150
<b>Percentage</b>	5.33%	24.66%	29.33%	40.66%	100%

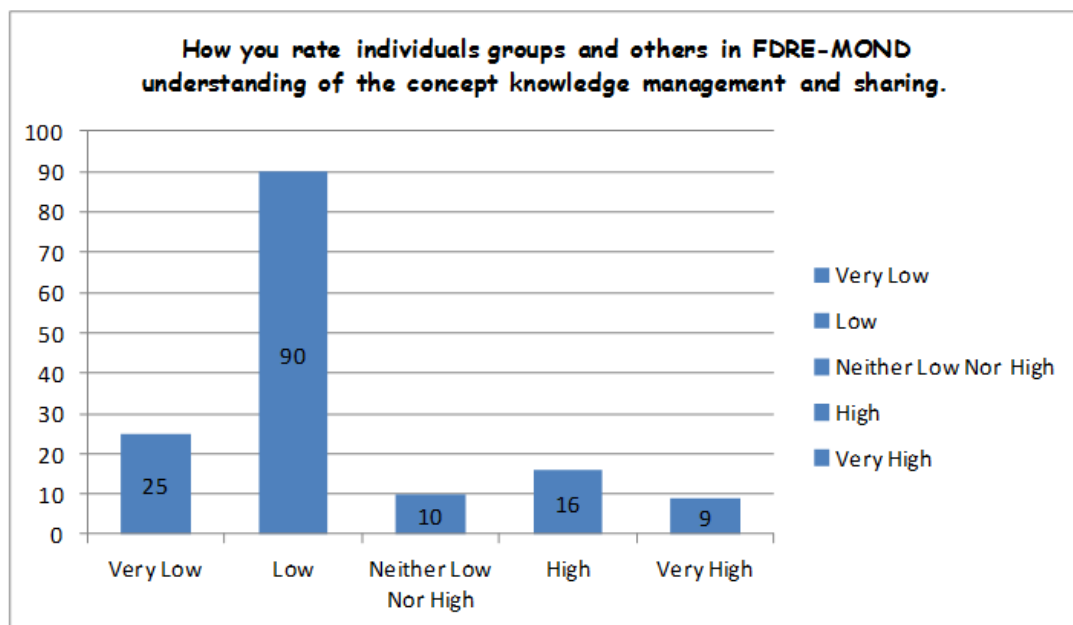
Strengthen the above analysis and theory on item 2.1 the strategic and operational leaders gave some relevant non supportiveness samples like; 60.66% of the total respondents believe that at all level leaders strategic operational and tactical lacks an attitude of being role models on Sharing Experiences and Knowledge is an always existing problem within the organization other 15.33% also believe leaders lacks on attitude of being role models on Sharing Experiences and Knowledge is a frequently observed problem in MOND, In an organization effective communication between leaders at all level and army member subordinates is inherently important, effective communication among this categories leaders and subordinates develops motivation. From this short theoretical view Lack of leadership commitment to consistent and ongoing communication in MOND remains very poor as of 39.33% and 32% of the total respondents believe that it is an always and frequently observable problem in MOND,

Downward communication from the superiors to the subordinate Army members Upward communication from the subordinate Army members to the superiors are important to give and receive comment, feedback and suggestions and This kind of communication is important for the relationships in the organization, which lacks MOND to manage and share organizational knowledge smoothly. Lack of awareness of the skills of each Army members possesses and lack of empowerment and encouragement are some of them.

### 4.2.3. Knowledge Management & Sharing Concept Related Items

4.2.3.1. How you rate individuals groups and others attitude in FDRE-MOND understanding of the concept knowledge management and sharing.

Chart 7. Individuals groups and others attitude in FDRE-MOND



Knowledge is increasingly seen as an organization’s most valuable resource, many firms and organizations have implemented knowledge-management and sharing systems in an effort to capture, store, and disseminate knowledge across the firm (Alavi and Leidner, 2001).

Knowledge sharing is central to the success of all knowledge management strategies. Effective knowledge sharing practices enable reuse and regeneration of knowledge at individual, group and organizational level. By sharing people of one or more organization or community share and

exchange understandings, norms, values, attitudes, beliefs, ideas and expertise (best practices). From this governing analytical Army member in MOND were asked to give their opinion on to what extent they understand the concept of knowledge management and sharing, from the data we can observe that 115 out of 150 respondents believe understanding level of the concept of knowledge management and sharing in MOND is low. Many scholars describes that knowledge can be classified that in two forms tacit and explicit, and by different levels as of individual, group and organizational level.

An open discussion was made with strategic, operational and tactical leaders to strengthen the above item 3.1.

- Do you have any idea about the term knowledge management?
- How do you understand Tacit & Explicit knowledge?
- How do you understand individual, group and organizational level knowledge?
- How you understand the term knowledge conversion?

On the issue of knowledge concept interviewees (strategic, operational and tactical leaders) indicated that definitely they have heard of KM and have to some extend read about it. However they say they are not sure to how the concept is practiced on a full scale, though they have practiced it informally themselves in managing their own knowledge and that of the organization from current and previous lives. They confirm that indeed they know the importance of skills management, learning, sharing of knowledge and mentoring.

