

**EFFECT OF KNOWLEDGE MANAGEMENT ON SERVICE DELIVERY IN
MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY, KENYA**

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**A THESIS SUBMITTED TO MOI UNIVERSITY IN PARTIAL FULFILMENT OF
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SCIENCE IN HUMAN RESOURCE DEVELOPMENT, IN THE SCHOOL OF
BUSINESS AND ECONOMICS**

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DECLARATION

Declaration by the candidate

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DEDICATION

This work is dedicated to my children Valery, Larry, Lenny and Lewis and the entire family for their patience, encouragement and sacrifice to enable me go through the Masters program.

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I am most grateful to the Almighty God for the gift of life, and for the grace, mercy, strength and guidance that He granted me in the course of this study.

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ABSTRACT

Knowledge management is significant in enhancing service delivery in institutions of higher learning. However, universities in developing countries continuously grapple with limited budget, weak and inadequate infrastructure, thus affecting service delivery. It is against this background that the purpose of this study was to investigate the effect of knowledge management on service delivery in institutions of higher learning: A Case of Masinde Muliro University of Science and Technology. The objectives of this study were: to establish how the level of awareness on service delivery in institutions of higher learning; to determine effect of knowledge management system on service delivery in institution of higher learning; to assess the effect of culture change on service delivery in institution of higher learning and to examine the effect of information and communication technology on service delivery in institutions of higher learning. Human Capital Theory supported the study. The study adopted a descriptive survey design. The total target population was 298 administrative staff Masinde Muliro University of Science and Technology. The study used Yamane formula to calculate the sample size of 171 respondents. The study adopted stratified and simple random sampling in sampling the respondents. Data was collected using a questionnaire that had both open and closed-ended questions. A pilot was carried out at Kibabii University before the main study to ascertain the reliability and validity of research instruments. The study used content validity, and the reliability of the instrument was tested through the use of Cronbach Alpha value. The collected data were cleaned, coded, managed and analyzed with the aid of SPSS software version 23. Data analysis was done using descriptive and inferential statistics. Descriptively data were analyzed using frequency, percentages, means, and standard deviations. Inferentially data were analyzed using correlation and multiple regression models. Analyzed data were presented in the form of frequency tables. The study found out that there was a significant effect of level of awareness on service delivery in institutions of higher learning ($\beta_4=0.314$, $p=0.000$). There was a significant effect of the knowledge management system on service delivery in institutions of higher learning ($\beta_4=0.216$, $p=0.0008$). There was a significant effect of culture change on service delivery in institutions of higher learning ($p=0.0110$) ($\beta_4=0.179$, $p=0.0110$). There was a significant effect of information and communication technology on service delivery in institutions of higher learning ($\beta_4=0.184$, $p=0.0089$). Therefore, the overall regression results imply that there is a positive and significant effect of knowledge management on service delivery in institutions of higher learning. The study concluded that, indeed, information communication technology plays a role in managing knowledge. The study recommended that the university should train its staff on the importance of information sharing. The institution's training policy be implemented and to include periodical staff rotation. The institution to improve the knowledge management systems not only to include internet but also other systems like emails, data warehouse, routine decision making, and other networks; the university should ensure that its connectivity is sufficient to enable sharing of information. For this to be achieved, knowledge management officer be employed. This will lead to an improvement in knowledge management, thus increased service delivery.

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OPERATIONAL DEFINITION OF TERMS

Combination the process of recombining discrete pieces of explicit knowledge into a new form in which the prototypes of new concepts are developed and incorporated into the organization

Culture change refers to change of cultural capital on individual and the institutions of higher learning. In this study it means the reconstruction of the cultural concept of the university.

Externalization a knowledge creation process in that tacit knowledge becomes explicit, taking the shapes of metaphors, analogies, concepts, hypotheses, or models

Information and communications technology are stressing of the role of unified communications and the integration of telecommunications and computers in the institutions of higher learning.

Internalization is the process of understanding and absorbing explicit knowledge into tacit knowledge held by the individual.

Internalization this knowledge through learning by doing and experimenting, new knowledge is then used by employees and making tacit knowledge to be generated again.

Knowledge hoarders are people who gather and guard information for personal preservation and future use.

Knowledge Management constitutes a formal process which ensures efficient simultaneous use of knowledge by employees, technology and work process and the transfer of knowledge to the right individuals at the right time.

Knowledge management system is any kind of IT system that stores and retrieves knowledge to improve understanding, collaboration, and process alignment.

Service Delivery service delivery is the interaction between providers and clients where the provider offers a service, whether that be information or a task, and the client either finds value or loses value as a result.

Socialization sharing knowledge in face-to-face, natural, and typically social interactions

Turnover process in which employees leave the organization and have to be replaced

LIST OF ACRONYMS

AMREF	African Medical Research Foundation
B2C	Business-to-Consumer
CBD	Central Business District
CDHMA	Centre for Disaster Management and Humanitarian Assistance
CoP	Communities of Practice
EPSS	Electronic Performance Support System
FESS	Faculty of Education and Social Sciences
GDNet	Global Development Network
HR	Human Resource
ICT	Information and Communication Technology
IK	Indigenous Knowledge
IT	Information Technology
KM	Knowledge Management
KMA	Knowledge Management Africa
MMUST	Masinde Muliro University of Science and Technology
NGOs	Non-Governmental Organizations.
QMS	Quality Management System
SOLACE	School of Open Learning and Continuing Education
STPIL	Science and Technology Park and Industrial Linkages
WECO	Western College of Arts and Applied Sciences
WUCST	Western University College of Science and Technology

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, and scope of the study, significance of the study, justification of the study and limitation of the study. The chapter gives us

1.1 Background to the Study

Knowledge management is the conscious integration of people, processes and technology involved in designing, capturing and implementing the intellectual infrastructure of an organization (Donate & de Pablo, 2015). It enables the people within an organization to share what they know, leading to improved services and outcomes. Knowledge Management (KM) plays an important role in the improvement of organizational competitive advantage through sharing of best practices, achieving better decision making, and faster response to key institutional issues, better process handling and improved people skills. In turn, this means less reinvention of the wheel, relevant and focused policies in compliance with institutional goals and objectives, the ability to access information more quickly, improved academic and administrative services, reduced costs and prevention of mistakes and failures.

Knowledge management became more prominent by the late 1980's. Although it happened gradually and management often voiced their uncertainty, it was a natural change brought about by numerous factors. In past eras, most employees had to fit into their organizational

structures by means of performance standards based upon strictly defined job descriptions (Geisler & Wickramasinghe 2015). Employment was secure as long as they performed assigned tasks and minded their own business. Out-of-the-box thinking was not likely and knowledge hoarding was the order of the day. During the era of business process reengineering, cost accountants saw the most knowledgeable workers as an unnecessary expense. The solution was through downsizing or early retirement. Many organizations made the strategic mistake of pushing their intellectual assets out the door. Knowledge hiding then replaced the culture of knowledge hoarding.

During the 1990's, chief executives in the consulting trades realized that the foundation of our economy had been shifting from natural resources toward intellectual assets. They began evaluating how employees were using knowledge in their organizations. The biggest shock came with the discovery that the companies did not own 80 percent of corporate knowledge. The knowledge went home every night with the employees. As a result, questions such as how knowledge is acquired, used, and delivered became paramount (Lee & May, 2016).

These early pioneers knew that their organizations had to adapt quickly. They spent their time rethinking what they were doing, how they were doing it, and why. They tore down barriers and ancient processes and replaced them with a systematic approach to knowledge sharing based on the fluid dynamics of a networked economy. As CEOs evaluated their knowledge management dynamics, it became apparent that the people who drove their enterprises were those who were creating and accumulating knowledge. As time went on, the value of these people and what they knew was exerting an increasing influence on the success of their organizations. The challenge then became how to create the information,

organizational intelligence, business models, communication tools, and learning systems around these extremely important people (Lee & May, 2016). The lessons learned by these early adopters of knowledge management indicated that though they knew what knowledge was, finding out who has it, reorganizing operations to nourish and manage it, changing the work culture to support it, and building knowledge networks around it were the real challenges of the future.

In Germany, knowledge management (KM) involves any activity related to the capture, use and sharing of knowledge by the organization (Prey et al., 2016). However, due to a number of reasons growing complexity, interdisciplinary, economies of speed, inter-organizational co-operation internal knowledge generation is under pressure and must increasingly integrate external knowledge quickly and smoothly.

Knowledge is vital for business improvement but according to Ranjbarfard, (2016), it is not the knowledge of the organisational members per which is of critical strategic importance, it is the firm's productivity in building, integrating and utilizing its intellectual capital which is vital. The understanding of knowledge has considerably changed over the years, particularly from the perspective of organizations. The new paradigm is that within the organization, in order for knowledge to grow it must be shared. The sharing of knowledge between concerned management and staff has been seen to build an organization stronger and more competitive.

A method of confronting this KM threat is to introduce a structured programme for the transfer of critical knowledge (Beazley, 2013). It is evident that not all knowledge may be collected and transferred, but that is not the goal. The goal is to transfer solely the critical knowledge related to the work position that would, in case it is lost, endanger the operation

of the organization. Some continuity is definitely better than none. The drive to manage knowledge in African culture is characterized by an old African proverb that states in Africa, when an old man dies, the entire library is burnt. In this, there is need in Africa to capture indigenous knowledge, share and transfer it by networking between countries (Ondari & Minishi-Majanja, 2017).

The civil service in sub-Saharan Africa is still bureaucratic and rigid in its operations (Dewah & Mutula, 2016). Knowledge management is not as yet embraced in the civil services across the sub-Saharan region. Public service in an Africa, a key requirement is that of taking knowledge management seriously – at least as seriously as chief finance officers for finances and chief information officers for information technology – as a key part of agency management (Withers, 2016). Withers explains that such management should embrace systematic oversight of the stock, use, generation and retention of knowledge and information, with particular attention to the placement of this in executive decision-making and the incentive and reward structures of a department or agency.

Companies in the Information Technology (IT) sector especially, have to work hard to keep their talented people (Patnaik & Kar 2014). Talented employees have been able to move from organization to organization, moving to the organization that provides them with the best package of benefits, salary and working conditions. If key people leave an organization, it may lose valuable knowledge. An organization may also find they gain benefits, such as an increased level of knowledge, by people entering the organization. Considering these thoughts, organizations need to have a strategy for how they are to manage what often is considered the most important asset: the intellectual capital of the employees. The intellectual assets need to be identified and organizations need to ensure

they organize themselves in a way that knowledge loss due to employee turnover is minimized. In order to do so organizations need to understand the relationship between knowledge management and employee service delivery and that is the core map in carrying out this study.

For employers it is very important to monitor the volume of employees who leave the organization and how this factor influences the organization. That, of course, is dependent on the size of the organization, its location and special teams of employees, which can help to formulate a general strategy of sources (Hutchinson & Purcell, 2013).

Organizations are facing a crisis of knowledge management, irrespective of sector of economy, size of organization which is to ensure that employees will not leave the organization before transferring their experience (Townsend & Hutchinson 2017). This means that organizations are facing a “knowledge preservation crisis” as organizations’ knowledge is threatened. In this respect knowledge management becomes a key means of reducing the risk of loss of critical knowledge which could in turn affect service delivery in the institution.

Masinde Muliro University is not exceptional in the crisis being faced by organizations in knowledge management as there still the challenge of funding the sector so as to ensure that critical knowledge is transferred from one employee to another so that when they leave the organization their knowledge is possessed by other individual in the organization or is stored in the explicit form or in documents.

The human element in the provision of services is very important for the institutions of higher education in order to operate efficiently and effectively in a highly competitive environment. The human elements in the concept of providing higher education services

are strongly linked to the competitive service and the success of an institution (Yarimoglu, 2014).

Customer Satisfaction has long been recognized to play an essential role in the success and survival in today's competitive environment. Customers are the lifeblood of any organization, private companies or public administrations, because your satisfaction is the key to the survival of the organization continues. Satisfaction is particularly important with regard to organizations that offer services rather than goods (Shohrowardhy, 2015).

Organisational outcomes such as service quality, efficiency and customer satisfaction have been underpinned by technological advancement. Many of these technologies are largely facilitated by the internet and business-to-consumer (B2C) e-commerce and have changed and continue to change the way services are delivered and how customers interact with service organisations (Gabriel *et al.*, 2016).

A policy framework that can promote knowledge economies rests on at least four pillars, all involving long-term commitment. The first pillar relates to the provision of economic incentives and an institutional environment that encourages entrepreneurship, the development of new activities and modernization (World Bank 2015). The second pillar that a country needs to build is a skilled and flexible labour force. A country should provide quality education and life-long learning to its people, both male and female. The third pillar relates to building a knowledge society where dynamic information and telecommunications infrastructure provide efficient services and tools to all sectors of society. As a country sets out to restructure and develop its telecommunications infrastructure, it should ensure wider and less costly access to telephone lines and to the Internet. The fourth pillar refers to the creation of a system of science and research centres,

universities, and other organizations that can interact to promote innovation and create new products and services. Building such innovation systems would facilitate the pooling of resources for research projects, ensuring financing and/or commercialization of research, promoting excellence through professional associations of experts and peer-review mechanisms, and the creation of specialized research and development centres. In their assessment of how Kenya fares with reference to these pillars, the World Bank (2015) scores Kenya average on all four of the main pillars outlined. Kenya scores average for all categories and that the country is particularly weak in the field of tertiary education. These factors would indicate that Kenya has not yet become a knowledge society, and a considerable amount of work needs to be done before it can become one.

KM initiatives are expanding across institutions of higher learning. The competitive benefits of KM efforts have been demonstrated and documented in the industry, government and in the academic world. For instance, towards achieving the objective of its Vision 2020, Malaysian Public Institutions of Higher Education's contribution to the Vision is the production of knowledgeable human power or knowledge workers to the country. As other non-profit organisations, Malaysian Public Institutions of Higher Education have taken the challenge of the implementation of KM in their respective organisations on board (Abu-Bakar & Alias, 2005). Many educational institutions want better ways of transforming knowledge into effective decision-making and action. Thus, institutions of higher learning focus on making individual knowledge re-usable for the achievement of their missions. To achieve their institutional missions, that is, education, research and service to society, institutions of higher learning need to manage the processes associated with the creation of knowledge and innovation through shared ideas (AL-Hakim

et al, 2012). IHLs seek to share information and knowledge among the academic communities within and outside the institutions and normally those institutions that succeed in knowledge management are likely to view knowledge as an asset and to develop organisational norms and values which support knowledge creation and sharing. Therefore, knowledge management can become part of an organization's capital asset and to achieve the institutional mission, that is, education, research and service to society, IHLs need to manage consciously and explicitly the processes associated with the creation of knowledge, its sharing and re-use (Sulisworo, 2012).

Some institutions of higher learning in Africa have recognised knowledge as a beneficial asset, hence they are trying to implement various strategies to ensure that they cope with the existing demands for knowledge from their customers (competitors for students to improve their own services to remain competitive). Institutions such as ZOHRU University in Morocco have started to ensure that they manage right knowledge and get the right people at the right time and make their decisions using the knowledge management system (Laoufi et. al., 2011). A survey by the National University of Singapore (NUS, 2007), which involved countries in Africa and Asia noted that knowledge management is recognized as central to information sharing between public sector agencies and between the public sector and the citizens they serve; some have KM programmes in place whereas others are working on them.

Knowledge has impacted all institutions in South Africa, particularly those of higher education, through their academic libraries. This has underscored the value of knowledge management. As a result, the role of academic libraries is changing to providing the

competitive advantage for the parent institutions. Success of academic libraries depends on their ability to utilize information and knowledge of its staff to better serve the needs of the academic community. Consequently, whatever affects academic libraries has an impact on the entire institutions (Taylor 2014).

MMUST holds the view that science and technology is an indispensable tool in harnessing resources of nature for sustainable development and creating an environment in which human beings can survive and realize their potential. Thus, the human person has the moral obligation to creatively improve the environment. This can be achieved through a well-conceptualized educational, scientific and technological package through which every human being must rightfully experience and acquire the tools to facilitate this mission.

1.2 Statement of the Problem

The public universities are expected to deliver quality and efficient services. However, Kenyan public universities have to continuously grapple with limited budget, weak and inadequate infrastructure, lack of resources and facilities and manpower problems. Naturally, they can pay little heed to the issue of knowledge management, which calls for considerable investment in terms of money, time, planning and efforts. Creating a culture of knowledge sharing, acquiring appropriate hardware and software, building information and communications infrastructure and developing human resources. In Masinde Muliro University of Science and Technology is also faced by challenges in delivering service. There has been complain about Enterprise Resource Planning (ERP) system being misconfigured leading to the loss of students' marks and fee balances. Addressed the frequent deaths of students in the university has also been a big challenge. The University also experienced a number of challenges such slow development of physical facilities,

uncoordinated expansion into low potential areas, and over reliance on outsourcing of teaching facilities, poor financial management and declining productivity of staff, inadequate ICT infrastructure, poor health services for both staff and students and inadequate funding of research activities. Delayed implementation of schemes of service for staff; declining productivity of staff; lack of student placement services; inefficient student admission and registration procedures and low graduate completion rates. The slow development of physical facilities, uncoordinated expansion into low potential areas, and over reliance on outsourcing of teaching facilities, poor financial management and declining productivity of staff, inadequate ICT infrastructure, poor health services for both staff and students and inadequate funding of research activities are all the evidence of poor service delivery in the university. This study therefore was undertaken to bridge the gap in that, in the Universities knowledge has been transferred from lecturers to students, but not much has been done to ensure effective transfer of knowledge from employee to employee through knowledge management systems as a way of ensuring effective service delivery by the human resource fraternity. Therefore, this study sought to investigate effect of knowledge management on service delivery in institutions of higher learning in Masinde Muliro University of Science and Technology, Kenya.