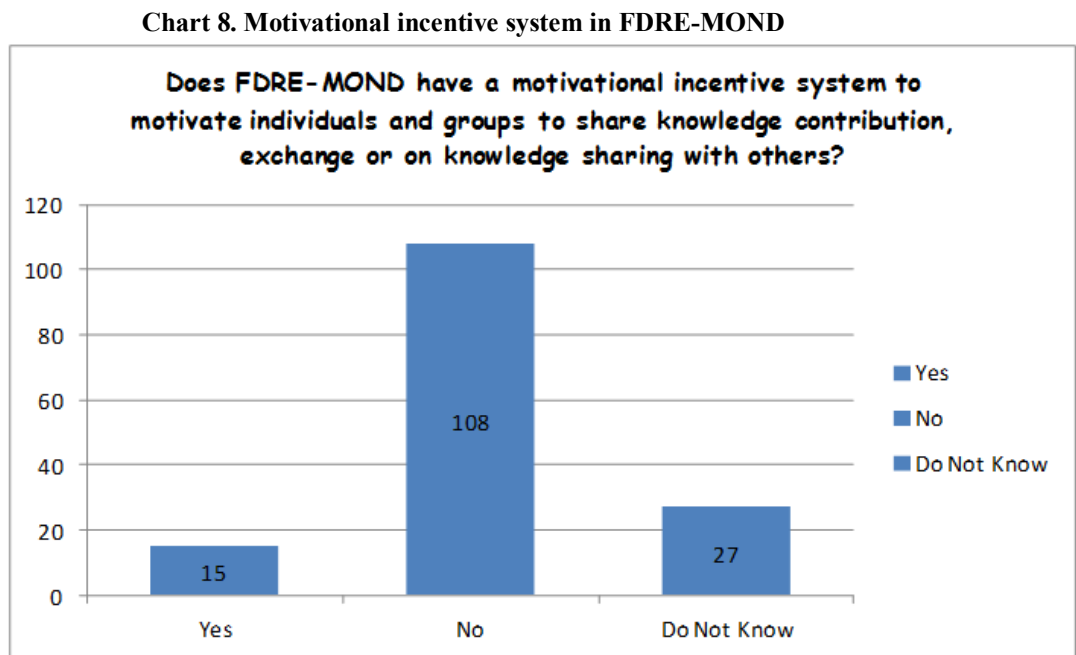
Generally saying the terms related with knowledge management and sharing like, Socialization process of converting tacit knowledge into new tacit knowledge to several persons at the same time, Externalizations conversion o tacit knowledge to explicit among groups, Combination conversion of explicit knowledge to explicit and Internalization conversion of explicit to tacit remains non understood within the organization. According to the leaders perception on individuals and groups side the possible problems pushing them to not be active are, lack of Participation in improving Knowledge Management System of the organization, lack of

confidence that the institution will act on their recommendations and lack of believe that they have a given knowledge and they can contribute it, are among those.

To conclude from the two observation respondents and leaders perceptions on this issue MOND doesn't practice as it is defined in different theories knowledge management within the organization.

#### 4.2.4. Incentive and Motivational Related Items

4.2.4.1. Does FDRE-MOND have a motivational incentive system to motivate individuals and groups to share knowledge contribution, exchange or on knowledge sharing with others?



As the presented perception of Army members on Motivational incentives system of MOND gives the following fact, 135 in number or 90% the respondents gave an opinion of strong disagreement and 10 in number or 6.66% of them disagreement which means in MOND we can conclude there is no at all an incentive motivational system to encourage individual and group Army members. As of different scholars, Incentive systems, rewards and motivational aids should incorporate the importance of collaboration, sharing and application of knowledge.

Incentives should focus on knowledge sharing and contribution, teamwork, creativity and innovative solutions, with group-based compensation encouraging high levels of knowledge exchange. The reward system may include both monetary and non-monetary recognition. Knowledge-related participation can be assessed in annual performance reviews (Davenport, Wiig 1999; Wong 2005).

For this item an interview question was also forwarded to strategic and operational leaders;

- Is there a motivation and incentive mechanism in MOND to motivate Army Members?

For this question all the interviewees gave their witness even if it is not procedurally putted as a policy in some cases individual and Army members are giving recognition for their contribution.

From the table below, we can say there is a lack on incentive management in MOND, as it is stated in previous sections incentives can be intrinsic or extrinsic, in monetary and non-monetary terms, but the most important thing is again which is stated in different sections by scholars it should exist as a written policy and communicate for the Army members.

#### 4.2.4.2. Give value of appropriateness for the listed incentive mechanisms

For the items below respondents were asked to give their feeling as follows on the appropriateness of some selected motivational mechanisms usually practiced in MOND.

For the items below respondents were asked to give their feeling as follows Always (A), Frequently (F), Sometimes (S), and Never (N)

**Table 5. Appropriateness of incentive mechanisms**

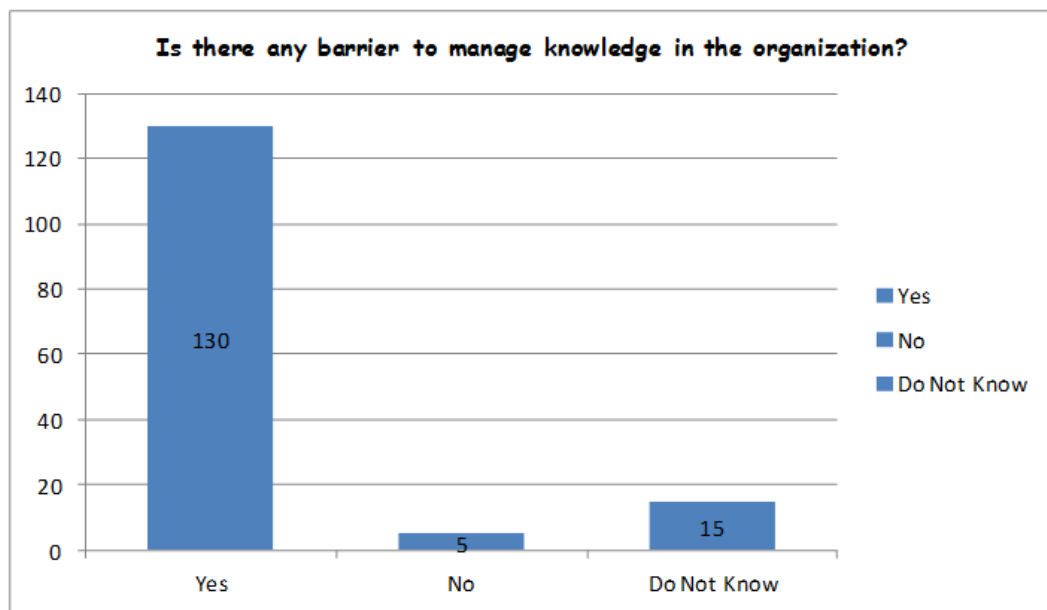
<b>Item to be Evaluated</b>	<b>VA</b>	<b>A</b>	<b>LA</b>	<b>NA</b>	<b>Total</b>
• Official Organizational Recognition	98	35	17	00	<b>150</b>
• Personal Recognition	49	81	20	00	<b>150</b>
• Certification	46	79	22	3	<b>150</b>
• Financial Prize	114	19	8	9	<b>150</b>
• Military Rank Promotion	15	45	67	23	<b>150</b>

On the above item respondents gave their opinion , all listed items are appropriate Official Organizational Recognition and Financial Prize were supported by the majority as a very appropriate type and the remaining three items; Personal Recognition, Certification and Military Rank Promotion ranked as an appropriate item for the motivational system.

#### 4.2.5. Factors Affecting Knowledge Management and Sharing Related Items

##### 4.2.5.1. Is there any barrier to manage knowledge in the organization

**Chart 9. Barrier to manage knowledge in the organization**



The above item is prepared to gather relevant information's to check whether there is a barrier to manage knowledge in the organization, and the respondents opinion fall on 100% agreement of that there is a barrier which affect knowledge management practice in the organization and we can conclude from this result study indicate that knowledge acquisition, creation, sharing and retention were inhibited by several factors such as none suitable Organizational Environment , lack of Army members interactions, Lack of Expertise, Lack of awareness of importance of Knowledge Management Unavailability of Infrastructure and Technology, Non Responsive Organizational Structure, resignations, employees reluctance to share knowledge and a culture that does not promote knowledge sharing.

As it is presented in the above table respondents proof that in MOND there is a barrier affecting the organizational knowledge management and sharing. 100% of the respondents 76.66% agreement and 23.33% of the total respondents' strong agreement on the questioned item. Below here respondents were asked intentionally their view on the pillars of knowledge management, the resulted also presented below.

#### 4.2.5.2. Rate the existence of barriers to manage knowledge in the FDRE-MOND

For the items below respondents were asked to give their feeling as follows Always (A), Frequently (F), Sometimes (S), and Never (N)

**Table 6. Existence of barriers to manage knowledge in the FDRE-MOND**

<b>Item to be Evaluated</b>	<b>A</b>	<b>F</b>	<b>S</b>	<b>N</b>	<b>Total</b>
• Organizational Environment	31	71	38	10	150
• Organizational Culture	63	54	18	15	150
• Lack of structured procedure an process to implement Knowledge Management	74	51	18	7	150
• Lack of Expertise	119	23	5	3	150
• Unavailability of Infrastructure and Technology.	78	55	11	6	150
• Non Responsive Organizational Structure.	128	4	14	4	150
• Lack of awareness of importance of Knowledge Management	91	25	21	13	150
• Army members' resistance and lack of interaction to share their knowledge.	82	26	34	8	150
• Lack of Leadership Support.	106	22	10	12	150
• Lack of Resource (Budget, and Staff)	125	5	7	13	150
• Turnover of Skilled Army Members	45	77	19	9	150

For the items above respondents were asked to give their feeling on the happening frequency rate of organizational barriers which lower the knowledge management and sharing practice; as of the respondents' perception;

- Organizational Culture (63 out of 150) , Lack of structured procedure an process to implement Knowledge Management (74 out of 150), Lack of Expertise(119 out of 150),

Unavailability of Infrastructure and Technology(78 out of 150), Non Responsive Organizational Structure(128 out of 150), Lack of awareness of importance of Knowledge Management(91 out of 150), Army members' resistance and lack of interaction to share their knowledge (82 out of 150), Lack of Leadership Support(106 out of 150) and Lack of Resource (Budget, and Staff) (125 out of 150) are rated as an always observed barriers to manage and share knowledge in MOND.

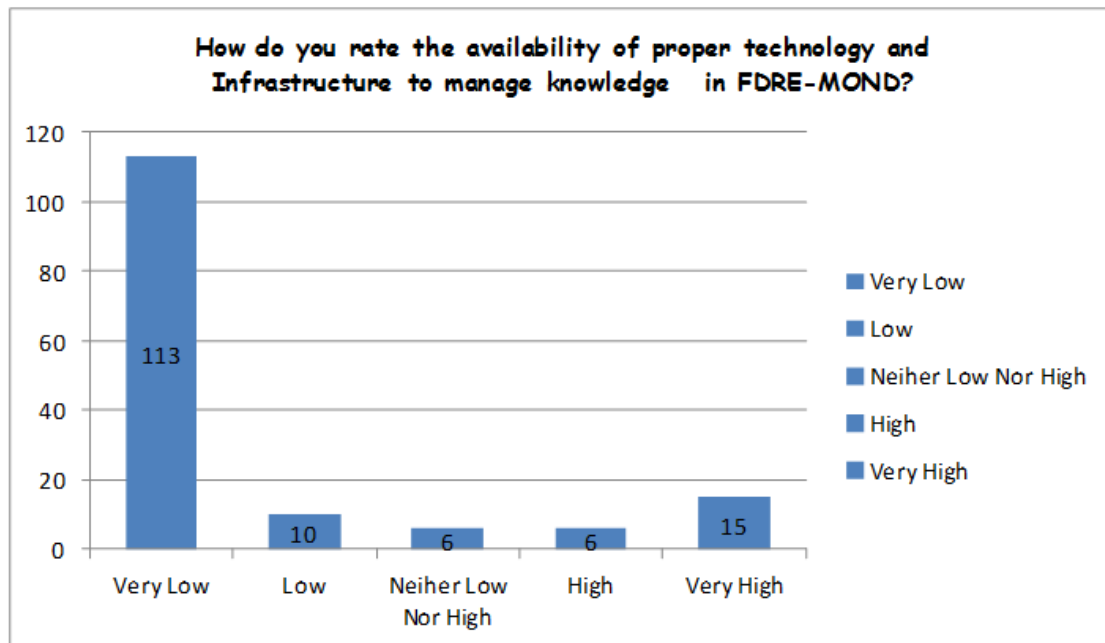
- Organizational Environment and Turnover of Skilled Army Members are rated as a frequently observed barrier to manage and share knowledge in MOND.