1.3 Objectives of the Study

The study was guided by both general and specific objectives

1.3.1 General Objective

The main aim of this study was to investigate effect of knowledge management on service delivery in institutions of higher learning in Masinde Muliro University of Science and Technology, Kenya

1.3.2 Specific Objectives of the Study

- (i) To establish effect level of awareness on service delivery in institutions of higher learning.
- (ii) To determine effect of knowledge management system on service delivery in institution of higher learning.
- (iii) To assess the effect of culture change on service delivery in institution of higher learning.
- (iv) To examine the effect of information and communication technology on service delivery in institutions of higher learning.

1.4 Research Hypothesis

H₀₁: There is no significant effect of level of awareness on service delivery in institutions of higher learning.

H₀₂: There is no significant effect of knowledge management system on service delivery in institution of higher learning.

H₀₃: There is no significant effect of culture change on service delivery in institution of higher learning.

H₀₄: There is no significant effect of information and communication technology on service delivery in institutions of higher learning.

1.5 Significance of Study

1.5.1 Making Policies in Organizations

The study's findings will be of great assistance in generating policies on management practices that will enhance knowledge management as a way of improving performance of employees through service delivery.

1.5.2 Knowledge Contribution Scholars

This study findings on knowledge management would be as a source of reference to future academicians and scholars. Those who would focus on human resource development and human resource management this study would be reference material. Since knowledge management is an important aspect in human resource management, future researchers would want explore more on the aspect. Thus, the recommendations that the researcher has come out with as suggestions for further study on knowledge management would be of assistance to future researchers in exploring this field.

1.5.3 Incorporating the Findings by The Institution

The managers will benefit from the study since it will aid them to know the extent of awareness of knowledge management in the institution and the systems that need to be put in place for the purpose of employee improved service delivery. The managers will know

the knowledge management systems that exist and how they can be incorporated into the policies of the institution to enhance performance and efficiency of service delivery.

1.6 Justification of the Study

Knowledge management being the conscious integration of people, processes and technology involved in designing, capturing and implementing the intellectual infrastructure of an organization, enables people within an organization to share what they know, leading to improved services and outcomes. Universities being a non-profit sector have since transferred knowledge from lecturers to students, but have not shown major interest for knowledge management interventions so far. This has been due to limited budget, weak and inadequate infrastructure, lack of resources and facilities and manpower problems. This study was then done in Masinde Muliro University of Science and Technology to establish the effects of Knowledge management on service delivery. The recommendations reached from the study will then assist universities in formulation of ways ensuring that Knowledge Management is implemented to achieve effective service delivery in institutions.

1.7 Scope of the Study

The study focuses on the effect of knowledge management on service delivery in institutions of higher learning in Masinde Muliro University of Science and Technology, Kenya. The independent variables were: level of awareness; knowledge management system; culture change; information and communication technology while the dependent variable was the service delivery in institutions of higher learning. The study adopted

descriptive survey research design. Data was collected from university staffs using questionnaires. Data was collected during the month of June and December 2019.

1.8 Limitation of the Study

The study was limited to responses from university staffs who could not give all information due to fear of victimization and risk losing their jobs. However, this was mitigated by assuring them on the confidentiality and secrecy of the information they would provide. Some respondents were not willing to give information concerning the study objectives. However, the researcher reassured them that the information would be used only for the purpose of academic research and their identity will not be disclosed.

The study was limited to Masinde Muliro University of Science and Technology. The results could not be generalized to effect of knowledge management on service delivery in institutions of higher learning. However, the study results can be used by policy makers and other institutions of higher learning to come up with strategies of encouraging the knowledge management in institutions which can be applied in the whole country. The study was limited to the use of questionnaires which were closed ended hence could not give room for respondents to give their opinions and views. However, this was mitigated by supplementing them with interview schedule. These gave in-depth information which could not be given by the questionnaires alone.

In addition, since prior arrangement was done between the researcher and the institution where the study was done, there was a possibility of some staffs reading about knowledge management for the sake of that research. The situation might be different during other

days when the staffs were not asked to provide information related to knowledge management and service delivery in the institution.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter looked at theoretical framework, empirical review of the study objectives and lastly the conceptual framework.

2.1 Service Delivery in Institutions of Higher Learning

The human element in the provision of services is very important for the institutions of higher education in order to operate efficiently and effectively in a highly competitive environment. The human elements in the concept of providing higher education services are strongly linked to the competitive service and the success of an institution (Cherkesova et al, 2016).

According to Shahimi, Abbas and Nawaz (2014) the students are not only customers. Customers of institutes of higher education: parents, employers of graduates, research sponsors, legislators and other members of the staff, teachers and taxpayers Chawla and Sharma (2014) classifies customers of the institutions of higher learning in three levels:

Major customers: Students; Secondary customers: Parents, governors and employers; Customer Services: The labour market, the government and society.

It is, however, the concept of student as the primary customer of higher education, the research, where the higher education institutions may have their greatest challenge. Students are also considered as the main customers of higher education in the United Kingdom Green (2014) avers that the main customers of higher education are the students.

The importance of students from private institutions of higher education in Malaysia is irrefutable. The progress of private institutions of higher learning depends entirely on the number of their students.

Organisational outcomes such as service quality, efficiency and customer satisfaction have been underpinned by technological advancement. Many of these technologies are largely facilitated by the internet and business-to-consumer (B2C) e-commerce and have changed the way services are delivered and how customers interact with service organisations (Froehle, 2006; Reinders *et al.*, 2008). A key change is that customers are expected to actively participate in the service delivery process (Reinders *et al.*, 2008; Xue *et al.*, 2007). This has implications for the way customers interact with the organisation, customer perceptions of service quality and how the customer perceives their relationship with the organisation.

Organisations have struggled to understand how to better manage relationships with customers (Bernard & Mawuli, 2014). Customer service has been a key area of innovation and organisations focus considerable resources, including investment in information technologies, on attempting to achieve a high level of customer satisfaction (Plakoyiannaki *et al.*, 2008; Bettencourt and Ulwick, 2008). Satisfied customers become loyal customers (Axelsson, 2008). Customer loyalty is significant because customers' loyal to a given seller may be worth up to 10 times as much as its average customer (Anderson and Srinivasan, 2003) and customer loyalty leads to long term profitability. The front-line employee has an important role in the service value chain because these employees shape customer perceptions of service quality (Scotti *et al.*, 2009).

Front-line employees in the service sector have a critical role in how customers experience the organisation because value is created when an employee interacts with a customer (Fleming & Asplund, 2007). The ability of an organisation to provide value to customers and engender their loyalty relies on how effectively this interaction between employees and customers works (Plakoyiannaki *et al.*, 2008).

Employee and customer experiences with technology must be managed together effectively to drive effective organisational performance (Fleming and Asplund, 2007; Fleming and Artis, 2010). The interactions between customers and employees in service organisations are mediated by increasingly sophisticated technologies. Customers interact with service organisations using a variety of service delivery channels. Increasingly, many of these interactions are through self-service delivery channels (Padlee & Reimers, 2015). The success of B2C electronic commerce interactions relies on the level of usage by customers (Roberts & Toleman, 2007) and the customer's ability to utilise the technology.

In other service delivery channels, employee-customer interactions are supported by ubiquitous or anywhere, anytime technologies that support business transactions and processes. U-commerce has been coined by some authors to describe “the use of ubiquitous networks to support personalised and uninterrupted communications and transactions between a firm and its various stakeholders to provide a level of value over and beyond traditional commerce” (Watson *et al.*, 2002: p.55). Examples include mobile and wireless technologies that are increasingly used to interact with customers in business-to-consumer (B2C) electronic business transactions.

The management of employees with appropriate human resource management policies and practices is crucial to ensuring employees have the skills to effectively respond to customer needs (Conduit & Mavondo, 2015). Service strategies that involve the internet have generated different ways to deliver services to customers resulting in changes to the way work is organised (Varlander & Julien, 2010). The employee-customer interaction depends on technology enabled business processes and the effectiveness of these connections has clear implications for how an organisation achieves sustained competitive advantage. Employee management becomes of strategic importance to ensure that the employee-customer-technology nexus works effectively and efficiently to achieve an organisation's objectives. This is more important in these uncertain economic times.

2.2 Theoretical Framework

The study was supported by Human Capital Theory.

2.2.1 Human Capital Theory

The theory of human capital was proposed by Schultz (1961) and developed by the Nobel prize-winning economist Gary S. Becker in his seminal work on the economics of employer provided training (1964). Human capital theory advocates that education or training imparts useful knowledge and skills to workers which in turn increase their productivity and incomes (Becker, 1964). Becker distinguishes between specific human capital and general human capital. Specific human capital includes expertise acquired through education and training which is specific to a particular firm (firm-specific or context-specific skills). General human capital (general skills), on the other hand, is

knowledge gained through education and training which is valuable across board (e.g., reading and writing).

Becker views human capital as similar to "physical means of production", for example., factories and machines: one can invest in human capital (via education, training, medical treatment) and one's outputs depend partly on the rate of return on the human capital one owns. Thus, human capital is a means of production, into which additional investment yields additional output.

Human capital is knowledge, skills, and capabilities of individuals that have economic value to an organization (Bohlander et al., 2001: p. 4). The Organisation for Economic Cooperation and Development (OECD, 2001: pp.2) describes human capital as the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being. Human capital is the capabilities, knowledge, skills, and experience, all of them embodied in and inseparable from the individual (Dess & Pickens, 1999).

The human capitals are the innate abilities, behaviour and personal energy that individuals bring to work. Intellectual capital results from the knowledge and skill that individuals generate, retain and use. This human capital can as a result of interactions in an organization generate organizational capital. The focus in HRM, from the Human Capital perspective, is to attract, retain and develop human capital (Amstrong, 2001).

Thus, the theory provides a suitable basis for understanding the knowledge management systems in an institution on human resource service delivery since it explains the link between training that imparts useful knowledge on workers and service delivery, which in return affects innate abilities, behaviour and the personal energy that individuals bring to work.

2.3 Review of theories related to Knowledge Management

Nonaka (1994), Nonaka's key contribution to knowledge management in the first instance was to argue that the first step to making a more sophisticated model was to think through how knowledge might be actually transferred, and he noted that for that to happen, knowledge has to be transformed to information, and only then can it be moved. Following this, Nonaka developed his signature model of how such information might be transferred. His model essentially proposed that there was a dynamic intertwining of tacit and explicit knowledge, such that tacit knowledge is extracted to become explicit and is then re-internalized as tacit.

Nonaka sought to establish a sense of dynamism in the knowledge transfer model, and to this end he proposed the SECI model:

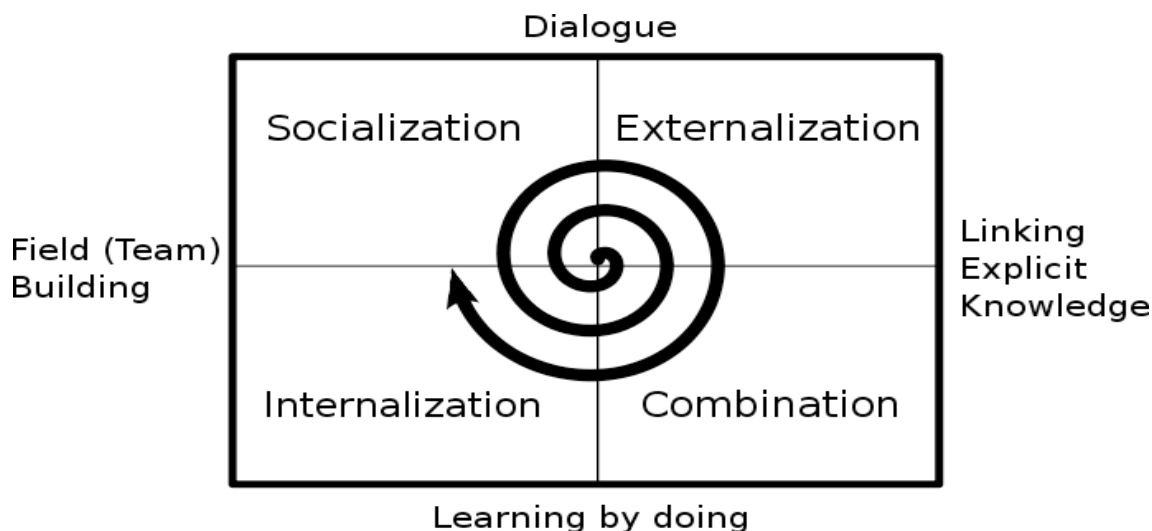


Figure 2.1: The SECI Model (Nonaka & Takeuchi, 1995)

2.4 Knowledge Management Introduction

Knowledge in organizations represents the foundation on which company strategy is built. This means that knowledge should be understood as the fundamental factor of sustained

performance (Becerra-Fernandez & Sabherwal, 2014). Management support is the most important factor of systematic knowledge management. The growing importance of knowledge naturally calls for its systematic management. The study reached recognition of the need to understand and to measure the knowledge management activities with the objective that organizations can do what they do better, and so that governments can develop and adapt policies to promote these benefits.

Systematic knowledge management in the organisation includes efforts to maximise the success of the organization through the creation and exchange of knowledge and skills. New definitions of management and its role in knowledge management have been developed. In order to be able to manage knowledge, one has to understand what knowledge is and how to make efficient use of it (Brunswicker & Vanhaverbeke, 2015).

Efficient knowledge management has gained importance because of the very need of the organisations who wish to perform successfully in a competitive market to maximize the efficient use of all of their resources. The goal of knowledge management is not knowledge itself, but rather the management of human resources who possess such knowledge. Sarala et al. (2016) emphasized that human resources management was one of the significant challenges throughout all the stages of the organisation life cycle. One of the relevant elements of knowledge management is undoubtedly the creation of such an environment in which individuals trust one another and the management and are willing to share their knowledge with others with a view to contributing to the successful performance of their organization.

Omotayo (2015) define knowledge management as a process of continuous management of all types and forms of knowledge with a view to realizing the set goals, fully exploiting existing knowledge and creating new opportunities. Similar to this is the definition given by (Tseng & Lee, 2014), according to which knowledge management constitutes a formal process which ensures efficient simultaneous use of knowledge by employees, technology and work process and the transfer of knowledge to the right individuals at the right time. (Tzortzaki & Mihiotis, 2014) also understands knowledge management as a certain activity which is consistent with the human capital management strategy. Girard and Girard (2015) understands knowledge management as a process of identification and analysis of available knowledge and, consequently, as a process of planning of different activities with a view to realizing the set objectives and increasing a company's capital. Webbs (2017: p.2) defines knowledge management as support for knowledge-related managerial activities, such as creation, storage, reformulation and use.

Knowledge is the full utilization of information and data, coupled with the potential of people's skills, competencies, ideas, commitments and motivations (Liebowitz, 2019). Knowledge is people, money, leverage, learning, flexibility, power, and competitive advantage. Knowledge is more relevant to sustained business than capital, labour or land. Nevertheless, it remains the most neglected asset. It is essential for action, performance and adaption. Knowledge provides the ability to respond to novel situations (Nieves & Haller, 2014). Knowledge is present in ideas, judgments, talents, root causes, relationships, perspectives and concepts. It is stored in the individual brain or encoded in organizational processes, documents, products, services, facilities and systems.

Knowledge is the basis for, and the driver of our post-industrial economy. Knowledge is the result of learning which provides the only sustainable competitive advantage. Knowledge Management therefore is the collection of processes that govern the creation, dissemination, and utilization of knowledge. In one form or another, knowledge management has been around for a very long time. Practitioners have included philosophers, priests, teachers, politicians, scribes, Librarians. Knowledge management is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures and previously un-captured expertise and experience in individual workers (Bahrami & Evans, 2014).

Knowledge management is 'any process or practice of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organizations', (Scarborough, 1999: pp. 668-678). It focuses on the development of firm-specific knowledge and skills that are the result of organizational learning processes. Knowledge management is concerned with both stocks and flows of knowledge. Stocks included expertise and encoded knowledge in computer systems. Flows represent the ways in which knowledge is transferred from people to people or from people to a knowledge database. (Cho & Korte, 2014) describes it as the process of systematically and actively managing and leveraging the stores of knowledge in an organization. Worthley (2015) describe knowledge management as 'the attempt by management to actively create, communicate and exploit knowledge as a resource for the organization.