On the above item an interview was made with strategic, operational and tactical leaders and their feeling is summarized as follows, they believe that there are different barriers which adversely affects the knowledge management and sharing within the organization through individuals and groups among those the dominating rather than the listed in the above table are; People keeping skills/knowledge for themselves, Professional jealousy, hard earned knowledge is hard to part with, Most people are selfish with knowledge, Members are selfish and do not want to share their knowledge when they exit the system, it leaves a huge gap, People only want recognition for themselves and therefore would like to be regarded as expertise/assets thereby not sharing knowledge/information.

#### 4.2.6. Technology and Infrastructure Related Items

4.2.6.1. How do you rate the availability of proper technology and Infrastructure to manage knowledge in FDRE-MOND?

**Chart 10. Availability of proper technology and Infrastructure**



The above survey wanted to check the availability of Infrastructure and Technology in support of knowledge sharing and ultimately knowledge management in FDRE-MOND; as of our respondents 113 or 75.33% of 150 respondents believe Infrastructure and Technology is always and a huge barrier to manage knowledge and for 10 or 6.66% of the also gave their agreement, cumulatively 85.33% of the total respondents prove the lack of proper technology and infrastructure to manage knowledge. Scholars gave different definitions on Infrastructure and Technology and their importance to manage knowledge.

Technological infrastructure facilitates KM through knowledge repositories where Army members share their expertise and access the shared experiences of others. Information technology also addresses knowledge-oriented capabilities such as email, intranets, networked computers and standardized software so that documents can be easily exchanged, supporting daily operations, problem solving and decision making (Joia & Lemos, 2010). Similarly Effective KM requires technological infrastructure that is simple, easy to use, is suitable to users' needs, contains relevant content and incorporates a standardized knowledge structure and taxonomy (Wong 2005).

Technology enables and provides the entire infrastructure and tools to support knowledge management within an organization, lack of proper tools and technology infrastructure can lead an organization to failure. The Gartner Group defined ten technologies that collectively make up full-function knowledge management. The functional requirements that organization can select and use to build a knowledge management solution include: Capture and store, Search and retrieve, Structure and navigate, Share and collaborate, Synthesize and Solve or recommend.

4.2.6.2. Give a value on the appropriateness of the listed methods' to manage and share knowledge in FDRE-MOND.

For the items below give your feeling as follows Very Appropriate (VA), Appropriate (A), Less Appropriate (LA) and Not Appropriate (NA)

**Table 7. Appropriateness of managing and sharing knowledge**

<b>Item to be Evaluated</b>	<b>VA</b>	<b>A</b>	<b>LA</b>	<b>NA</b>	<b>Total</b>
• Knowledge Sharing by a written document, book, pamphlet, research, report etc	69	48	33	0	<b>150</b>
• Knowledge Sharing by audio-video recorded diffusion	23	14	88	25	<b>150</b>
• Knowledge Sharing by creating a Knowledge Sharing Center	34	31	78		<b>143</b>
• Internet and Intranet Access Documentation	9	6	15	120	<b>150</b>
• Knowledge Sharing by web site accessibility	8	15	11	116	<b>150</b>
• Blog and e-mail diffusion	14	5	14	117	<b>150</b>
• Video-Conferencing	40	31	24	55	<b>150</b>
• Knowledge Sharing by a Conference	87	58	5	0	<b>150</b>

On the above table respondents were asked to give their opinion on a possible way to manage knowledge within the army. For the above item respondents gave an automatic response of 100%

response “Yes”, on any possible recommendation to manage knowledge in MOND. And this item also supported by the interviewed strategic and middle level leaders also their opinion on the possible way to manage and share knowledge in line with the geographical settlement of the army units. And an important emphasis was given by the leaders too, managing knowledge within a large organization like a MOND, whose operating and knowledge source elements are disparate in terms of mission and geographic location is a challenge, however the adaptable best mechanisms as of them are as follows; Knowledge Sharing by a Conference, Knowledge Sharing by a written document, book, pamphlet, research, report etc, Knowledge Sharing by audio-video recorded diffusion, Knowledge Sharing by creating a Knowledge Sharing Center and After Action Review are among the best.

#### 4.2.7. Overall Knowledge Management

4.2.7.1. What is/are the possible outcome/s of knowledge management in FDRE-MOND?

For the items below give your feeling as follows Very Appropriate (VA), Appropriate (A), Less Appropriate (LA), Not Appropriate (NA)

**Table 8. Possible outcome/s of knowledge management**

<b>Item to be Evaluated</b>	<b>VA</b>	<b>A</b>	<b>LA</b>	<b>NA</b>	<b>Total</b>
• Bringing of Army members Satisfaction	81	21	33	15	<b>150</b>
• Creating Fast Decision Making process	43	16	68	23	<b>150</b>
• Rapid Problem Solving method	57	23	57	13	<b>150</b>
• Innovation	94	41	8	7	<b>150</b>
• Quality of Work	76	27	26	21	<b>150</b>
• Decreasing Time Consumption	36	48	51	15	<b>150</b>
• Experience Gaining	88	46	15	1	<b>150</b>
• Better Risk Management	31	29	84	6	<b>150</b>
• Army members Retention	27	53	59	11	<b>150</b>
• Better Work Environment	84	61	3	2	<b>150</b>
• Developing Trust Among Individuals and Groups	71	39	31	9	<b>150</b>

The important factors that are driving the need for Knowledge management are organizational survival, competitive differentiation, globalization effects and aging workforce. Another important factor that is driving the need for KM is the realization that an organization must manage its knowledge if it is to survive in today's dynamic and competitive marketplace. Survival concerns are not limited to for-profit firms as nonprofits and even public agencies have all realized the value of KM. Desouza (2011) point out that without adequate care in how knowledge is managed, organizations will not be operating optimally and this will result in the ineffective and inefficient creation and delivery of products and services leading to unsatisfied customers, which is what ultimately leads to the demise of the organization.

Based on the above theory, respondents were asked to give their opinion on possible outcome if the organization manage knowledge, and from the table we can draw that 108 in number or 72% agreement and 42 in number or 28% strong agreement. This implies that the understanding level of the respondents on the proposed item that managing knowledge can have a possible positive outcome for the successful advantage of the organization.

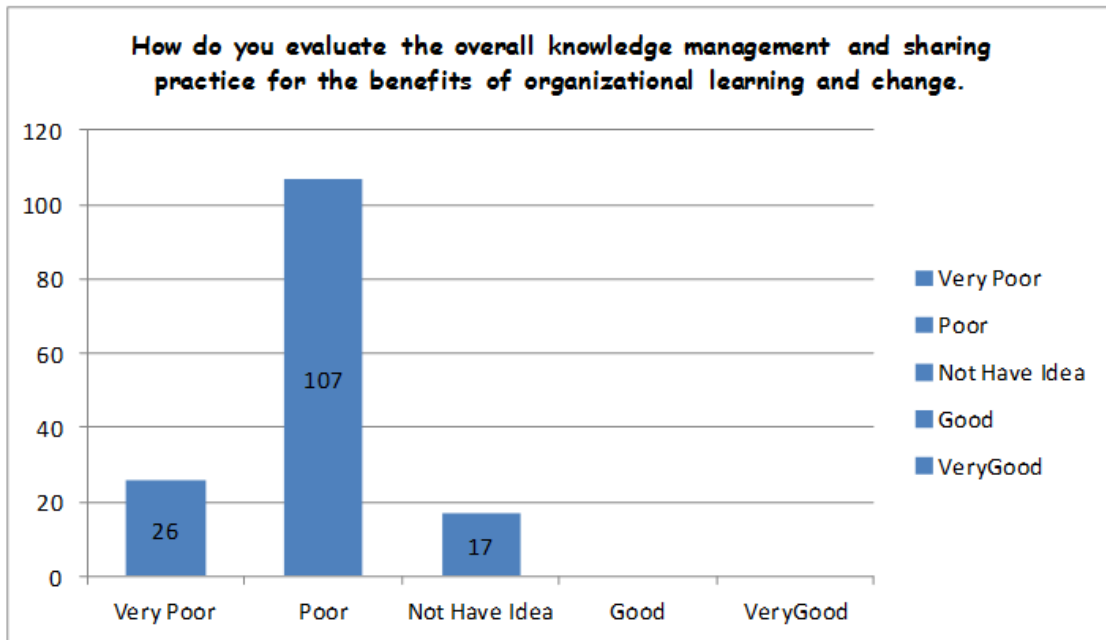
This point also strengthens by an interview with strategic leaders;

- Is there any possible outcome and importance of Knowledge Management in your Organization?

For the above question they believe that without any doubt managing knowledge bring a positive outcome on the organization performance and on the individuals carrier, and they gave some basic and important outcomes of managing knowledge like; bringing of Army members Satisfaction, creating Fast Decision Making process, Rapid Problem Solving method, Innovation, Quality of Work, Decreasing Time Consumption, Experience Gaining and Better Risk Management.

4.2.7.2. How do you evaluate the overall knowledge management and sharing practice for the benefits of organizational learning and change?

Chart 11. Overall knowledge management and sharing practice



Knowledge Management (KM) has been growing in importance and popularity a research topic since the mid 1990s. This is sufficient time for many organizations to implement KM initiatives and KM systems (KMS).

Knowledge management (KM) is the process of enabling knowledge flow to enhance shared understanding, learning, and decision making. Knowledge flow refers to the ease of movement of knowledge within and among organizations. Knowledge must flow to be useful. The purpose of knowledge management is to create shared understanding through the alignment of people, processes, and tools within the organizational structure and culture in order to increase collaboration and interaction between leaders and subordinates. This results in better decisions and enables improved flexibility, adaptability, integration, and synchronization to achieve a position of relative advantage. Sound Knowledge Management practices in Army enhance: Collaboration among personnel at different places, Rapid knowledge transfer between units and individuals, Reach-back capability to Army schools, centers of excellence, and other resources, Leader and Soldier agility and adaptability during operations, Doctrine development, An organization's ability to capture lessons learned throughout each force pool of the Army force

generation cycle, Effective and efficient use of knowledge in conducting operations, and supporting organizational learning are essential functions of KM. but as we can observe in the table presented above 85 % Of the total respondents believe that the knowledge management practice of MOND is poor. Learning from experience is not a very visible within the organization; different scholars wrote basic characteristics of learning and changing organization.

Jyothibabu et. al (2010) have developed an integrated scale to measure Organizational Learning. This scale was based on Watkins and Marsick's Dimensions of the Learning Organization Questionnaire (DLOQ) (elaborated by Watkins et. al (1997) and Bontis et. al (2002)). The combination of their study results revealed that there were seven dimensions of learning that affected organizational outcomes:

- Continuous Learning (CL): Organizational effort to facilitate continuous learning opportunities to all of its members.
- Inquiry and Dialogue (DI): Fostering a culture of questioning, feedback and experimentation by an organization.
- Team Learning (TL): Collaborative work promoted by an organization so as to achieve desired tasks.
- Employee Empowerment (EE): The concern for an organization to consider the collective vision of its employees/members about the gap between the current state of affairs and the futuristic vision.
- Embedded System (ES): Presence and efforts to establish systems to capture and share learning.
- System Connection (SC): Connection of an organization to its internal and external environment.
- Strategic Leadership for learning (LL): Involvement from leaders to use learning for changes and leading the organization to new directions.

#### 4.2.8. Interview Summary of Selected Scenario

As it is presented in the previous chapter the investigator choose a specific research scenario to strengthen and demonstrate in one of knowledgeable area where the Ethiopian Army is investing. For this purpose 18 peacekeeping participated Army members selected from 9 different peacekeeping missions presented in table 2 were asked very few questions; which summarizes the main research body by giving a focalized opinion on knowledge management and experience sharing within the organization.