Epetimehin and Oluwayomi (2017), identifies knowledge as multifaceted and complex, being situated and abstract, implicit and explicit, distributed and individual, physical and

mental, developing and static, verbal and encoded. Knowledge is embedded in technologies, rules and organizational procedures. Olohan (2017), argued that embedded knowledge is located in organizational routines or capabilities or societal level. Can be found in systems of relations between, for example, technologies, the roles the people perform, the formal procedures of the organization and the emergent routines.

Knowledge is Encultured as collective understandings, stories, values and beliefs. Williams (2016), states that it is the process by which we arrive at shared understandings of our group or organization. It is also embodied into the practical activity-based competencies and skills of key members of the organization. The study describes this as knowledge acquired in action, such as undertaking a project or apprenticeship. Knowledge is embraced as the conceptual understanding and cognitive skills of key members.

Data consists of the basic facts the building blocks for information and knowledge. Information is data that have been processed in a way which is meaningful to individuals, it is available to anyone entitled to gain access to it. Knowledge is information put to productive use which is personal and often intangible and it can be elusive the task of tying it down, encoding it and distributing it is tricky (Gondwe, 2014).

2.4.1 Explicit and Tacit Knowledge

According to Nonaka and Toyama (2015), tacit knowledge is contrasted with explicit knowledge, which is expressed as knowledge that is communicated to others. That knowledge will be created if we convert one type of knowledge to another. The conversion can be tacit-to-tacit, that is watching somebody, then doing it, tacit-to-explicit which is doing it, then describing it, or explicit-to-explicit, that is reading about it, then describing it.

The result, whenever knowledge translates from one form to another, is liberated energy, innovation, and performance. That tacit knowledge lives in our hunches, intuition, emotions, values, and beliefs.

Both explicit and tacit knowledge are rooted in action, experience and involvement in a specific context. Tacit knowledge is further divided into cognitive and technical elements. The cognitive elements refer to an individual's mental models consisting of mental maps, beliefs, paradigms and viewpoints; whereas, the technical component consists of concrete know-how, crafts, and skills that apply to a specific context. The explicit knowledge is in its turn, articulated, codified and communicated in symbolic form and or natural language. Davies (2015) stated that knowledge is either explicit or tacit.

Knowledge can be codified, that is, it is recorded and available, and is held in databases, in corporate intranets and intellectual property portfolios, this is therefore explicit knowledge. Tacit knowledge exists in people's minds. It is difficult to articulate in writing and is acquired through personal experience. It includes scientific or technological expertise, operational know-how, insights about an industry, and business judgment. The main challenge in knowledge management is how to turn tacit knowledge into explicit (Eaves, 2014).

The process that transfers tacit knowledge in one person to tacit knowledge in another person is socialization. This process is experiential, active and a "living thing," involving capturing out as a research area for practitioners rather than as knowledge by walking around and through direct interaction with customers and suppliers outside the organization and people inside the organization (Gourlay, 2003). This depends on having shared

experience, and results in acquired skills and common mental models. Socialization is primarily a process between individuals.

The process for making tacit knowledge explicit is externalization. One case is the articulation of one's own tacit knowledge, ideas or images in words, metaphors, analogies. A second case is eliciting and translating the tacit knowledge of others such as customer, experts for example into a readily understandable form, for example, explicit knowledge. Dialogue is an important means for both (Andreeva & Ikhilchik, 2011). During such face-to-face communication people share beliefs and learn how to better articulate their thinking, though instantaneous feedback and the simultaneous exchange of ideas.

Externalization is a process among individuals within a group. Once knowledge is explicit, it can be transferred as explicit knowledge through a process Nonaka calls combination. This is the area where information technology is most helpful, because explicit knowledge can be conveyed in documents, email, data bases, as well as through meetings and briefings. The key steps collecting relevant internal and external knowledge, dissemination, and editing/processing to make it more usable. Combination allows knowledge transfer among groups across organizations (Lee & Kelkar, 2013).

In this study, combination was the most applicable process since the researcher looked for ways of ensuring that all the information is gathered through documents, email databases and also in meeting and seminars. This ensured that all important information in an organization was gathered and stored for the purpose of it being shared amongst the employees (Hosseini, 2011).

Internalization is the process of understanding and absorbing explicit knowledge into tacit knowledge held by the individual. Knowledge in the tacit form is actionable by the owner. Internalization is largely experiential, in order to actualize concepts and methods, either through the actual doing or through simulations. The internalization process transfers organization and group explicit knowledge to the individual. Within a company, there are five enablers for knowledge creation; vision, strategy, structure, system, and staff (Cabitza et al., 2014).

The researcher used the internalization process in the Nonaka's Model to understand the way in which the explicit knowledge available in an organization can be absorbed by the employees in MMUST. This was done through studying the vision, mission, strategy, structure, system and the staff in the university.

2.5 Level of Awareness of Knowledge Systems on Service Delivery

Higher education institutions for instance adapt to knowledge management by identifying a number of existing facilities, systems or projects. Facilities such as libraries, and electronic collections of learning materials, networks for e-mail communication, and management information systems which provide data on the student profile all contribute to the success of implementation of knowledge management. Stefik (2014) found out that knowledge awareness can be better applied in the higher education institution by creating a flexible and innovative relationship between work and education, helping students to match their talents more closely to their current workplace demands, contributing to the adaptation and assimilation of new knowledge with existing ones as well as contributing to the re-connection of learning with experience

Ajayi, Nwosu and Ajani (2015) reported on the impact of facilities on undergraduate student choice of university. Using the hostels in the Federal University of Technology, Akure as a case study, the facilities provided in the hostels were identified and the level of satisfaction with each of the facilities measured using Relative Satisfaction Index. Questionnaires were used in data collection from a total of 322 students taken as the sample size for the study. The study revealed that respondents were vividly aware of what university should provide to them but were dissatisfied with the adequacy and functionality of some facilities such as the laundry, bathroom and toilet facilities due to distance from rooms and the level of cleanliness

Yusoff et al., (2015) explored the knowledge and awareness about colorectal cancer (CRC) among undergraduate students of one of the leading universities in Saudi Arabia, along with the mode of information access. The present cross-sectional study was conducted at the King Abdulaziz University, Jeddah, Saudi Arabia, among students of different faculties. The study questionnaire, containing 28 items, was adapted from surveys identified in the relevant literature. The CRC awareness questionnaire consisted of an awareness section (early CRC signs and symptoms, and risk factors) and a knowledge section. The data were analyzed using the SPSS version 21.0. A total of 525 undergraduate students participated in the study. The majority were females (63.0%) and approximately half (56.8%) were medical students. The majority of the students (82.3%) were aware of CRC, and 68% thought that CRC is a preventable disease. Regarding colorectal cancer screening tests, only one-third of students (33%) had actual knowledge, while the majority of the students (77.0%) thought that there are tests which help in early detection. Only 4% of the participants had a family history of CRC. The majority of the participants (84%) thought

that CRC is a disease that can be cured. Almost 50-60% participants had good awareness level regarding risk factors, and signs and symptoms. Regarding knowledge, participant responses varied for family history (52%), age (59%), chronic infection of the colon (72%), obesity and lack of exercise (66%). More than one-third of the students had received information material regarding CRC from their curriculum followed by social media (20.4%), and nearly 40% from other sources such as TV, hospital and mass media. Female participants had significantly better awareness in a few questions regarding CRC awareness as compared to their male counterparts.

Awuor (2014) studied the impact of knowledge awareness on innovation and service delivery among consulting firms in Kenya. Questionnaire that targets 266 respondents resulted in 216 usable ones with a response rate of 81.2 per cent. To test the research hypotheses, a multiple regression analysis was conducted, in addition to descriptive statistics that provide a background about the respondents. The analysis showed that there is a significant and positive impact of knowledge awareness processes on innovation in Nairobi consulting firms, as well as a significant and positive effect of codification and personalization approaches on innovation, while the service delivery approach has a significant negative impact with innovation. The study was however not done in institutions of higher learning like the current study.

Babakus and Inhofe (2015) reviewed public sector level of awareness on knowledge management. Articles published in KM journals are analyzed using a structured literature review methodology. The paper analyses 180 papers published within ten journals specializing in the field of KM. Findings show that few authors specialize in the field and there are several obstacles to developing a cohesive body of literature. Low levels of

international cooperation among authors and international comparisons mean that the literature is fragmented. Some research topics and some geographical areas within the public sector theme are over-analyzed, while others are under-investigated. Additionally, academic researchers should re-think their methodological approach if they wish to make significant contributions to the literature and work toward developing research which impacts practice in conjunction with practitioners.

Ryan (2015) confirms concerns of the students with issues of assurance. The students in this study are not confident that they are getting value for money, or that the skills they are learning what can get them good results both academically and for future employment. They are also concerned about lecturers' knowledge in their subject area. All these issues should always concern the management. Further, he observes that fulfilling one's by the host community and institution is prevalent among students.

Ellis (2018) Studied on knowledge management awareness and organizational performance in the service industry. Data are collected from human resource managers and general managers working in 119 service firms. Exploratory factor analysis and hierarchical regression analysis are used to analyse the proposed hypotheses. The results indicate that level of awareness has strong and positive effects on KM process and organizational performance after controlling for the effects of level of awareness. Further, KM process partially mediates the relationship between level of awareness and organizational performance after controlling for the effects of transactional leadership. Implications and directions for future research is that no such study has been done in any institution of higher learning.

Algahtani (2014) studied on the impact of knowledge sharing on the relationship between organizational culture and service delivery of ICT industry in Hong Kong so that appropriate strategies can be put in place by relevant decision-makers to enhance corporate performance. The research includes items of culture dimension, knowledge sharing dimension, service delivery dimension and demographic information. Data collected from 228 valid respondents by an internet-based self-administrative anonymous questionnaire survey were analyzed by factor analysis and multiple regressions; validity, reliability and the mediating effect of knowledge sharing were also tested. Research findings revealed that organizational culture significantly influences knowledge sharing and service delivery and that knowledge sharing plays an important mediating role between organizational culture and service delivery. It is unique in that it investigated the mediating effects of knowledge sharing on service delivery of ICT practitioners in Hong Kong but not on knowledge system awareness among universities.

2.6 The Effect of Knowledge Management System on Service Delivery

2.6.1 Knowledge Management in Enhancing Service Delivery in Institutions

According to Antal et al., (2014), knowledge is an essential resource for establishing competitive advantage and management should attempt to identify, generate, deploy and develop knowledge. Hence, managers need more information about knowledge and about how it can be managed and if it can be managed at all. In a world replete with knowledge and information or its possible acquisition, what is often missing within organizations are the processes for dissemination. As with most things, knowledge is only as good as its contextual applicability. Once knowledge/information has been determined to be useful, and applicable to a particular context, its manageability must be determined, that is, how it

should be dispensed, who should be the recipients, what effects it will have on an organization and even the market in general.

Lamont (2011), brings out that an institution that embraces knowledge management becomes process-intensive for the reason that large amount of information is well organized and the tacit knowledge of staff are also monitored through using the method of knowledge mapping so that the expertise of the staff is fully utilized. Students also get more diverse employment information when the University' career center employed the Knowledge Management because of the fact that employment student advisers with various background expertise give professional advice for the students from different faculties and disciplines (Bridgstock, 2009).

Wamundila and Mngadi (2011) state that by implementing the Knowledge management, various explicit knowledge is captured and tacit knowledge is codified into documents. In the Higher Education in Britain, distance learning is greatly promoted because knowledge management helps to collect suitable information and knowledge to the learners. Knowledge management process, however, does not exist' in vacuum. It should be integrated into other organizational processes that create value. It should be harmonized with general corporate strategy and maintained by appropriate culture. This requires the formation of suitable organizational framework, that is, particular socio-technical environment which is created in order to ensure the performance of knowledge management process.

Based on the existing models of socio-technical knowledge management system, major aspects of organizational context could be identified; strategic leadership, organizational

infrastructure, technological infrastructure, organizational learning, and knowledge culture. Strategic Leadership: KM process in the organization is not performing per se. This is only possible with the recognition and support from the top management. Only when top management acknowledges the value of knowledge management, and knowledge management could be created and developed (Muchaonyerwa & Mutula, 2017).

Organizational infrastructure: Zimu-Biyela, (2016) argues that organizations consist both of formal and informal structure or networks. The formal networks exist to promote order and stability and are represented by the officially sanctioned structures and constraints established within an organization. The informal networks are a 'shifting network of social and other informal contacts between people within an organization and across its boundaries'. Thus, the organizational infrastructure determines how the employees of the organization are organized in formal and informal networks or teams and how they interact formally and informally.

Organizational learning: According to Wachira (2013), learning is the acquisition of new knowledge by people who are able and willing to apply that knowledge in making decisions or influencing others. The aim of the organizational learning process in knowledge management system is to increase individual knowledge, to reinforce competencies, and to convert them into a collective knowledge through interactions, dialogues, discussions, exchange of experience and observations.

Knowledge culture: Organizational culture is a complex entity of values, beliefs, behaviour models and symbols. It represents organization's value, which can turn into a model for the activities and behaviours of the staff. According to (Stephen 2016), culture provides a work environment in which employees are engaged, challenged, motivated and

rewarded in a positive way for their performance and contribution to the organization's success.

Technological infrastructure: It is often claimed that the role of communication and information technologies in KM is minor compared to elements of social context, but the technological context is of real value for creation and development of knowledge management system. So, a proper KM is unthinkable without appropriate communication and information technologies which play an important role in supporting knowledge management process. (Olson 2015) points out that, such technologies facilitate the transformation of data into information, and information to knowledge. They help distribute knowledge vertically and horizontally, as well as make it easily searched and utilized. So, organizations need adequate technological infrastructure that could help them to manage and leverage knowledge systematically and actively. Proper Technological infrastructure is acknowledged as the basic technological building block of any knowledge management system.

Nothing happens without incentives Niekerk (2019). We have limited time and energy, and people in most companies are already working at their limit. Institutions should then adopt ways of motivating their human resource to tap more from the expertise that they possess: Expectation. As part of the governance system, management need to set the clear expectation for staff on what constitutes a minimum acceptable level of KM. Example. This is not something 'the troops' do. Management needs to lead by example. Recognition. Knowledge management needs to be given status as an important part of the job, through the creation of KM posts, through the provision of KM training, and through active encouragement by management. Payback. People who use a knowledge management

approach need to find that they get local benefit. By accessing the knowledge of others, they find that it makes their own job much easier.

Reward. Although any attempt to 'bribe' people into managing knowledge is unlikely to be sustainable in the long term, the reward systems of the company need to be compatible with knowledge management. We need to identify and reward the team players rather than the lone heroes, the knowledge sharers rather than the power hoarders, the re-users rather than the re-inventors. If the reward system is misaligned, then people will not take KM seriously.

(<http://www.knoco.com/knowledge-management-FAQ-htm>) (Muchaonyerwa 2015).

López-Nicolás and Merono-Cerdan (2011) state that in their 'codification model', managers need to develop a system that encourages people to write down what they know and to get these documents into the electronics depository. They believe that real incentives – not just enticements – are required to get people to take these steps. In companies following the personalization model, rewards for sharing knowledge directly with other people may have to be different. Direct financial rewards for contributing to the codification and sharing of knowledge may often be inappropriate, but this could be a subject for discussion in a performance review as part of a performance management process.

2.6.2 Knowledge Creation in Institutions

Ngulube and Wamundila (2011), states that staff with different duties have different core functions and generate specific knowledge accordingly. Career Advisors who deal with students, they get the experience of handling the enquiries; also develop the expertise and skills to search related information in the knowledge base, so tacit knowledge is created. Then they input the enquiries and solutions to the knowledge base, so explicit knowledge is created. Take the staff that is responsible for organizing the workshops as another example;

they need to find sources before giving speech to the audiences. Through referring to the best practices in career advising or listening to experienced colleagues, they get some new understanding or ideas about a specific subject, so tacit knowledge is generated. In addition, PowerPoint slides, worksheets, agendas and other useful resources are created by them for the workshop, so explicit knowledge is generated.

2.6.3 Knowledge Capture in Institutions

To capture and codify the tacit knowledge, employees learn from history, learn from others, interview with partners and build a knowledge asset. If a department needs to organize similar activities, they will refer to and learn from the past experience. The department also learns from others, for example, the director regularly finds some information like the latest best practices in the foreign career advising industry, and then he tries to apply these practices in the department. Furthermore, the department captures tacit knowledge through interviews. It holds annual meetings with companies which have cooperated with them to organize activities, so staff can get more ideas about the selection criteria, future plan or particular requirements of those companies. Building a knowledge asset, a department has a central system that contains all important information that the staff has to know. There is also uses of taxonomies to capture and codify the explicit knowledge. According to Aarons (2011), taxonomy is a classification scheme that use for easy retrieval of specific information in a system.