As previously mentioned, semi structured research interviews will be conducted in order to collect relevant data. Kvale (2009) points out the importance of interview guides that contain the purpose of the study and a description of the corresponding questions. The research question is reflected on the interview questions that aim at gaining a detailed perspective on how KM is contributing to bring effective Organizational change and Learning. The interview starts with more general questions that focus on the broad context in which KM systems and Organizational Change and Learning are perceived by organization members. As proposed by Kvale and Brinkmann (2009), the interview questions are as brief and simple as possible. The two questions are;

- Did you get any past experience of peacekeeping lesson before they depart from home land? If your response is yes, on what way you get it? And by whom they get it?
- And the second question is, you are asked to contribute for future mission after accomplishing your mission. If your response is yes, on what way you get it? And to whom they get it?

In both cases the result is 100 % 'NO', but in other way the peacekeeping participated Army members were asked if they got any chance to share an experience for future learning purpose , again 100% of them believe that if they got any possible opportunity to share an experience for future they have a lot of learned experience in mind. Their open ideas summarized as follows.

The main point which is not shared and unlearned according to the peacekeeping participated Army members is troop preparation issue; Troops have to be drawn from different units across the country to form up a complete battalion with the required strength that meets the UN standards for deployment to the mission area. In recent times, in extreme cases, some personnel have been posted to deploying units as late as the time of their departure to the mission area. These individuals were deployed without pre-induction training. Obviously personnel filled at the last minute for a PSO arrive in the mission area without adequate knowledge of each other's capabilities and deficiencies. This creates problem of command and control. On other side peacekeepers coming from other friendly nations came with a full of equipped mentality and readiness to perform the mission

Other summarized point which is not shared and unlearned according to the peacekeeping participated Army members is Training Issue: Another major problem identified is that of training associated with Peace Support Operations (PSOs). Different countries have different training doctrines for the training of its personnel. The Ethiopian Army is faced with the problem of training doctrine for PSO. This problem had manifested itself in various operations. This would impact positively on all aspects (organization, training, leader development, materiel, and selection of soldiers) of the Armed Forces of Ethiopian preparations for and conducting peace support operations.

Other important summarized point which is not shared and unlearned according to the peacekeeping participated Army members is a Language Barrier Issue:

Language barrier is another major problem posed to Ethiopian Army personnel in PSO. Difficulties of getting interpreters in order to communicate with the host nation and peacekeepers from non-English speaking countries. In most cases Ethiopian Army needs to encourage more of its personnel or create a language centers to learn some common former colonial or UN/AU languages like French, Portuguese, Spanish and Arabic etc to manage the peacekeeping life smoothly and for the benefits of easy integration.

The last point is Lack of Adequate Staff Officers' Preparation and Unmatched Selection with the Qualification needed for the Work: There is lack of adequate staff officers' preparation for peacekeeping missions in Ethiopia, especially when it comes to military observers and contingent commanders at all levels. From platoon commanders to brigade commanders, staff officers who would be assigned in HQs are not getting the proper training for their missions. In most cases, this has happened because the selection and preparation of personnel who would be deployed for peace missions are not conducted ahead of time. This problem has to be resolved by having a well-developed rotation plan for the training, preparation, and deployment of troops, staff members to the HQs, and military observers and staffs.

To summarize the selected knowledgeable area all respondents were very optimistic and gave their frank feedback, as a result the conclusion indicates there is no formal way of experience sharing mechanism or managing knowledge. As they prove again in every peacekeeping mission individually share any possible and important information's before and after the mission, but it is difficult to share all important ideas informally, and the most important thing is there is no mechanism at all to manage individuals' knowledge (Tacit) to group or collective knowledge (Explicit), Army members leave the organization by different reasons retirement, medical issue and others... and the organization always lose its learned resource.

## **CHAPTER FIVE: CONCLUSION, SUMMARY & RECOMMENDATION**

### **5.1. Summary of Findings**

This section provides a summary of findings with respect to the objectives meant to be achieved by the study. The study investigated the role of knowledge management in enhancing organizational change and performance in MOND.

- Organization Related Items; on organizational related issues that analysis gives a fact that in MOND there is no at all an organizational response on the knowledge management issue, no department existing and no assigned responsible person to run this activity. A temporary committee sometimes created by the top leadership to manages things seasonally.
- As perceived by the respondents on Incentives and Motivational Related Items; on this question the analysis indicates total inexistence of such a system within the organization.
- Other item is about barrier to manage knowledge in the organization; for this question respondents gave their opinion in a frank way and the result obtained is there are different barriers to manage knowledge in MOND. Among the listed barriers are; organizational culture, lack of resource and experts to manage knowledge, lack of technology and infrastructure, Army members resistance and lack of interaction to share their knowledge, Lack of Resource (Budget, and Staff), non responsive organizational structure and Lack of awareness of importance of Knowledge Management.

On Issue Related to Individuals and Groups Attitude to manage knowledge in the organization; it is oblivious individuals and groups in general human is a core component of an organization. But the reality on the analysis part for this item indicates that individuals and groups are not involved on managing knowledge the respondents feedback indicates, Fear of job security, Cultural factors, Lack of trust among them and Lack of commitment and Lack of cohesive teams in organization which facilitates sharing of experiences and Information among Army members, support by the top management are the main negative factors affecting Knowledge Sharing within the organization.

- Leadership Related Items, on leadership context the analysis indicate that there is a lack of leadership support at all level. Scholars believe that most of the organizations agree now a day that effective leadership is one of the most important contributors to the overall organizational performance and change. Intelligent leaders are those who have a store of skills and knowledge gained from experience that allows them to manage effectively and efficiently the tasks of daily life. Effective leadership is always required to bring effective changes (Kennedy,2000). But in MOND case the leadership of the organization lacks; lack of role models on Sharing Experiences and Knowledge, Lack of leadership commitment to consistent and ongoing communication, lack of awareness of the skills of each Army members possesses and lack of empowerment and encouragement are some of them.
- Issue related outcome and importance of Knowledge Management; from the gathered data knowledge management has important outcome important outcomes like; bringing of Army members Satisfaction, creating Fast Decision Making process, and Rapid Problem Solving method, Innovation, Quality of Work, Decreasing Time Consumption, Experience Gaining and Better Risk Management.

## **5.2. Conclusions**

Knowledge is considered as one of the main sources of competitive advantage and essential element for survival of almost all organizations. The aim of the study was to investigate the role of knowledge management in enhancing organizational change in ministry of national Defense. The study also sought to investigate and recommend the KM practices and strategies that could be adopted by organization to create, capture and retain knowledge as a competitive advantage and for future use. The investigator reasonably chooses much focalized question to penetrate the untouchable boundary of defense in an academic research. Concluding from the research findings, there were indications that the organization faced some couple of challenges that included: inadequate understanding of what KM meant, lack of written knowledge retention policies, lack of knowledge sharing policy, lack of employee interactions, mistrust amongst Army members, lack of suitable KM environment. In general the knowledge management concept is untouched area of resource and concept in MOND.

### 5.3. Recommendations

In general words, it is important that the Ministry of Defense considers the importance of knowledge management practices, this based on the problem statement of the study and the findings this study has made. MOND will need to invest greatly on knowledge management programs to enhance and protect its knowledge resources to enable it accomplish its mission and vision effectively. The development of modern warfare is reflected by the rising importance of having knowledge advantage and information supremacy over adversaries. Generally saying investing includes financial, human and system. The most emphasized points and which could be the preliminary work of the organization are presented as follows;

- Organization related, MOND need to establish a clear policy and procedure including strategy to manage knowledge, a written policy and have a specific department and a clear independent organizational structure are advisable. Organizational structure and hierarchical chain of command should not be barriers for tacit (knowledge within individuals) knowledge sharing. Organizational structure and hierarchies hinder communication, therefore hampering the tacit knowledge transfer process. A smooth organizational environment also needed to manage knowledge. Enabling structures in terms of hierarchy and communication flows that facilitate learning. To give special emphasis and Recommendations on knowledge management policies MOND need to have; knowledge management policies should be written or documented for future references. Other side MOND need to create a positive organizational culture to enable individuals and groups openly share and manage knowledge. Besides the organizational structure and policy documents, knowledge managing teams and experts also needed to manage, share and archive organizational knowledge in a possible way of knowledge retaining mechanism.
- Leadership Related; Leadership, sense-making, problem-solving and decision-making are more complex and more demanding in military situations (Manuri and Raja Yaacob 2011). Command and control is taking on new dimensions, and the role of military personnel is evolving into that of 'Knowledge force'. The study therefore makes recommendations to address the KM issues identified by the study in order to enhance the

value of the mission accomplishment in MOND. The recommendations made address on basic items of the research questions of the study.

- Motivation and Incentives; Top leadership need see knowledge as a strategic asset and provides incentives and support for knowledge management processes. Organization need to provide incentives to motivate users to learn from experiences and use KM system.
- Recommendation Ideas on Knowledge Sharing Mechanism; respondents gave their opinion on what possible way MOND manage and share tacit and explicit knowledge within the organization. Among those the most suitable on the context of simplicity for the perspective of Army units geographical settlement and the available resources, Knowledge Sharing by a Conference, Knowledge Sharing by a written document, book, pamphlet, research, report etc, Knowledge Sharing by audio-video recorded diffusion, Knowledge Sharing by creating a Knowledge Sharing Center and After Action Review are among the best.

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## **Appendices 1**

### **Interview Questions for Strategic and Operational Leaders**

**ADDIS ABABA UNIVERSITY  
SCHOOL OF GRADUATE STUDIES  
COLLEGE OF BUSINESS AND ECONOMICS  
DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT  
MANAGEMENT**

#### **1. Organization Related Items**

- Defense has Knowledge Management Department?
- MOND has a proper Organization Structure to Manage Knowledge?
- FDRE-MOND has a written knowledge management sharing and retention policy or strategy.
- How do you rate the suitability and smoothness of organizational culture of FDRE-MOND to manage knowledge?

#### **2. Leadership Related Items**

- How you rate leadership support to manage and share knowledge in FDRE-MOND.

#### **3. Knowledge Management & Sharing Concept Related Items**

- How you rate individuals groups and others in FDRE-MOND understanding of the concept knowledge management and sharing.

#### **4. Incentive and Motivational Related Items**

- Does FDRE-MOND have a motivational incentive system to motivate individuals and groups to share knowledge contribution, exchange or on knowledge sharing with others?

**5. Factors Affecting Knowledge Management and Sharing Related Items**

- Is there any barrier to manage knowledge in the organization? If yes give some examples.

**6. Technology and Infrastructure Related Items**

- How do you rate the availability of proper technology and Infrastructure to manage knowledge in FDRE-MOND?

**7. Overall Knowledge Management**

- How do you evaluate the overall knowledge management and sharing practice for the benefits of organizational learning and change?

## **Appendices 2**

### **Interview Questions for Peacekeeping Participated Army members**

**ADDIS ABABA UNIVERSITY  
SCHOOL OF GRADUATE STUDIES  
COLLEGE OF BUSINESS AND ECONOMICS  
DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT  
MANAGEMENT**

#### **1. Interview questions Related to Question 1**

- Did you get any past experience of peacekeeping lesson before they depart from home land? If your response is yes, on what way you get it? And by whom they get it?

#### **2. Interview questions Related to Question 2**

- After your mission you are asked to contribute for future mission after. If your response is yes, on what way you get it? And to whom they get it?

#### **3. Interview questions Related to Question 3**

- Do you think that if you get any chance you have something to contribute o learn from your experience?

**Appendices 3**  
**ADDIS ABABA UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**  
**COLLEGE OF BUSINESS AND ECONOMICS**  
**DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT**  
**MANAGEMENT**

**Section I: Introduction**

**This Questionnaire is prepared for the study entitled “Assessment of Knowledge Management Practice: The case of Ethiopian Ministry of National Defense.**

This is for the partial fulfillment of MA in **Policy and Development Management**.

In order to make the research outcomes complete, reliable and fruitful, your genuine and accurate response to each item has contribution. Therefore, you are kindly requested to respond to each item will at most honestly and accurately.

All the responses you provide will be strictly confidential and shall only be used for the purpose of academics.