2.6.4 Knowledge sharing and dissemination by employees

Work Coordination Meetings could be held on a weekly basis. In the meeting, the top management briefs upcoming activities in the coming two weeks. For example, there

would be information about the venue, date and time, special arrangement of a recruitment talk. Staff is welcomed to raise any questions or topics that related to their works for further discussion. Open platform can be seen in the meetings. This kind of person-to-person interaction is a typical socialization style in an organization, which facilitates ‘Tacit-to-Tacit’ transformation of knowledge (Brătianu, 2016).

Formal meeting is the most frequently used method for ‘Tacit-to-Tacit’ transformation of knowledge in the department. However, it is difficult to gather all staff sometimes, so the meeting cannot be held weekly. A regular sharing practice might not be maintained since engaging all participants is necessary in knowledge sharing. Departments rely heavily on computer system to share knowledge among its staffs. The central system which stores all important information is the knowledge base and intranet of the department. It is accessible to staff only. Moreover, when the management gets useful information from recruitment fairs or conferences, they circulate the hard copy or send the soft copy through email to inform all staff. This practice allows as many staff engage as possible with the use of high-accessible platform (Nonayama & Toyama 2015).

2.6.5 Knowledge Acquisition and Application in Institutions

According to Dalkir (2005), there are two major types of knowledge application that is Knowledge repositories or Electronic Performance Support System (EPSS) and Knowledge reuse. Knowledge repository is an intranet platform that includes all the tacit and explicit knowledge of an organization which is collected from the experience and practices of staff. C&P has set up a knowledge-based system which keeps all the knowledge like best practices in career advising, records of recruitment talks and student feedback records and analysis. It is regarded as an intranet.

According to Mitchem et al., (2013), Electronic Performance Support System (EPSS) is an electronic construction that uses to capture, store and disseminate the knowledge asset of individual or collective efforts. It helps the staff to work efficiently and effectively. The system assists in preserving the organizational knowledge asset, and improves the working performance and efficiency of the staff. For instance, Career Advisors can find relevant information in the system quickly and provide satisfactory answer to enquirers. In addition, the staff can reuse the knowledge that contained in the system for different purposes. For example, reuse the PowerPoint slides for similar workshops; reuse the ideas and concepts for department planning.

2.6.6 Knowledge-Sharing Culture as A Norm in Organizations

Dalkir (2013) stated that the knowledge-sharing culture is one where sharing knowledge became the norm of the organization, and collaboration among people is encouraged. Knowledge is shared through different channels such as knowledge repository, emails. It is not a compulsory requirement to have any incentive system like rewards to encourage sharing. Since the manager believes that knowledge sharing is part of the corporate culture, there is no need to promote the message of knowledge sharing through incentives. In fact, it requires staff to document all activities in daily operation and upload all relevant information to the system from time to time by following the established departmental policies for the purpose of effective knowledge dissemination and sharing among the staff.

2.6.7 Collaborative climate for knowledge management

Sorakraikitikul and Siengthai (2014) suggested the assessment of collaborative degree of an organization, can be treated as an indicator of effectiveness of knowledge management.

Other than the core functions, individual staff is encouraged to have knowledge in other aspects. There is no formal training provided for them, however, through self-learning and communication with other colleagues, they are expected to have the knowledge in other aspects. Staff's workloads vary in teams and periods, based on the actual needs of the department in a specific period of time that staff may be assigned to other team for extra support. When a team does not have much works to do, part of staff in the team will be assigned to help another team consequently.

From the process point of view, institutions must make clear policies and procedures to ensure the knowledge management process can be executed in a smooth way. The department requires its staff document all activities in daily operation and upload all relevant information to the system from time to time by following the established departmental policies for the purpose of effective knowledge transfer, learning and sharing among the staffs (Wamundila & Ngulube (2011).

From the perspective of people issue, the team spirit and open organizational culture are the positive motivators for advocating knowledge sharing among the staffs (Tan 2016). Nevertheless, the top-bottom approach of knowledge management in the Unit resulted in discouraging knowledge sharing atmosphere among the lower-level staffs. The lower-level staffs always are the receivers and listeners of the knowledge provided by the top-level staffs, but they may have lower degree of sharing about feedbacks and experiences to the top management due to the lack of sharing channels and tools. For example, the top-level staffs will circulate the best practices in careers advising in foreign countries to the lower-level staffs via email or the knowledge-based system, yet there is no sufficient channel for

lower-level staffs to express their opinions in those best practices or share their personal experience in careers advising.

Additionally, the department utilizes KM strategies in managing the organization's knowledge such as continuous improvement in intranet and the advancement in working procedures. Also, metrics and assessments to evaluate the effectiveness and efficiency of the practice of KM within the department can be practiced as well. Practice of KM in institutions can be done in a more comprehensive way on top of the existing proactive ones. Explicit knowledge is possessed in institutions of learning in the form of financial records necessary for meeting tax, payroll or accounting obligations, files of important historical documents, self-study documents, research articles, conference proceedings, and minutes of meetings. Photo albums and similar mementos of college activities and interests form part of the knowledge asset, as well as library databases. Presbitero, Roxas and Chadee (2017) points out that research and scholarship are the tangible assets of an academic institution. In addition to these tangible explicit knowledge assets there are the tacit or implied knowledge and human expertise of the people who work in the organisation, as well as everything that is contained in the intranets.

KM practices in higher education are actions aimed at improving the internal flow and use of information through knowledge acquisition and knowledge sharing for institutional effectiveness (Fullwood, Rowley & Delbridge, 2013). It enables an organization to improve its performance by enabling learning and innovation whilst solving its problems, acknowledging and resolving gaps in its operations, and recognizing knowledge (comprising people and information) as an organizational asset which has to be managed through enabling policies and institutional tools.

2.7 Culture Change through Knowledge Management in Organizations on Service Delivery

We cannot properly discuss about KM if we do not consider its relation to organization culture. Different authors underscore the importance of linking cultural and organizational factors to the implementation and sustainability of knowledge management initiatives. Constrained by its environment, an organisation makes a number of "choices" which, collectively, eventually define its culture. These choices are influenced by the philosophy of the organization, the values of top management, and the "assumptions" of founding principles and succeeding generations of organisational leaders. These choices also define the success or failure of KM initiatives. In organizations such an organisational culture should be created that incorporates KM, including motivation, ability, performance, education, learning, training, trust, behaviour, values and beliefs (Ngulube & Mavodza 2013).

Dalkir (2013) stated that organizational culture can generate cross-individual behavioral consistency such as shared values and shared mental models. Moreover, open organizational culture facilitates knowledge sharing as well as forming communities of practices. Hence, employees, who are encouraged to share, are more engaged in knowledge sharing activities. Dalkir (2013) reflected that knowledge transfer and sharing could be facilitated by the well-established policies and sharing culture of an organization. Consequently, organizational culture no doubt largely influences degree of knowledge sharing.

Aming'a (2015) observed that even if there are perfect hardware such as knowledge sharing tools, knowledge sharing would not be successful. It can be explained by that employees are indifferent to participate in sharing under the organizational culture that

promotes individual success rather than team spirit as a whole. Apart from that, Harorimana (2010) argued that individual and organizational culture could co-exist. When individual culture is exaggeratedly stressed, conflicts may be easily found and harmony of the organization would be destroyed. In this way, team spirit and open organizational culture can make knowledge management outcomes more obvious.

An open culture is one in which as Haqani and Ahlan (2015) suggests, people contribute out of a sense of commitment and solidarity. Relationships are characterized by mutuality and trust. In such a culture, organizations place a high priority on mutual support, collaboration and creativity, and on constructive relationships. There is no 'quick fix' way in which a closed culture where these priorities do not exist can be converted into an open culture. Long-established cultures are difficult to change. HR can encourage management to develop purpose and value statements which spell out that an important aim of the organization is to achieve competitive advantage by developing and effectively using unique resources of knowledge and expertise, and that to achieve the aim, sharing knowledge is core value.

2.7.1 Climate of Commitment and Trust

Amstrong (2016), Gaining commitment is a matter of trying to get everyone to identify with the purpose and values of the organization, which will include processes for developing and sharing knowledge. Commitment can be enhanced by developing a strategy which will include the implementation of communication, education and training programmes, initiatives to increase involvement and 'ownership', and the introduction of performance and reward processes.

Developing a high-trust organization means creating trust between management and employees as a basis for encouraging trust between individual employees or groups of employees. People are more likely to trust management if its actions are fair, equitable, consistent and transparent, and if it keeps its word. It is difficult although not impossible to develop trust between management and employees. But it is not possible to make individual employees trust one another, and such trust is important if knowledge is to be shared (Chen, Yen & Tsai, 2014).

Developing a climate of trust in the organization helps, otherwise it is a matter of developing social capital in the sense of putting people into positions where they have to work together, and encouraging interaction and networking so that individuals recognize the value of sharing knowledge because it helps achieve common and accepted aims. This process can be helped by team-building activities. Trust may also be enhanced if knowledge is exchanged as a matter of course in forums and conferences. Dialogue occurs between people who want to connect and are given opportunities to do so in a collaborative, creative and adaptive culture (Wang, Wang & Liang, 2014).

2.7.2 Knowledge Management Through Organizational Design and Development

Hart et al., (2013), human Resource can contribute to effective knowledge management by advising on the design of process-based organizations in which the focus is on horizontal processes that cut across organizational boundaries. Such organizations rely largely on networking and cross-functional or inter-disciplinary project teams or task forces, and knowledge sharing is an essential part of the operation. Attention is paid to identifying and encouraging groups of people to informally bound together by shared expertise and a

passion for joint enterprise. They are seen as important because it is within such groups that much of the organization's tacit knowledge is created and shared.

Role definitions emerging from organization design activities should emphasize knowledge-sharing as both an accountability (a key result area) and a competency (an expected mode of behaviour). Thus, it can become an accepted part of the fabric and therefore the culture of the organization. Organizational development activities can focus on team-building in communities with an emphasis on processes of interaction, communication and participation with the aim of developing a sharing culture (Amstrong, 2016).

2.7.3 Resourcing to Enhance Knowledge Management

Human Resource department contributes to enhancing knowledge management processes by advising on how to attract and retain people with the required skills and abilities, including those who are likely to exhibit the behaviours needed in a knowledge-sharing culture. This means devising competency frameworks for recruitment and development purposes which include knowledge-sharing as a key behaviour. Such a competency could be defined as 'The disposition to share knowledge fully and willingly with other members of the community'. Exercises and tests designed to test the disposition and ability of individuals to share knowledge may be included in interviews. Retaining knowledge workers is a matter of providing a supportive workplace environment and motivating them (George, 2015).

2.7.4 Performance Management Contribution to Knowledge Management

The promotion and development of performance management processes by HR can make an important contribution to knowledge management, by providing for behavioural

expectations which are related to knowledge-sharing to be defined, and ensuring that actual behaviours are reviewed and, where appropriate, rewarded by financial or non-financial means. Performance management reviews can identify weaknesses and development needs in this aspect and initiate personal development plans which are designed to meet these needs. One starting point for the process could be the cascading of corporate core values for knowledge-sharing to individuals, so that they understand what they are expected to do to support those core values. In a 360-degree feedback process, one of the dimensions for an assessment by colleagues and direct reports could be the extent to which an individual shares knowledge (Davis, 2013).

2.7.5 Organizational and Individual Learning as A Tool of Knowledge Management

Organizational learning takes place when people learn collaboratively Biswas and Suar (2013). It involves accumulating, analysing and utilizing knowledge resources which contribute to the achievement of business objectives. Knowledge management approaches can make a major contribution to the enhancement of learning in an organization. Practices associated with creating the right environment for sharing knowledge will in particular promote organizational learning by creating a ‘rich landscape of learning and development opportunities.

The concept of a learning organization is also relevant. Gould (2016), states that one of the characteristics of such an organization is ‘there are well-defined processes for defining, creating, capturing, sharing and acting on knowledge’. Senge (2014) postulates that learning organizations ‘transfer knowledge quickly and efficiently throughout the organization by means of formal training programmes linked to implementation’. Organizational learning, however, is based on individual learning, and the significance of

knowledge management and the techniques available to support it can be learnt in formal training sessions or monitoring programmes designed and facilitated by the HR function.

2.7.6 Knowledge Management through Workshops and Conferences

Human Resource department can play an important part in knowledge management by setting up and facilitating workshops, conferences, seminars and forums in which members exchange information and ideas, discuss what they have learnt and agreed on what use can be made of the knowledge they have acquired. Apart from their value in disseminating knowledge, such gatherings can help to develop an environment in which knowledge-sharing is accepted as a natural and continuing activity (Jarvis, 2014).

2.7.7 Promoting collective intelligence and knowledge of people

Knowledge Management must have practical application to human organizations. The tools, databases and technological aids are not themselves Knowledge Management. Knowledge and learning come from people and their relationships with each other and their experiences. The real challenge, therefore, comes in the form of developing a culture that embraces learning, sharing, changing, and improving, all through the collective intelligence and knowledge of people.

Sankowska (2013) noted that to implementing knowledge management efforts failed due the lack of an appropriate cultural context that would create and nurture reciprocal trust, openness and cooperation. Employees must be enthused with a thirst for knowledge and that many failures in this arena are the result of top down efforts to “push” information. Push approaches can often be identified by management’s reference to information

technology initiatives. The authors maintain that push is easy; the challenge is in creating the pull, the desire for the knowledge among the employees.

2.7.8 Culture Change in Knowledge Management

The availability of information is changing everything, and it is creating the greatest mass empowerment of all time (Andrejevic, 2013). In this world of constant change, the organizations that learn how to be smart, quick, agile and responsive are the ones that will survive long into the future. Organizations, though, are not machines. They are made up of people who need time to experience, reflect, and learn. Likewise, knowledge is not something that can be quantified and it is far more complex in that it is derived out of human relationships and experiences. This, then becomes the greatest challenge of Knowledge Management, the organization's ability to embrace, grow, and attend to the human dimension.

Moving to a systematic management of knowledge is a culture change process. You will be introducing a culture where knowledge is seen as important to corporate success, and where accessing and sharing knowledge becomes an automatic routine process. This requires a change in the way people think and behave. This is a profound shift from the individual to the collective.

From "I know" to "We know"

From "Knowledge is mine" to "Knowledge is ours"

From "Knowledge is owned" to "Knowledge is shared"

From "Knowledge is personal property" to "Knowledge is collective/community property"

From "Knowledge is personal advantage" to "Knowledge is company advantage"

From “Knowledge is personal” to “Knowledge is inter-personal”

From “I defend what I know” to “I am open to better knowledge”

From “not invented here (i.e. by me)” to “invented in my community”

From “New knowledge competes with my personal knowledge” to “new knowledge improves my personal knowledge”

From “other people's knowledge is a threat to me” to “our shared knowledge helps me”

From “Admitting I don't know is weakness” to “Admitting I don't know is the first step to learning” (Barnes & Milton, 2014: p. 1-2).

That shift from “I know” to “we know” from “Knowledge is mine” to “Knowledge is ours” is a huge one, and counter-cultural to many of us. People can find it scary, but once it has been achieved, it is like living in a different, and far better world.

2.8 Technology in Enhancing Knowledge Management

According to Husain and Nazim (2015), knowledge management is neither the preserve of the Information Technology (IT) function nor that of Human Resource (HR). The two functions need to work together. IT ensures that knowledge is recorded and made acceptable through means such as the intranet. HR collaborates by providing means for tacit knowledge to be collected and, where feasible, codified. In terms of technology, institutions need to set up a knowledge-based system which keeps all the tacit knowledge like best practices in careers advising, records of recruitment talk and students' feedbacks on careers talks or fairs. The system does not only assist in preserving the organizational knowledge asset, but also help to improve the working performance and efficiency of the staffs. In addition, the system is regarded as an intranet that is the only channel for

knowledge sharing besides email. Insufficient channel for sharing knowledge might lower the sharing atmosphere.

Organizations are most likely wasting resources by re-inventing knowledge, spending excess time locating difficult to find knowledge and unsuccessfully absorbing and using the growing volumes of new knowledge flowing into the organization every day. Recent advances in information processing technology, combined with widely available access to high-speed networks, provide organizations with unparalleled opportunities to formalize the collection, protection and use of knowledge. To accomplish this, new software systems and processes have been developed to integrate with existing information systems and spread throughout the enterprise. These new approaches are collectively referred to as “Knowledge Management” (Chigada & Ngulube, 2015).

Chigada (2014) states that, the initial challenge of knowledge management is synthesizing the information processing technologies in your organization and the unique abilities of the people to allow the organization to survive and thrive on knowledge. Knowledge management is not just knowing everything the organization knows. It is creating a synthesis between the people and the information to the point that the whole is more than the sum of the parts. The value of knowledge management relates directly to the effectiveness with which the managed knowledge enables the members of the organization to deal with today's situations and effectively envision and create their future.

The technology dimension of Knowledge Management, while important, is not essentially where knowledge actually resides. Technology can accumulate information, sort information, communicate information, and do so at high rates of speed. But knowledge resides inside human relationships and experiences. So, the challenge becomes one of

building a culture that values face-to-face human relationships, reflection, and sharing. Organizations must challenge themselves to engage as many people as possible in the experiences, such that the organization learns to the depth and breadth that will sustain its growth in knowledge and ultimately its survival.

Wang et al., (2014) notes that the barrier of knowledge sharing could be eased by collaborative and advanced technology. Concerning collaboration, (Connolly, Gould, Baxter & Hainey, 2012) suggested using Web 2.0 technologies for vocational training environment, where learning management systems could be further utilized. Preference is given to interactive features of Web 2.0 technologies. On top of that, (Sampson & Zervas, 2012) illustrated using mobile platform is considered to be more efficient than web-based alone, in terms of user accessibility.

Socially oriented principles should be followed. Examples can be found in enterprise search tools that intelligent search reduces deployment time, improving knowledge sharing efficiency (Ghani, Djordjevic & Cumby, 2011). Multimedia content search in addition to traditional textual one's channels users to designated resources more effectively, matching with the principle that both tangible and intangible resources are directed towards the right projects and people.

Roknuzzaman and Umemoto (2013) in their study, said that knowledge management involves much more than the use of technology, it relies on the use of IT as an enabler. Consequently, while knowledge workers do not need formal qualifications or deep expertise in IT, they do need to have sufficient understanding and skill, that is, a basic level of literacy to be able to use these enablers effectively for their own purposes. In a study conducted by (Harper, 2013) identifying the key skills and understandings required for

KM, an understanding and facility in technology emerged as crucial, despite the fact that other factors were afforded primacy over the technology. Information professionals require a basic understanding of computing and network architectures in order to interact with IT staff and managers such as managing the Intranet. The high value of techno-literacy for knowledge management practitioners has also been mentioned in other sources. It is encouraging to note that despite any perceived deficiencies amongst professionals as potential knowledge managers, they are rarely regarded as being weak in the human factors. However, since the pace of technology development continues unabated, professionals need to keep abreast of broad trends. This is because the knowledge manager should be able to serve as a facilitator between technology and people; between users and corporate intranets. The nature of a librarian's work is at advantage in this regard because it is indeed a blend of people and technology. Reporting on the 1999 ALA Congress on Professional Education, Prentice highlighted values that need to be acknowledged in courses: Ability to deal with IT; Communication skills; Management skills and the ability to deal with change. In fact, the range of required skills for people in the knowledge age would be more extensive and more complex in order to account for the pervasive nature of knowledge.

Walkley and Hall (2015) has suggested that at least four levels should be recognized in developing the competency (education and training) structure for employees in a KM-specific environment, from entry-level "foundation skills" to job-specific "local or unique competencies" to "global" competencies "present in all employees within a particular function or organization" to the most developed level, "universal competencies" common to all of the workers in a firm.

2.8.1 Adoption of technology in an organization to enhance KM

Depending on organizational culture, application of knowledge sharing tools may vary, resulting in benefits ranging from technology enhancement of existing platform to more unbounded collaboration (Brooks & Rowley, 2013). Web 2.0 is in a position bonding individual in an organization more closely, which allows higher degree of knowledge sharing that everyone in it can contribute and add value to the system.

The challenge of the individual versus the team in knowledge sharing is created by the very culture and context in which it resides. According to Mannie and Adendorff (2015), the major challenge of knowledge management is in the process of capture and integration. In order to be successful, an organization must first concentrate on changing the mindset of its followers. The goal in using knowledge management is to aid them in the performance of their duties. Knowledge management challenges that were once focused on financial aspects are now facing the challenges of measuring human and intellectual value too. It can assist by human language technology. The technology can include but is not limited to "retrieval, extraction, summarization, and presentation/generation". Not only is this technology meant to enhance access, but also to enhance interactions between people by improving knowledge awareness.

2.9 Critique on Knowledge Management

One of the greatest challenges of knowledge management is the assurance that knowledge will prevail by ensuring that knowledge workers are given "voice" sometimes referred to as shared leadership. (Jafari et al., 2013) defines knowledge workers "as people who know

more about what they are doing than their managers do while many knowledge workers have years of education and experience in training for their positions, they often have little training in how to effectively influence upper management” (Jafari, et al., 2013).

Jafari et al., (2013) who quoted Peter Drucker provides an explanation for this lack of influence when he says, “The great majority of people tend to focus downward. They are occupied with efforts rather than results”. In reality this concept might be taken further – suggesting that the answer lies not in focusing on efforts *or* results, but rather focusing on shared purpose. The responsibility for having “voice” within an organization does not necessarily rest with a perception of permission from upper management but with courageous followership. Illeris (2016), states that shared leadership has its limits when given a top-down approach. Instead, he purports that both the follower and leader share a common purpose and that the “loyalty of each is to the purpose and to helping each other stay true to that purpose”– something that can only be done holistically, by giving knowledge workers “voice” within the organization.

Knowledge is power. Too often people see knowledge hoarding as a way to personal power. However, by the same argument, knowledge sharing is empowerment. People need to move from Building empires to building new relationships. The Individual work bias of the past (“I have to solve this all by myself”) is shifting to teamwork and a collaborative bias. Local focus is often a perceived barrier to knowledge management, which can be converted to a network focus by the establishment of communities of practice. “Not invented here” can be a real barrier to the import of knowledge, if the relationship of trust is missing. Trust will grow with face-to-face knowledge sharing, and few people resist a request for help. People are often afraid that Errors will be penalized, and are therefore unwilling to share what they

may see as failures. That is why techniques such as Retrospect accentuate learning from success. People feel they are Not paid to share. Knowledge management is often seen as not part of normal business. Preserving the value of our knowledge assets is not seen as core business. People feel they have no time to share. This is a very real barrier; most people are 'maxed out' at the moment. So, we need to make knowledge sharing as quick and efficient as we can, because really, we have no time not to share.

Durst and Runar Edvardsson (2012), brings out their view, that after its explosive growth phase in the 1990s, use of the knowledge management literature in the business world has grown steadily and continues to do so. The examination of existing definitions and classifications of knowledge management shows a wide spectrum of viewpoints that range from the more mechanistic, that is knowledge viewed as asset, to more socially oriented.

However, the process of how knowledge management affects organizational performance remains unclear. Little guidance is provided on how knowledge assets are identified, nurtured, enriched, revitalized, bundled, converted and integrated into strategic and distinctive capabilities and how these idiosyncratic resources which are socially complex, causally ambiguous and path dependent are in turn used to generate superior performance and impact on business performance.

Part of such limitations stems from the proliferation of knowledge management initiatives that are primarily viewed as information systems projects. However, as Walker (2016) points out productive knowledge is typically embodied and competitive advantage through redeploying competences and capabilities in different economic settings cannot be accomplished by simply handling information.

There is no doubt that knowledge management is now at the crossroads and needs to look to new research and practice horizons and advance new thinking in relation to the essence of knowledge and the drivers of performance and growth. Such a new “blood” is needed to prevent that knowledge management becomes just a buzzword or a sales pitch Mills and Smith (2011) and to deny the questioning of whether knowledge management can survive into the future.

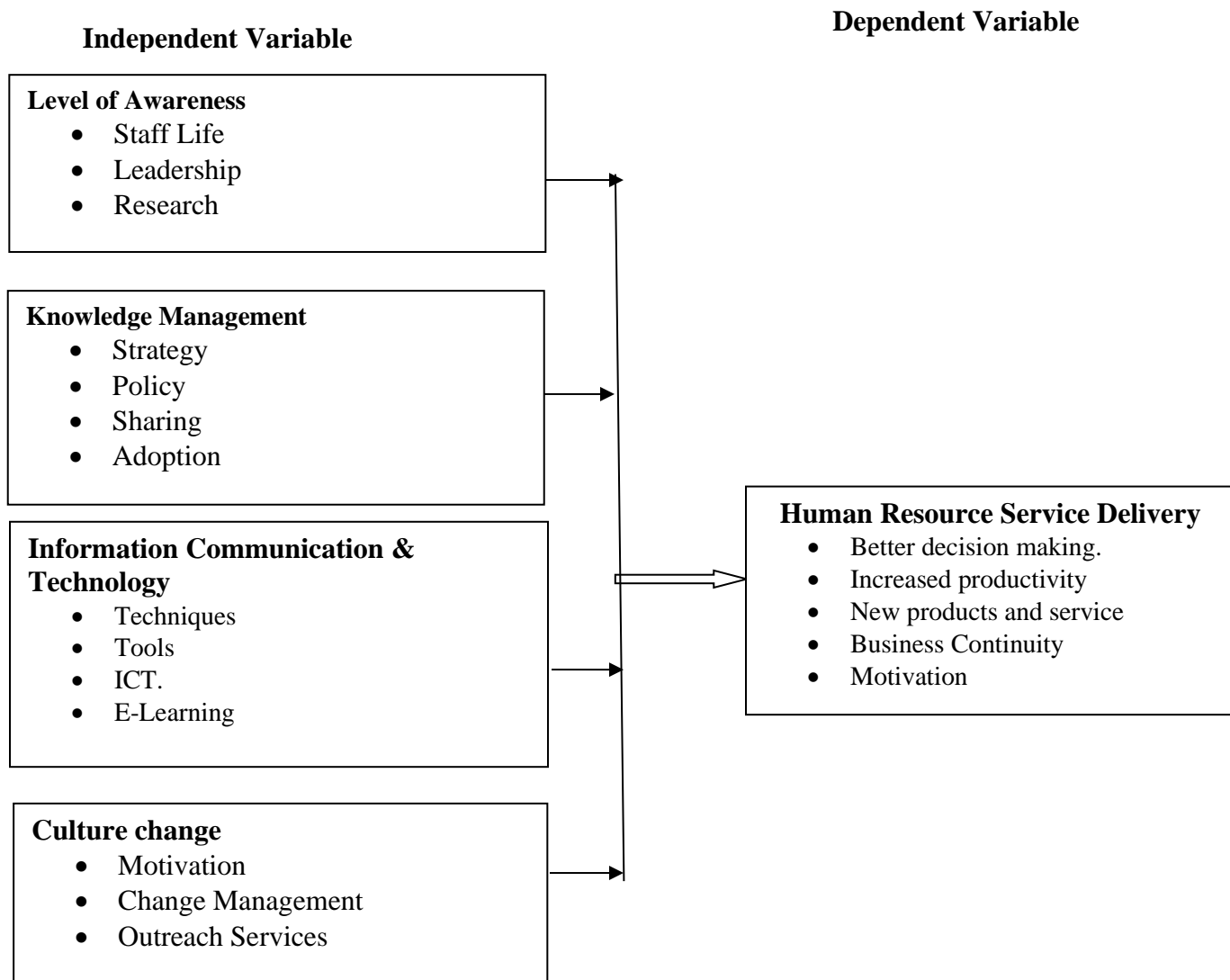
Similarly, Kamoche et al., (2011) recognizes the importance of organizational context as a primarily determinant that influences how knowledge management affects organizational performance. In his study, the context reflects the organization roles and structure as well as the socio-cultural processes such as culture, power relations, norms, rewards systems, and management philosophy. In the same perspective, Lindebaum and Jordan (2014) consider that under a socio-technical perspective, knowledge management activities are seen as being complex combinations of technology and organizational infrastructure, corporate culture, knowledge and people. Martín-de Castro (2015) argue that alternative views to knowledge management for innovation that are more contingent and contextualized need to be explored. Geisler and Wickramasinghe (2015) developed a model showing the relationship between knowledge management and creativity and stressing the moderating effect of entrepreneurial mindset to seek, identify, pursue, and exploit opportunities. According to Hislop, Bosua and Helms (2018), knowledge management initiatives can decrease turnover rates and support business performance, if they are coupled with HR policies that focus on employee sentiment, satisfaction, motivation, and commitment. Davcik (2014) recognizes as potential field for developing knowledge capabilities individual and organizational skills and behaviors. Chigada (2014)

also considers the source of a firm's competitive advantage as being strictly related to its commercial knowledge or "an explicitly developed and managed network of imperatives, patterns, rules and scripts, embodied in aspects of the firm, and distributed throughout the firm, that creates marketplace performances".

Asrar-ul-Haq and Anwar (2016) suggest investigation and inquiry of the centrality of people behaviour in the dynamics and success of knowledge management initiatives. This requires that new conceptual dimensions need to be added to the paraphernalia of models, approaches and tools already characterizing the knowledge management discipline. In particular attention has to be paid to those soft aspects such as experiences, emotions, energy, and ethics that affect people behaviour. The knowledge management discipline has to shed light on the role and relevance of these knowledge-based drivers for the innovation and sustainable development of twenty first century organizations.

2.10 Conceptual Framework

The researcher came up with a conceptual framework showing the relationships between variables in the study. The study has two variables which are knowledge management, which is an independent variable and effective human resource service delivery, which is dependent variable in the study. Also, a critical review of studies related to the area of study is analyzed and the findings compared with the results of the current study.



Source: Author (2020)
Figure 2.2: Conceptual Framework

The conceptual framework shows the Knowledge Management and its relationship with human resource service delivery. Knowledge management includes a set of practices or activities that are initializing in organization in order to identify, acquire, create, storage disseminate and apply knowledge. According to Ciarniene and Stankeviciute (2015), Knowledge management activities are defined as the activities initiated or actively supported by organization in order to ensure efficient development and use of organizational knowledge.

Knowledge identification is the determination of all critical knowledge that is possessed by employees and their groups in the organization. This is as per the employee area of specialization.

Knowledge acquisition involves the renewal of employees' knowledge by attaining new information, knowledge and experience. Employees are able to acquire knowledge through trainings in conferences and workshops. They could also learn from more experienced employee.

Knowledge creation is the creation of new knowledge that is materialized in new products, services, processes and concepts. The organization is able to create new knowledge by ensuring that employees attend trainings, this is so by having a training policy in place such that when an important skill is identified, capable employees will be taken for training.

Valuable knowledge storage deals with the structuring and storing knowledge in the ways that make it more formalized and accessible. Though knowledge is possessed by employees, the organization should be able to store what has been captured from the employees in form of software data. This will be done by storing reports, processes and

policies created by employees in organizations data bank, may be through computers and knowledge mapping made available as to where the knowledge is stored. This will make knowledge easily accessible by the users.

Knowledge dissemination is the diffusion of knowledge, experience and valuable information between individuals and their groups in organization. Knowledge possessed in the organization must be shared between employees, every knowledge stored should be accessible to employees when there is need, so as to avoid reinventing what has been done by other people earlier. This will be possible when there is knowledge mapping and also when the management would provide a way such as encouraging mentoring and teamwork between employees. Knowledge management officers are able to assist human resource trace certain necessary skills and information for the purpose of better performance.

Knowledge application is the productive use of organizational knowledge in the institution through solving the problems making the decisions, designing new products and services for the benefit of the organization.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction to Chapter Three

This chapter discusses the research methodology that was applied in carrying out the study. It covers the research approach, research method, sampling techniques, target population, sample size, data generation, data analysis, validity and reliability and ethical considerations.

The study was quantitative research, which involved a literature search and questionnaires. A pre-test to refine the research instrument was carried out before it was administered. Both the primary and secondary sources of data collection were utilized.

3.2 Research Design

The study adopted descriptive survey design. Descriptive survey design is all about describing people who take part in the study. In survey method research, participants answer questions administered through interviews or questionnaires. After participants answer the questions, researchers describe the responses given. Descriptive survey design was adopted to determine whether using knowledge management is an effective method for service delivery through asking questions to the carefully selected sample. This is because it makes use of both qualitative and quantitative data to describe the state of affairs as they exist in the field. This design is simple and easy to carry out, yet it can yield suitable information desirable by the study (Mugenda & Mugenda, 2003). Descriptive studies are more than mere data collection; they involve measurement, classification, analysis, comparison and interpretation of data (Kothari, 2009). Descriptive survey design was

useful in the collection of original data from a population which is too large to observe directly. In this case data was collected from management officers, teaching staff, technical staff (with trained skills) and support staff. The descriptive analysis approach was chosen for the study because it sought to gain some insight into a phenomenon as a means of providing basic information in the area of study.

3.3 Research Approach

This study will adopt postpositivist research approach that argue that theories, hypotheses, background knowledge and values of the researcher can influence what is observed (Ryan, 2006). Postpositivist pursue objectivity by recognizing the possible effects of biases. While positivists emphasize quantitative methods, postpositivist consider both quantitative and qualitative methods to be valid approaches. Postpositivist believe that human knowledge is based not on a priori assessments from an objective individual, but rather upon human conjectures (Miller & Fredericks, 1991). As human knowledge is thus unavoidably conjectural, the assertion of these conjectures are warranted, or more specifically, justified by a set of warrants, which can be modified or withdrawn in the light of further investigation.

In this study, knowledge management applied in institutions of higher learning was used to understand their effects on service delivery in Masinde Muliro University of Science and Technology, Kenya. The research approach was chosen because it allows the use of questionnaire to collect data during survey study.

3.4 Study Area

The study was conducted at Masinde Muliro University of Science and Technology, which is higher education learning centre offering Diplomas and Degrees in various fields. The Masinde Muliro University of Science and Technology was chosen as study area due to poor service delivery manifested by poor management practices, increased competition for students, reduced revenue, a destabilized work environment, increased insecurity and exposure to risk. The centre is located in Kakamega County. Kakamega County is in the Western province of Kenya. Kakamega borders Bungoma to the North, Trans Nzoia to the North East, Uasin Gishu and Nandi Counties to the East, Vihiga to the South, Siaya to the South West and Busia to the West.