Dear respondents! Please note that:

- You do not need to write your name on the questionnaire
- You need to respond all of the item
- You should not conduct other respondents to fill it
- Put a tick mark (**X**) 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 +251-911-780884.**

**E-mail .....**

**Section II: Personale Information**

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

<b>Educational Background</b>			
<b>Diploma</b>	<b>Bachelor</b>	<b>Master</b>	<b>Phd</b>

<b>Military Rank</b>			
<b>Senior Officer</b>		<b>Line Officer</b>	
Colonel		Captain	
Lieutenant Colonel		Lieutenant	
Major		Second Lieutenant	

<b>Work Experience</b>			
<b>10-15 years</b>	<b>16-21 years</b>	<b>22-27 years</b>	<b>28 and above years</b>

**Section III: Questionnaire for Selected Army Members**

**A. Organization Related Items**

1. FDRE-MOND has Knowledge Management Department		
<b>Yes</b>	<b>No</b>	<b>Do Not Know</b>

2. FDRE-MOND has a written knowledge management sharing and retention policy or strategy.		
<b>Yes</b>	<b>No</b>	<b>Do Not Know</b>

3. How do you rate openness and suitability of FDRE-MOND organizational structure to manage knowledge?				
<b>Very High</b>	<b>High</b>	<b>Neither High nor Low</b>	<b>Low</b>	<b>Very Low</b>

4. How do you rate the suitability and smoothness of organizational culture of FDRE-MOND to manage knowledge?				
<b>Very High</b>	<b>High</b>	<b>Neither High nor Low</b>	<b>Low</b>	<b>Very Low</b>

5. Does FDRE-MOND have qualified experts to manage knowledge?		
<b>Yes</b>	<b>No</b>	<b>Do Not Know</b>

**B. Leadership Related Items**

6. How you rate leadership support to manage and share knowledge in FDRE-MOND.				
<b>Very High</b>	<b>High</b>	<b>Neither High nor Low</b>	<b>Low</b>	<b>Very Low</b>

6.1. Give a value or the listed item on leadership support to manage and share knowledge in FDRE-MOND. For the items below give your feeling as follows Always (A), Frequently (F), Sometimes (S), and Never (N)				
<b>Item to be Evaluated</b>	<b>A</b>	<b>F</b>	<b>S</b>	<b>N</b>
• Lack of role models on Sharing Experiences and Knowledge				
• Lack of leadership commitment to consistent and ongoing communication				
• Lack of awareness of the skills of each Army members possesses				
• Lack of empowerment and encouragement				
• Leaders are aware of and recognize the power of intellectual capacity individual Army members and groups knowledge.				

**C. Knowledge Management & Sharing Concept Related Items**

7. How you rate individuals groups and others in FDRE-MOND understanding of the concept knowledge management and sharing.				
<b>Very High</b>	<b>High</b>	<b>Neither High nor Low</b>	<b>Low</b>	<b>Very Low</b>

**D. Incentive and Motivational Related Items**

8. Does FDRE-MOND have a motivational incentive system to motivate individuals and groups to share knowledge contribution, exchange or on knowledge sharing with others?		
<b>Yes</b>	<b>No</b>	<b>Do Not Know</b>

8.1. Give value of appropriateness for the listed incentive mechanisms For the items below give your feeling as follows Very Appropriate (VA), Appropriate (A), Less Appropriate (LA) and Not Appropriate (NA)				
Item to be Evaluated	VA	A	LA	NA
• Official Organizational Recognition				
• Personal Recognition				
• Certification				
• Financial Prize				
• Military Rank Promotion				

**E. Factors Affecting Knowledge Management and Sharing Related Items**

9. Is there any barrier to manage knowledge in the organization		
<b>Yes</b>	<b>No</b>	<b>Do Not Know</b>

9.1. Rate the existence of barriers to manage knowledge in the FDRE-MOND For the items below give your feeling as follows Always (A), Frequently (F), Sometimes (S), and Never (N)				
Item to be Evaluated	A	F	S	N
• Organizational Environment				
• Organizational Culture				
• Lack of structured procedure an process to implement Knowledge Management				
• Lack of Expertise				
• Unavailability of Infrastructure and Technology.				

• Non Responsive Organizational Structure.				
• Lack of awareness of importance of Knowledge Management				
• Army members' resistance and lack of interaction to share their knowledge.				
• Lack of Leadership Support.				
• Lack of Resource (Budget, and Staff)				
• Turnover of Skilled Army Members				

### F. Technology and Infrastructure Related Items

10. How do you rate the availability of proper technology and Infrastructure to manage knowledge in FDRE-MOND?				
<b>Very High</b>	<b>High</b>	<b>Neither High nor Low</b>	<b>Low</b>	<b>Very Low</b>

10.1. Give a value on the appropriateness of the listed methods' to manage and share knowledge in FDRE-MOND. For the items below give your feeling as follows Very Appropriate (VA), Appropriate (A), Less Appropriate (LA) and Not Appropriate (NA)				
<b>Item to be Evaluated</b>	<b>VA</b>	<b>A</b>	<b>LA</b>	<b>NA</b>
• Knowledge Sharing by a written document, book, pamphlet, research, report etc				
• Knowledge Sharing by audio-video recorded diffusion				
• Knowledge Sharing by creating a Knowledge Sharing Center				
• Internet and Intranet Access Documentation				
• Knowledge Sharing by web site accessibility				
• Blog and e-mail diffusion				
• Video-Conferencing				
• Knowledge Sharing by a Conference				

**G. Overall Knowledge Management**

<p>11. What is/are the possible outcome/s of knowledge management in FDRE-MOND?                  For the items below give your feeling as follows Very Appropriate (VA), Appropriate (A), Less Appropriate (LA), Not Appropriate (NA)</p>				
Item to be Evaluated	VA	A	LA	NA
• Bringing of Army members Satisfaction				
• Creating Fast Decision Making process				
• Rapid Problem Solving method				
• Innovation				
• Quality of Work				
• Decreasing Time Consumption				
• Experience Gaining				
• Better Risk Management				
• Army members Retention				
• Better Work Environment				
• Developing Trust Among Individuals and Groups				

<p>12. How do you evaluate the overall knowledge management and sharing practice for the benefits of organizational learning and change?</p>				
Very Poor	Poor	Not Have Idea	Good	Very Good