In the current development phase, the University intends to build on the gains made from the previous phase, learn from the challenges encountered and embark on a more focused, efficient and effective utilization of resources towards the achievement of its vision. The University is run by Council as the supreme organ, with the day to day activities being managed by Senate under the chairmanship of the Vice Chancellor. The academic programmes are approved and administered by the Senate.

Currently, the University has three faculties, namely: Faculty of Science, Faculty of Engineering and Faculty of Education and Social Sciences (FESS) offering undergraduate and graduate degree programmes. In addition to the three faculties, the University has also established the following Centres, schools and institutes: Centre for Disaster Management and Humanitarian Assistance (CDHMA), School of Open Learning and Continuing Education (SOLACE), School of Graduate Studies, School of Health sciences, Science and Technology Park and Industrial Linkages (STPIL) and the Institute of Sugar Technology.

3.5 Target Population

Target population refers to the individuals or elements that the researcher intends to use in the study so as to obtain primary data Etikan Musa and Alkassim (2016). The study population was derived from staff at Masinde Muliro University of Science and Technology. The total target population was 298. From the target population the researcher chose administrative staff in the following departments; Deputy Vice Chancellors, Registrars, Quality Management System department (QMS), Library, Procurement, Finance, Audit, Health Services, Human Resource Registry Section, Deans office and their departments. Teaching staff, Technical staff (with trained skills) and Support staff. The researcher selected the departments because there is need for human resource knowledge management in these sections each and every single day. The target population is presented in Table 3.1.

Table 3.1 Study Population

Department	Target population
Administration	190
Procurement	12
Finance	42
Library	34
Quality Management	10
Management	10
Total	298

(Source: MMUST Administration, 2020)

3.6 Sample Size

The study used Yamane formula ($n=N/1+Ne^2$), to calculate the sample size.

Where;

n= the sample size

N = the size of population

e = the error of 5 percent

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{298}{1 + 0.05^2 * 298}$$

$$n = \frac{298}{1.745}$$

$$= 171$$

Therefore, the number the sample size for this study was 171 respondents as presented in Table 3.2.

Table 3.2 Sample Size

Department	Sample Size
Administration	109
Procurement	7
Finance	24
Library	20
Quality Management	6
Management	6
Total	171

3.7 Sampling Technique

Sampling is the process of selecting units from a population of interest so that by studying the sample, we may fairly generalise results back to the population from which they were chosen (Mwituria, 2012). It then becomes imperative that selecting the manner of obtaining data and from whom the data will be acquired be done with sound judgment, especially since no amount of analysis can make up for improperly collected data. The study adopted stratified sampling technique in putting the study population into six strata comprising of administration, procurement, finance, library, quality management and

management. Using the proportionate sampling the study distributed the samples size among the six strata. Simple random sampling was used to select respondents from each stratum because all of them had an equal chance of being chosen to participate in the study.

3.8 Data Collection Instruments

Data was collected using a questionnaire which had both open and closed-ended questions. The closed-ended questions confined the respondents to give their views strictly on the question asked while responses to the open-ended questions enabled the researcher to get a greater insight into the decisions and thinking of the respondents on the same. According to Kothari (2017), a good questionnaire must enable the respondents to provide answers to the research questions as validly, objectively and as economically as possible. Questionnaires were used since the study was concerned with variables that could not be directly observed such as views, opinions, perceptions and feelings of the respondents (Silverman, 2016). The questionnaire is most frequently a very concise, pre-planned set of questions designed to yield specific information to meet a particular need for research information about a pertinent topic. The research information is attained from respondents normally from a related interest area. Questionnaires were used because they are cheap and easier to administer and analyse. They also have the advantage of covering a large number of respondents easily and faster.

Questionnaires used in this study had four Sections (Appendix II): -

Section A – This section sought employees' general information that included the department they were attached to, gender, professional qualification and numbers of years they have served in the institution.

Section B – This section sought respondents' views on level of awareness on service delivery in institutions of higher learning: What they understood by the term Knowledge management, the most essential skills, the knowledge creation processes they were aware of and what motivated the institution to adopt knowledge management.

Section C – This section sought respondents' views on effect of knowledge management system on service delivery in institution of higher learning.

Section D – This section sought respondents' views on effect of culture change on service delivery in institution of higher learning.

Section E – This section sought respondents' views on effect of information and communication technology on service delivery in institutions of higher learning.

Section F – This section sought respondents' views on service delivery in institutions of higher learning.

3.9 Pilot Testing

A pilot was conducted before the main study in order to ascertain the reliability and validity of research instruments. The pilot study is a small-scale research project that collects data from respondent similar to those used in the full study. Pilot study is undertaken to ensure increased response rate, establish accuracy and appropriateness of data collection instruments, and detect any weakness in the data collection instrument (Jankoicz, 2005; Kombo & Tromp, 2009). The purpose of the pilot study in this research was to identify any probable weaknesses in the research instrument by way of assessing both its validity and reliability. The piloting of the instrument enabled the researcher to know how well the respondents were able to comprehend the questions therein. Any errors detected at this

stage was addressed accordingly prior to the administration of the research instruments in collection of data in the main study. According to Ondiek (2008) at least 10% of the sample size should be used for the purpose of pilot study. This study therefore used at least 17 respondents for the purpose of pilot study. The pilot was carried out in Kibabii University with similar structures and participants with Masinde Muliro University of Science and Technology. The scope of the pilot was necessitated by the fact that the participants are not supposed to take part in the main study.

3.9.1 Validity of the Research Instruments

Validity refers to the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study, (Bryman 2001). Validity therefore, has to do with how accurately the data obtained in the study represents the variables of the study. If such data is a true reflection of the variables, then inferences based on such data were accurate and meaningful. The instruments were rated in terms of how effective it is in sampling the significant aspects of the purpose of the study. Best and Kahn (1989) suggest that the validity of the instrument is asking the right questions framed in the least ambiguous way.

The study used content validity. The content validity of the instrument was determined by the researcher discussing the items in the instrument with the supervisors, colleagues and other lecturers in the institution. The advice that were given by these people assisted the researcher to improve the validity of the research instruments and the necessary adjustments made. For the research instrument to be considered valid the content selected and included in the questionnaire must also be relevant to the variable being investigated

(Kerlinger, 1973). The supervisor was expected to rate the instruments in terms of how effectively they sample significant aspects of the purpose of the study and thus ensured that significant information was elicited. This gave direction of performance in the actual study.

3.9.2 Reliability of Research Instruments

Reliability is the ability of that test to consistently yield the same results when repeated measurements are taken of the same individual under the same conditions (Koul ,1993), basically, reliability is in principle, another researcher, or the same researcher on another occasion, should be able to replicate the original piece of research and achieve comparable concerned with consistency in the production of the results and refers to the requirement that, at least evidence or results, with similar or same study population. This study tested internal consistency reliability. Sijtsma (2009) defined internal consistency as the extent to which all of the items of a test measure the same construct, that is, the general factor saturation.

The reliability of the instrument was tested through use of Crobanch Alpha value. That is, to establish the reliability of the questionnaire. Cronbach alpha coefficients were reported as an indication of the construct reliability of the measuring instruments. Values range from 0 to 1, with higher values indicating greater reliability. Alpha coefficient of; below 0.60 is unacceptable, between .60 and .65 undesirable, between .65 and .70 minimally acceptable, between .70 and .80 respectable between .80 and .90 very good, > 0.90 is considered perfect. However, if Crobanch Co-efficient alpha of $\alpha = 0.70$ is obtained then it indicated that the research instruments were reliable and therefore can be adopted for data collection.

3.10 Data Collection Procedure

The researcher was allowed to start research by the School of Human Resource Development, Moi University. She later sought permit from the Ministry of Higher Education, Science and Technology through the National Commission for Science, Technology and Innovation (NACOSTI). It was a requirement that the researcher gets approval from Masinde Muliro University of Science and Technology and from Kakamega County Director of Education. NACOSTI facilitated the researcher with a research permit which allowed her to start data collection. Questionnaires were used as the main instrument of data collection.

The questionnaires were administered on the basis of 'drop and pick immediately' or 'pick later' depending on the availability of the respondents which ensured high rate of returns. The researcher administered the questionnaires in person since there was need for more explanation to the respondents to ensure understanding of the subject matter in the research.

3.11 Data Analysis and Presentation

The collected data cleaning, coded, managed and analyzed with aid of SPSS software version 23. Data analysis was done using descriptive and inferential statistics. Descriptively data were analyzed using frequency, percentages, means and standard deviations. Inferentially data were analysed using correlation and multiple regression models. The regression model that were used to test the hypothesis is shown below:

$$y = \alpha + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \varepsilon_i \dots \dots \dots \text{Equation 3.3}$$

y represent service delivery in institutions of higher learning

α represent constant.

$\beta_1, \beta_2, \beta_3, \beta_4$ represent the slope which represents the degree in which service delivery changes as the independent variable change by one-unit variables.

x_1 represent level of awareness

x_2 represent knowledge management system

x_3 represent culture change

x_4 represent information and communication technology

ε represent error term

analyzed data were presented in form of frequency tables.

3.12 Assumptions of the Multiple Linear Regression Model

The following are the assumptions that the data must meet in order to conduct a linear regression analysis. Normality: It is assumed that the residuals of variables are normally distributed. That is, the errors in the prediction of value Y (the dependent variable) are distributed in a way that approaches the normal curve. The normality of distribution was also checked by use of Kolmogorov-Smirnov test. Linearity: linear regression needs the relationship between the independent and dependent variables to be linear. It is also important to check for outliers since linear regression is sensitive to outlier effects. The linearity assumption can best be tested with scatter plots

Multicollinearity: There should be no perfect linear relationship between two or more of the predictors. So, the predictor variables should not correlate too highly this were tested using variance inflation factor (VIF) and tolerance. According to Besley, Kuh and Roy (1980) and Green (2000), identification of multicollinearity in a model is important and is tested by examining the tolerance and the variance inflation factor (VIF) diagnostic factors.

The variance inflation factor (VIF) measures the impact of multicollinearity among the variables in a regression model. Green (2000) concluded that even though there is no formal criterion for determining the bottom line of the tolerance value or VIF, tolerance values that are less than 0.1 and VIF greater than 10 roughly indicates significant multicollinearity; A conclusion supported by Tavakol and Dennick (2011) and Gujarat (2009). This study carried out a multicollinearity test among the variables of the study.

Serial correlation/autocorrelation Gujarat (2009) and Cameron (2005), both cited in Keraro (2014) defined autocorrelation as the correlation between members of a series of observations ordered in time or space. A Durbin-Watson test were used to detect the presence of autocorrelation between the variables of this study. According to Gujarat (2009), the Durbin- Watson statistic ranges in value between 0 to 4. A value near 2 indicates non-autocorrelation; a value closer to 0 indicates positive correlation while a value closer to 4 indicates negative correlation. This was carried out auto-correlation test among the variables of the study.

3.13 Ethical Considerations

Ethics in research are moral principles, norms or standards of behaviour that guide moral choices about our behaviour and our relationship with others during the research (Cooper and Schindler, 2011). The main goal of ethics in research is to safe guard against causing mental or physical harm to participants and that makes data integrity a first priority should be valued highly. Permission to carry out the study was sought from relevant authorities and from the participants who participated in the study. The nature and the purpose of the research was explained to the respondents by the researcher. The researcher respected the individuals' rights to safe guard their personal integrity. During the course of data

collection, the respondents were assured of anonymity, confidentiality and they were assured of their freedom to participate in the study as it was voluntary for them to give information. No names or personal identification numbers reflected on the questionnaires except the numbering on the questionnaires, which was for the purpose of ascertaining that the required sample was reached by the researcher.

3.14 Chapter Summary

The Chapter presented a discussion on methodology that guided the preparation of data instruments, data collection and data analysis. As mentioned, the appropriate research design for his study was case study. Several sub-topics were presented that included philosophical paradigm, research method, sampling, data generation data analysis, validity and reliability and ethical considerations.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATIONS AND INTEPRETATIONS

4.1 Introduction

This chapter presents the study findings then goes a step ahead to interpret and discuss them. It provides the inferential and descriptive statistics that was utilized to present the findings. The main objective of this study was to investigate effect of knowledge management on service delivery in institutions of higher learning in Masinde Muliro University of Science and Technology, Kenya.

4.2 Response Rate

To establish the total number of the respondents who actively participated in the study by answering and submitting the questionnaires for data analysis, an analysis of the response rate was carried out and presented in Table 4.1.

Table 4.1 Response Rate

Response rate	Frequency	Percentage
Response	143	83.6%
Non-Response	28	16.4%
Total	171	100%

The Table 4.1 indicated that out of 171 questionnaires distributed to the respondents 143 were dully filled and return representing a response rate of 83.6%. The non- response rate comprised of 28 respondents representing 16.4% of the total sample size. The response rate of 83.6% gave the study a high degree of representativeness that could be relied upon to generalize the respondents' views on effect of knowledge management on service delivery in institutions of higher learning in Masinde Muliro University of Science and Technology,

Kenya. This was in tandem with Cooper & Schindler (2003) who argued that response rate exceeding 30% of the total sample size provides enough data that can be used to generalize the characteristics of a study problem as expressed by the opinions of few respondents in the target population. This response rate is considered very good to enable the determination of the phenomenon that exist as it is in line with Mugenda and Mugenda (2008) assertion.

4.3 Pilot Study Results

The study conducted pilot study in order to ascertain for reliability and validity of the research instrument. The pilot study results are presented in Table 4.2.

Table 4.2 Reliability Test Results

Constructs	Test Items	Cronbach's Alpha	Deduction
Level of awareness	7	0.7451	Reliable
Knowledge management system	5	0.7561	Reliable
Culture change	5	0.7441	Reliable
Information and communication technology	5	0.7208	Reliable
Service delivery	5	0.7538	Reliable
Average		0.744	

Table 4.2 presented the results pilot results on reliability where Cronbach's Alpha coefficient was used. The Cronbach's Alpha value for service delivery was 0.7538, Cronbach's Alpha value for level of awareness was 0.7451, Cronbach's Alpha value for knowledge management system was 0.7561, Cronbach's Alpha value for culture change was 0.7441 and Cronbach's Alpha value for information and communication technology was 0.7208. This implied that all the study variables had a Cronbach's alpha coefficient 0.7 hence reliable. The Cronbach's alpha ranges between 0 and 1. The closer Cronbach's alpha

coefficient is to 1.0 the greater the internal consistency of the items in the scale. If the value of alpha is >0.9 = Excellent, >0.8 = Good, >0.7 = Acceptable, >0.6 = Questionable, >0.5 = Poor, and <0.5 = Unacceptable. The results of the piloted research instruments enabled the researcher to determine the consistency of responses made by respondents and adjust the items accordingly by revising the document.

4.4 Respondents General Information

This section provides the analysis of demographic information regarding research participants and was necessary for the determination of whether the individuals in a particular study were a representative sample of the target population and testing appropriateness of the respondent in answering the questions for generalization purposes. These include; gender, academic level, department, current occupation and the length they have been in the current capacity, level of education and their current station.

4.4.1 Gender of the Respondents

The gender of the respondents was first sought since the findings would assist the study categorize respondents based on gender and the findings are show in Table 4.3

Table 4.3 Gender of the Respondents

Gender	Frequency	Percent
Male	104	72.7
Female	39	27.3
Total	143	100

The findings in Table 4.3 shows that majority of the respondents 104(72.7%) were male while minority 39(27.3%) were female. This implied that majority of the subjects who participate in the study were male compared to their female counterparts. The study finding

concurred with Unhalter (2005) results which noted that gender inequality is deeply rooted in the customs, decision-making procedures, unwritten cultures, power embodiment manners and resource sharing of organizations. This is attributed to culture dominance which is male oriented on issues of leadership so that most employees in the organization being male, leaving a small fraction to the female. Moreover, female employees fear ascending to power due to challenges that come with responsibilities and commitment ties attached to family responsibilities.

4.4.2 Level of Education

The respondents were asked to indicate their academic level and the results were as shown in Table 4.4.

Table 4.4 Level of Education

Academic level	Frequency	Percent
Post graduate	38	26.6
Graduate	63	44.1
Post-secondary	42	29.4
Total	143	100

Table 4.4 shows that 38(26.6%) of the respondents had post-graduate education level, 63(44.1%) had a graduate level of education while 42(29.4%) had a post-Secondary education. This implied that the subjects had sufficient knowledge to understand the topic under the study. The respondents were also in a position to fill the questionnaires indicating a significant majority being graduates hence the respondents were learned enough to understand and answer the questions with the regard to the topic of the study. This also indicated that knowledge management lies on the hands of those who have some education.

4.4.3 Department of Respondents

The study also sought to know the department in which the respondents were stationed in.

The results were as shown in Table 4.5.

Table 4.5 Department of Respondents

Department	Frequency	Percent
Administration	93	65
Procurement	5	3
Finance	18	13
Library	17	12
Quality Management	5	3
Management	5	3
Total	143	100

Table 4.5 revealed that 93(65%) of the respondents were from administration department, 5(3.0%) were from procurement department, 18(13%) were from finance department, 17(12%) were from Library section, 5(3%) were from the quality assurance department and 5(3%) were from the top management. From the results, all the sampled departments participated in the study. The departments were sampled since institutions main knowledge resides in officers in these sampled departments. From this data it was evident that administrative staff hold most of the institution's knowledge.

4.4.4 Current Occupation

The study further sought to establish the current occupation of the respondents. The results were presented in Table 4.6.

Table 4.6 Current Occupation of Respondents

Occupation	Frequency	Percent
Clerk/Office managers	32	22.4
Office administrators	70	49
Cashiers	11	7.7
Procurement assistants	9	6.3
Library assistants	16	11.2
Quality assurance assistants	5	3.5
Total	143	100

Table 4.6 shows that, 70(49%) of the respondents were office administrators (in all cadres), 32(22.4%) were clerks, 11(7.7%) were cashiers, 9(6.3%) were procurement assistants, 16(11.2%) were library assistants while the remaining 5(3.5%) were quality assurance assistants. Majority of the respondents were in the cadre of office administrators. It was important for the researcher to identify which office cadre mostly handles knowledge management.

4.4.5 Length of Stay in the Current Occupation

Lastly on demographic characteristics of the respondents, the study sought to find out how long the respondents have been in the current station. The results are shown in Table 4.7.

Table 4.7 Length of Service in the Current Station

Length of stay	Frequency	Percent
Less than 12 months	21	14.7
12 months to 24 months	26	18.2
25 months to 36 months	59	41.3
37 months to 48 months	26	18.2
49 and above	11	7.7
Total	143	100

Table 4.7 shows that 21(14.7%) of the respondents have been in the current station for less than 12 months, 26(18.2%) have been there between 1 to 2 years, 59(41.3%) have been in the current station between 25 months to 36 months, 26(18.2%) have been there between 37 months to 48 months while the remaining 11(7.7%) have been in the current station for 49 months and . The results show that majority of the respondents have been working for at least two years. It was important for the researcher to be aware that the respondents are actually part of the staff that holds institutions knowledge having worked for more than two years.

4.5 Descriptive Statistics Results

The study sought to investigate effect of knowledge management on service delivery in institutions of higher learning in Masinde Muliro University of Science and Technology, Kenya. This section represents the descriptive statistics in relation to the study namely; level of awareness, knowledge management system, and culture change, information and communication technology and the dependent variable which is service delivery. To achieve this, a five-point likert scale was used where; 1=Strongly Disagreed, 2=Disagreed, 3=Undecided, 4=Agreed, 5=Strongly Agreed.

4.5.1 Level of Awareness

The study first sought to establish how the level of awareness on service delivery in institutions of higher learning. Table 4.8 presents the study results.

Table 4.8 Level of Awareness

Statements		SA	A	UD	D	SD	Mean	Std.Dev	
KM is a process of creation, assimilation, retention and utilization of knowledge	F	17	98	8	9	11	3.688	1.04	
	%	11.9	68.5	5.6	6.3	7.7			
IT is a Key Part of KM	F	17	93	8	12	13	3.605	1.11	
	%	11.9	65	5.6	8.4	9.1			
Knowledge Management is all about the Utilization of ICT	F	21	73	17	22	10	3.495	1.143	
	%	14.7	51	11.9	15.4	6.9			
KM is a Type of Process-improvement Method	F	8	83	12	23	17	3.280	1.175	
	%	5.6	58	8.4	16.1	11.9			
KM is a training programme that all managers must participate	F	25	96	1	8	13	3.765	1.106	
	%	17.5	67.1	0.6	5.6	9.1			
Knowledge management is the management of information, knowledge and experience accessible to a company	F	14	105	4	12	8	3.715	0.975	
	%	9.8	73.4	2.8	8.4	5.6			
KM is a Management Trend	F	17	90	12	14	10	3.610	1.061	
	%	11.9	62.9	8.4	9.8	6.9			
Valid N		143						3.594	

Table 4.8 shows that 17(11.9%) of the respondents strongly agreed, 98(68.5%) agreed, 8(5.6%) undecided, 9(6.3%) disagreed and 11(7.7%) strongly disagreed with the statement that KM is a process of creation, assimilation, retention and utilization of knowledge. Further, the study findings showed in terms of means and standard deviation that the respondents agreed that KM is a process of creation, assimilation, retention and utilization of knowledge (mean=3.688, standard deviation=1.04). This implied that higher education institution has adopted knowledge management by identifying a number of existing facilities, systems or projects. Facilities such as libraries, and electronic collections of learning materials, networks for e-mail communication, and management information systems which provide data on the student profile all contribute to the success of

implementation of knowledge management. The findings agreed with Stefik (2014) who found out that knowledge awareness can be better applied in the higher education institution by creating a flexible and innovative relationship between work and education, helping students to match their talents more closely to their current workplace demands, contributing to the adaptation and assimilation of new knowledge with existing ones as well as contributing to the re-connection of learning with experience.

Also, 17(11.9%) of the respondents strongly agreed, 93(65%) agreed, 8(5.6%) undecided, 12(8.4%) disagreed and 13(9.1%) strongly disagreed with the statement that IT is a key part of KM. Further, the study findings showed in terms of means and standard deviation that the respondents agreed that IT is a key part of KM (mean=3.605, standard deviation=1.11). this implied that IT ensures that knowledge is recorded and made acceptable through means such as the intranet. The findings concur with Husain and Nazim (2015), knowledge management is neither the preserve of the Information Technology (IT) function nor that of Human Resource (HR). The two functions need to work together.

Further, 21(14.7%) of the respondents strongly agreed, 73(51%) agreed, 17(11.9%) undecided, 22(15.4%) disagreed and 10(6.9%) strongly disagreed with the statement that knowledge management is all about the utilization of ICT. Further, the study findings showed in terms of means and standard deviation that the respondents agreed that knowledge management is all about the utilization of ICT (mean=3.495, standard deviation=1.143). This implied that knowledge management involves much more than the use of technology, it relies on the use of ICT as an enabler. The findings agreed with Harper (2013) who identified the key skills and understandings required for KM, an understanding and facility in technology emerged as crucial, despite the fact that other

factors were afforded primacy over the technology. Information professionals require a basic understanding of computing and network architectures in order to interact with ICT staff and managers such as managing the Intranet.

Another, 8(5.6%) of the respondents strongly agreed, 83(58%) agreed, 12(8.4%) undecided, 23(16.1%) disagreed and 17(11.9%) strongly disagreed with the statement that KM is a type of process-improvement method. Further, the study findings showed in terms of means and standard deviation that the respondents were neutral KM is a type of process-improvement method (mean= 3.280, standard deviation=1.175). This implied that majority of respondents were not aware if KM can provide the right service, consistency of performance and dependability. This means that service is performed right at the first time, the company maintains accuracy in billing and keeping records correctly as promised, availing merchandise and error-free sales, transactions and records. The findings concurred with Awuor (2014) who asserts awareness can provide service providers with the ability to perform the promised service dependably and accurately.

Also, 25(17.5%) of the respondents strongly agreed, 96(67.1%) agreed, 1(0.6%) undecided, 8(5.6%) disagreed and 13(9.1%) strongly disagreed with the statement that KM is a training programme that all managers must participate. Further, the study findings showed in terms of means and standard deviation that the respondents agreed that KM is a training programme that all managers must participate (mean= 3.65, standard deviation=1.106). This implied that lack of knowledge and experience of making better evaluations. The findings disagreed with Yildiz (2014) who noted that it is unlikely for staffs who had been at an institution for a longer period to retrospectively rate their expectations in a way not influenced by their experiences.

Further, 14(9.8%) of the respondents strongly agreed, 105(73.4%) agreed, 4(2.8%) undecided, 12(8.4%) disagreed and 8(5.6%) strongly disagreed with the statement that knowledge management is the management of information, knowledge and experience accessible to a company. Further, the study findings showed in terms of means and standard deviation that the respondents agreed that knowledge management is the management of information, knowledge and experience accessible to a company (mean=3.715, standard deviation=0.975). This implied that customers' expectations of what the service provider should offer and how the provider actually performs to meet those expectations. Thus, delivering quality service means ensuring consistency in service delivery performances on daily basis. The findings concur with Orel and Kara (2014) who asserts that service quality is very important to attract and retain customers. This is because customers derive the perceptions of service quality on the levels of satisfaction they experience with the particular business.

Finally, 17(11.9%) of the respondents strongly agreed, 90(62.9%) agreed, 12(8.4%) undecided, 14(9.8%) disagreed and 10(6.9%) strongly disagreed with the statement that KM is a management trend. Further, the study findings showed in terms of means and standard deviation that the respondents agreed that KM is a management trend (mean=3.610, standard deviation=1.061). This implied that KM is very important to attract and retain customers since it is been used in management. The findings concur with Orel and Kara (2014) who asserts that customers derive the perceptions of service quality on the levels of satisfaction they experience with the particular business.

4.5.2 Knowledge Management System

The study sought to establish how the knowledge management system in service delivery in institutions of higher learning. Table 4.9 presents the study results.

Table 4.9 Knowledge Management System

Statements		SA	A	UD	D	SD	Mean	Std.Dev
Our institution has knowledge management systems that stores and retrieves knowledge	F	37	82	7	9	8	3.92	1.03
	%	25.8	57.3	4.9	6.3	5.6		
The knowledge management system has improved collaboration in the institution	F	25	89	8	7	14	3.72	.093
	%	17.5	62.2	5.6	4.9			
The knowledge management system adopted can locates knowledge sources	F	28	89	10	6	10	3.83	1.02
	%	19.6	62.2	6.9	4.2	6.9		
The knowledge management system adopted can mines repositories for hidden knowledge	F	26	94	7	7	9	3.85	0.99
	%	18.2	65,7	4.9	4.9	6.3		
The knowledge management system adopted in my institution, constantly update information	F	21	89	11	7	15	3.66	1.12
	%	14.7	62.2	7.7	4.9	10.5		
Valid		143					3.796	

Table 4.9 shows that 37(25.8%) of the respondents strongly agreed, 82(57.3%) agreed, 7(4.9%) undecided, 9(6.3%) disagreed and 8(5.6%) strongly disagreed with the statement that their institution has knowledge management systems that stores and retrieves knowledge. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that their institution has knowledge management systems that stores and retrieves knowledge (mean=3.92, standard deviation=1.03). This implied that the institution embraces knowledge management becomes process-intensive for the reason that large amount of information is well organized and the tacit knowledge of

staff are also monitored through using the method of knowledge mapping so that the expertise of the staff is fully utilized. The study findings agreed with (Bridgstock, 2009) who asserts that students also get more diverse employment information when the University' career center employed the Knowledge Management because of the fact that employment student advisers with various background expertise give professional advice for the students from different faculties and disciplines

Also, 25(17.5%) of the respondents strongly agreed, 89(62.2%) agreed, 8(5.6%) undecided, 7(4.9%) disagreed and 14(9.8%) strongly disagreed with the statement that the knowledge management system has improved collaboration in the institution. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that the knowledge management system has improved collaboration in the institution (mean= 3.72, standard deviation=0.093). This implied that knowledge management system has improved collaboration by incorporating value of knowledge management, and knowledge management could be created and developed. The findings agreed with Muchaonyerwa and Mutula (2017) who asserts that the only possible with the recognition and support from the top management. Only when top management acknowledges the value of knowledge management, and knowledge management could be created and developed.

Further, 28(19.6%) of the respondents strongly agreed, 89(62.2%) agreed, 10(6.9%) undecided, 6(4.2%) disagreed and 10(6.9%) strongly disagreed with the statement that the knowledge management system adopted can locates knowledge sources. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that the knowledge management system adopted can locates knowledge sources (mean=3.83, standard deviation=1.02). This implied that KM promote order and stability

and are represented by the officially sanctioned structures and constraints established within an organization. The findings agreed with Zimu-Biyela, (2016) argues that shifting network of social and other informal contacts between people within an organization and across its boundaries'. Thus, the organizational infrastructure determines how the employees of the organization are organized in formal and informal networks or teams and how they interact formally and informally.

Also, 26(18%) of the respondents strongly agreed, 94(65%) agreed, 7(4.9%) undecided, 7(4.9%) disagreed and 9(6.3%) strongly disagreed with the statement that the knowledge management system adopted can mines repositories for hidden knowledge. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that the knowledge management system adopted can mines repositories for hidden knowledge (mean=3.85, standard deviation=0.99). This implied that KM increases individual knowledge, to reinforce competencies, and to convert them into a collective knowledge through interactions, dialogues, discussions, exchange of experience and observations. This concurs with Wachira (2013) who asserts that learning is the acquisition of new knowledge by people who are able and willing to apply that knowledge in making decisions or influencing others.

Finally, 21(14.7%) of the respondents strongly agreed, 89(62.2%) agreed, 11(7.7%) undecided, 7(4.9%) disagreed and 15(10.5%) strongly disagreed with the statement that the knowledge management system adopted in my institution, constantly update information. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that knowledge management system adopted in my institution, constantly update information (mean= 3.66, standard deviation=1.12). This implied that

knowledge-based system which keeps all the knowledge like best practices in career advising, records of recruitment talks and student feedback records and analysis. It is regarded as an intranet. The findings concur with Dalkir (2005) who noted that there are two major types of knowledge application that is Knowledge repositories or Electronic Performance Support System (EPSS) and Knowledge reuse. Knowledge repository is an intranet platform that includes all the tacit and explicit knowledge of an organization which is collected from the experience and practices of staff.

4.5.3 Culture Change

The study first sought to establish how the culture changes on service delivery in institutions of higher learning. Table 4.10 presents the study results.

Table 4.10 Culture Change

Statements		SA	A	UD	D	SD	Mean	Std.Dev	
Leadership change has led the institution employees to move in the same direction with a common purpose and goals.	F %	37 25.9	80 55.9	5 3.5	8 5.6	13 9.1	3.84	1.148	
Culture change through knowledge management had led to shared experiences of employees.	F %	41 28.7	87 60.8	5 3.5	5 3.5	5 3.5	4.08	0.881	
Introduction of contract terms has affected job security of staffs hence internal competition is high	F %	22 15.4	102 71.3	3 2.1	7 4.9	9 6.3	3.84	0.959	
The institution has shifts to a culture of management by walking around whereby leadership are aware of operational realities	F %	20 13.9	99 69.2	3 2.1	7 4.9	14 9.8	3.72	0.910	
The institution has adopted the measuring of customer satisfaction for every interaction	F %	22 15.4	92 64.3	12 8.4	9 6.3	8 5.6	3.78	0.974	
Valid		143						3.852	

Table 4.10 shows that 37(25.9%) of the respondents strongly agreed, 80(55.9%) agreed, 5(3.5%) undecided, 8(5.6%) disagreed and 13(9.1%) strongly disagreed with the statement that leadership change has led the institution employees to move in the same direction with a common purpose and goals. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that leadership change has led the institution employees to move in the same direction with a common purpose and goals (mean=3.84, standard deviation=1.148). This implied that people are more likely to trust management if its actions are fair, equitable, consistent and transparent, and if it keeps its word. The findings concur with Armstrong (2016) who noted that gaining commitment is a matter of trying to get everyone to identify with the purpose and values of the organization, which will include processes for developing leadership change.

Also, 41(28.7%) of the respondents strongly agreed, 87(60.8%) agreed, 5(3.5%) undecided, 5(3.5%) disagreed and 5(3.5%) strongly disagreed with the statement that culture change through knowledge management had led to shared experiences of employees. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that culture change through knowledge management had led to shared experiences of employees (mean=4.08, standard deviation=0.881). This implied that organizations should emphasize knowledge-sharing as both an accountability (a key result area) and a competency (an expected mode of behaviour). The findings agreed with Armstrong (2016) who asserts that organizational development activities can focus on team-building in communities with an emphasis on processes of interaction, communication and participation with the aim of developing a sharing culture.

Further, 22(15.4%) of the respondents strongly agreed, 102(71.3%) agreed, 3(2.1%) undecided, 7(4.9%) disagreed and 9(6.3%) strongly disagreed with the statement that introduction of contract terms has affected job security of staffs hence internal competition is high. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that introduction of contract terms has affected job security of staffs hence internal competition is high (mean=3.84, standard deviation=0.959). This implied that human resource department contributes to enhancing knowledge management processes by advising on how to attract and retain people with the required skills and abilities, including those who are likely to exhibit the behaviours needed in a knowledge-sharing culture. This means devising competency frameworks for recruitment and development purposes which include knowledge-sharing as a key behaviour and employing them under contract terms makes them competitive. The findings concur with George (2015) who asserts that retaining knowledge workers is a matter of providing a supportive workplace environment and motivating them.

Also, 22(15.4%) of the respondents strongly agreed, 102(71.3%) agreed, undecided, 3(2.1%) disagreed and 9(6.3%) strongly disagreed with the statement that the institution has shifts to a culture of management by walking around whereby leadership are aware of operational realities and employees are aware of the competitive pressures facing the firm. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that the institution has shifts to a culture of management by walking around whereby leadership are aware of operational realities and employees are aware of the competitive pressures facing the firm (mean=3.84, standard deviation=0.959). This implied that the institution had adopt a culture where the leaders can assess the operations

in the institution and be able to manage the competition by managing knowledge. The study concurred with Raffaella and Glynn (2015) who noted that the shifts in cultural formation and production that result; the battle between lifeworld and system; the dangers of a commodification of culture and the emergence of repressive regimes of power and of a political economy of truth that, among other things, is produced and transmitted under the control of a few great political and economic apparatuses. These are battling that effect both individual and collective futures. Because schools are centrally concerned with such futures, school leaders must understand these issues and the ways in which they are articulated through the school's message systems.

Finally, 20(13.9%) of the respondents strongly agreed, 99(69.2%) agreed, 3(2.1%) undecided, 7(4.9%) disagreed and 14(9.8%) strongly disagreed with the statement that the institution has adopted the measuring of customer satisfaction for every interaction and use this data to give regular performance feedback to staff hence quality service delivery. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that the institution has adopted the measuring of customer satisfaction for every interaction and use this data to give regular performance feedback to staff hence quality service delivery (mean=3.72 , standard deviation=0.910). This implied that when attention is paid to identifying and encouraging groups of people to informally bind together by shared expertise and a passion for joint enterprise. They are seen as important because it is within such groups that much of the organization's tacit knowledge is created and shared enhancing service delivery.

4.5.4 Information and Communication Technology

The study also sought to establish how information and communication technology on service delivery in institutions of higher learning. Table 4.11 presents the study results.

Table 4.11 Information and Communication Technology

Statements		SA	A	UD	D	SD	Mean	Std.Dev
ICT facilitate the institution in sharing of knowledge and information	F	23	88	10	8	14	3.69	1.112
	%	16.1	61.5	6.9	5.6	9.8		
Information Technology strengthens the self-action of employees	F	20	98	6	9	10	3.76	1.01
	%	13.9	68.5	4.2	6.3	6.9		
Information and Communication Technology facilitate the effective use of institutional resources.	F	22	99	4	7	11	3.79	1.02
	%	15.4	69.2	2.8	4.9	7.7		
ICT simplifies the choice and opportunity capture, create, share/transfer and reuse of knowledge process in the institution	F	24	98	5	4	12	3.83	1.02
	%	16.8	68.5	3.4	2.8	8.4		
ICT has played a central role in the primary literature of knowledge management	F	25	94	5	9	10	3.80	1.03
	%	17.5	65.7	3.5	6.3	6.9		
Valid		143					3.774	

Table 4.11 shows that 23(16.1%) of the respondents strongly agreed, 88(61.5%) agreed, 10(6.9%) undecided, 8(5.6%) disagreed and 14(9.8%) strongly disagreed with the statement that ICT facilitate the institution in sharing of knowledge and information. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that ICT facilitate the institution in sharing of knowledge and information (mean=3.69, standard deviation=1.112). This implied that IT ensures that knowledge is recorded and made acceptable through means such as the intranet. The findings concur with Chigada (2014) who states that, the initial challenge of knowledge

management is synthesizing the information processing technologies in your organization and the unique abilities of the people to allow the organization to survive and thrive on knowledge.

Also, 20(13.9%) of the respondents strongly agreed, 98(68.5%) agreed, 6(4.2%) undecided, 9(6.3%) disagreed and 10(6.9%) strongly disagreed with the statement that information technology strengthens the self-action of employees. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that information technology strengthens the self-action of employees (mean=3.76, standard deviation=1.02). The findings agreed with Harper (2013) who identified the key skills and understandings required for KM, an understanding and facility in technology emerged as crucial, despite the fact that other factors were afforded primacy over the technology. Information professionals require a basic understanding of computing and network architectures in order interact with IT staff and managers such as managing the Intranet.

Further, 22(15.4%) of the respondents strongly agreed, 99(69.2%) agreed, 4(2.8%) undecided, 7(4.9%) disagreed and 11(7.7%) strongly disagreed with the statement that information and communication technology facilitate the effective use of institutional resources. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that information and communication technology facilitate the effective use of institutional resources (mean=3.79, standard deviation=1.021). This implied that the system does not only assist in preserving the organizational knowledge asset, but also help to improve the working performance and efficiency of the staffs. The findings concur with Chigada and Ngulube (2015) who noted the advancement in information processing technology, combined with widely available

access to high-speed networks, provide organizations with unparalleled opportunities to formalize the collection, protection and use of knowledge.

Another, 24(16.8%) of the respondents strongly agreed, 98(68.5%) agreed, 5(3.4%) undecided, 4(2.8%) disagreed and 12(8.4%) strongly disagreed with the statement that ICT simplifies the choice and opportunity capture, create, share/transfer and reuse of knowledge process in the institution. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that ICT simplifies the choice and opportunity capture, create, share/transfer and reuse of knowledge process in the institution (mean=3.83, standard deviation=1.02). This implied that ICT creates a synthesis between the people and the information to the point that the whole is more than the sum of the parts. The value of knowledge management relates directly to the effectiveness with which the managed knowledge enables the members of the organization to deal with today's situations and effectively envision and create their future. The findings concur with Chigada (2014) who stated that synthesizing the information processing technologies in your organization and the unique abilities of the people to allow the organization to survive and thrive on knowledge.

Finally, 25(17.5%) of the respondents strongly agreed, 94(65.7%) agreed, 5(3.5%) undecided, 9(6.3%) disagreed and 10(6.9%) strongly disagreed with the statement that ICT has played a central role in the primary literature of knowledge management. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that ICT has played a central role in the primary literature of knowledge management (mean=3.80, standard deviation=1.03). This implied that information professionals require a basic understanding of computing and network architectures in

order interact with IT staff and managers such as managing the Intranet. The findings concur with Harper (2013) who identified the key skills and understandings required for KM, an understanding and facility in technology emerged as crucial, despite the fact that other factors were afforded primacy over the technology. The high value of techno-literacy for knowledge management practitioners has also been mentioned in other sources.

4.5.5 Service Delivery

The study lastly sought to investigate service delivery in Masinde Muliro University of Science and Technology, Kenya. Table 4.12 presents the study results.

Table 4.12 Service Delivery

Statements		SA	A	UD	D	SD	Mean	Std.Dev
The institution has been able to achieve effective service delivery	F	38	74	12	13	6	3.87	0.087
	%	26.6	51.7	8.4	9.1	4.2		
The institution has been able to achieve effective service delivery	F	37	88	6	6	6	4.01	0.923
	%	25.9	61.6	4.2	4.2	4.2		
Collaboration between various component, internally and externally for teaching and research has been improved	F	29	94	9	7	4	3.96	0.071
	%	20.3	65.7	6.3	4.9	2.8		
Use of knowledge management in the institution has led to effective training and career development process of students and staffs	F	40	89	8	4	2	4.12	0.062
	%	27.9	62.2	5.6	2.8	1.4		
The use of knowledge management has boost institution services for quality delivery	F	31	85	10	7	10	3.84	0.087
	%	21.7	59.4	6.9	4.9	7.0		
Valid		143					3.96	

Table 4.12 shows that 38(26.6%) of the respondents strongly agreed, 74(51.7%) agreed, 12(8.4%) undecided, 13(9.1%) disagreed and 6(4.2%) strongly disagreed with the

statement that their clients are satisfied with their work. Furthermore, the study findings showed in terms of means and standard deviation that the respondents agreed that their clients are satisfied with their work (mean=3.87, standard deviation=0.087). This implied that organizational framework, that is, particular socio-technical environment which is created ensures that the clients are satisfied with their services. Lamont (2011) brings out that an institution that embraces knowledge management becomes process-intensive for the reason that large amount of information is well organized and the tacit knowledge of staff are also monitored through using the method of knowledge mapping so that the expertise of the staff are fully utilized which leads to customers satisfaction.

Also, 37(25.9%) of the respondents strongly agreed, 88(61.6%) agreed, 6(4.2%) undecided, 6(4.2%) disagreed and 6(4.2%) strongly disagreed with the statement that the institution has been able to achieve effective service delivery. Furthermore, the study findings showed in terms of means and standard deviation that the institution has been able to achieve effective service delivery (mean=4.01, standard deviation=0.923). This implied that institutions have been able to make clear policies and procedures through the knowledge management process this ensuring service delivery. The study results concurs with Wamundila and Ngulube (2011) who asserts that the organization department requires it's to document all activities in daily operation and upload all relevant information to the system from time to time by following the established departmental policies for the purpose of effective knowledge transfer, learning and sharing of information which in turn boost service delivery.

Further, 29(20.3%) of the respondents strongly agreed, 94(65.7%) agreed, 9(6.3%) undecided, 7(4.9%) disagreed and 4(2.8%) strongly disagreed with the statement that

collaboration between various component, internally and externally for teaching and research has been improved. Furthermore, the study findings showed in terms of means and standard deviation that the collaboration between various component, internally and externally for teaching and research has been improved (mean=3.96, standard deviation=0.071). This implied that knowledge and human expertise of the people who work in the organisation, as well as everything that is contained in the intranets. The findings concur with Fullwood, Rowley and Delbridge, (2013) who asserts that KM practices in higher education are actions aimed at improving the internal flow and use of information through knowledge acquisition and knowledge sharing for institutional effectiveness.

Also, 40(27.9%) of the respondents strongly agreed, 89(62.2%) agreed, 8(5.6%) undecided, 4(2.8%) disagreed and 2(1.4%) strongly disagreed with the statement that use of knowledge management in the institution has led to effective training and career development process of students and staffs. Furthermore, the study findings showed in terms of means and standard deviation that use of knowledge management in the institution has led to effective training and career development process of students and staffs (mean=4.12, standard deviation=0.062).

Finally, 31(21.7%) of the respondents strongly agreed, 85(59.4%) agreed, 10(6.9%) undecided, 7(4.9%) disagreed and 10(7.0%) strongly disagreed with the statement that the use of knowledge management has boost institution services for quality delivery. Furthermore, the study findings showed in terms of means and standard deviation that use of knowledge management has boost institution services for quality delivery (mean=3.84, standard deviation=0.087). This implied that knowledge is an essential resource for

establishing competitive advantage and management should attempt to identify, generate, deploy and develop knowledge. The findings concur with Antal et al., (2014) who asserts that an institution that embraces knowledge management becomes process-intensive for the reason that large amount of information is well organized and the tacit knowledge of staff are also monitored through using the method of knowledge mapping so that the expertise of the staff are fully utilized.

4.6 Multiple Regression Model Assumption

The study tested normality, linearity, multicollinearity, independence of residuals and Homoscedasticity assumptions.

4.6.1 Normality Assumption Test

The study used Kolmogorov-Smirnov test (K-S) one sample test to test the assumption of the normality of the population distribution. The study results are presented in Table 4.13.

Table 4.13 One-Sample Kolmogorov-Smirnov Test

	Level of KMS Awareness	Culture Change	ICT	Service delivery	
Mean	3.594	3.796	3.852	3.774	3.96
Std. Deviation	.546	.579	.64	.634	.531
Absolute	.280	.242	.307	.401	.310
Positive	.182	.193	.143	.144	.166
Negative	-.280	-.242	-.307	-.404	-.310
Kolmogorov-Smirnov Z	3.38	2.91	3.70	4.72	3.73
Asymp. Sig. (2-tailed)	0.000	.000	0.000	0.000	0.000
Valid N	143				

The study findings on Table 4.13 show that all Kolmogorov-Smirnov values were all greater than 0.05 implying that the data were normally distributed. Level of awareness had

Kolmogorov-Smirnov value of 3.38, knowledge management system had Kolmogorov-Smirnov value of 2.91, culture change had Kolmogorov-Smirnov value of 3.70 information and communication technology had Kolmogorov-Smirnov value of 4.72 and service delivery had a Kolmogorov-Smirnov of 3.73.

Linear regression assumes that variables are normally distributed (Connor & O'Neill, 2017). This implied that the error between the observed and predicted values should be normally distributed and has a mean of zero. According to Tabachnic and Fidell (2001) Kolmogorov-Smirnov value greater than 0.05 indicate that the data is normal and if the significance value is less than 0.05, the data significantly deviate from a normal distribution. Level of awareness, knowledge management system, and culture change, information and communication technology all had a significance value of less than 0.05. This implied that data follow a normal distribution.

4.6.2 Test for Linearity

The study used ANOVA test to test for linearity of the data and to visually show whether there was a linear or curvilinear relationship between two continuous variables before carrying out regression analysis. The study results are presented in Table 4.14.

Table 4.14 Linearity Test

Items	Linearity	Deviation from Linearity
Level of awareness	.000	.550
Knowledge management system	.000	.462
Culture change	.000	.208
Information and communication technology	.000	.608

Results presented in Table 4.14 revealed the linearity values and deviation from linearity for level of awareness were $0.000 < 0.05$ and $0.550 > 0.05$ respectively. For knowledge

management system the linearity values and deviation from linearity were $0.000 < 0.05$. For culture change were $0.000 < 0.05$ and $0.462 > 0.05$ respectively. For information and communication technology the linearity values and deviation from linearity were $0.000 < 0.05$ and $0.608 > 0.05$ respectively. This gives implications that the linearity values for the four study variables were less than 0.05 implying that the linearity assumption was made. The study findings also imply that the deviation from linearity values for the three study values were greater than 0.05 implying the data were not deviating from linearity. This gave an implication that the data used were linear. The regression models can only accurately estimate the relationship between dependent and independent variables if the relationship is linear (Osborne & Waters, 2002).

4.6.3 Multicollinearity Test Assumption

Multicollinearity was assessed using the tolerance and variance inflation factors (VIF). The study results are presented in Table 4.15.

Table 4.15 Multicollinearity Test Assumption

	Tolerance	VIF
Level of awareness	.764	1.309
Knowledge management system	.758	1.320
Culture change	.941	1.063
Information and communication technology	.804	1.212

The results in Table 4.15 present variance inflation factor values and tolerance value for level of awareness (tolerance=0.764 and VIF=1.309), for knowledge management system (tolerance=0.758 and VIF=1.320), for culture change (tolerance=0.941 and VIF=1.063) and for information and communication technology (tolerance=0.804 and VIF=1.212). The

study results imply that all tolerance values for the four variables under study were all 0.10 and VIF values all less than 10 which were accordance to Field, (2009). This gives an implication that data used had no multicollinearity. According to Field (2009) VIF values in excess of 10 is an indication of the presence of Multicollinearity.

4.6.4 Test for Autocorrelation

To establish whether or not the residual is serially correlated, Durbin-Watson test for autocorrelation was conducted. The study results are presented in Table 4.15.

Table 4.16 Autocorrelation Test

R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
.802^a	.644	.634	.352	2.123

The results in Table 4.16 indicated that Durbin- Watson statistic value was 2.123, hence the null hypothesis of no autocorrelation is accepted and that residuals are not auto correlated. The Durbin Watson test reports a test statistic, with a value from 0 to 4, where: 2 denotes no autocorrelation; 0 to 2<2 denotes a positive autocorrelation; while >2 denotes a negative autocorrelation. The decision rule is that test statistic values in the range of 1.5 to 2.5 are relatively normal. Values outside this range could be cause for concern (Field, 2009).

4.7 Inferential Statistics

This section consists of correlation and regression analysis. The section was meant to achieve both general and specific objectives in establishing the relationships that exists between the study variables.

4.7.1 Correlation Analysis

Correlation analysis was done to achieve the study specific objectives. The findings are presented in Table 4.17. Correlation refers to the strength of an association between two variables. A strong or high correlation means that two or more variables have a strong relationship with each other while a weak or low, correlation means that the variables are hardly related.

Table 4.17 Correlations Analysis Results

		Service delivery	Level of Awareness	KMS	Culture Change	ICT
Service delivery	Pearson Correlation	1				
	Sig. (2-tailed)					
Level of awareness	Pearson Correlation	.724**	1			
	Sig. (2-tailed)	.000				
KMS	Pearson Correlation	.689**	.712**	1		
	Sig. (2-tailed)	.000	.023			
Culture change	Pearson Correlation	.616*	.552**	.545*	1	
	Sig. (2-tailed)	.000	.002	.019		
ICT	Pearson Correlation	.614*	.567*	.510*	.610**	1
	Sig. (2-tailed)	.000	.035	.013	.001	

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

* . Correlation is significant at the 0.05 level (2-tailed).

The findings revealed that level of awareness was strongly positively and statistically significant correlated to service delivery ($r=0.724$ $p<0.01$). Further, knowledge management system was strongly positively and statistically significant correlated to service delivery ($r=0.689$ $p<0.01$). Culture change was strongly positively and statistically significant correlated to service delivery ($r=0.616$ $p<0.01$). Finally, information and

communication technology were strongly positively and statistically significant correlated to service delivery ($r=0.614$ $p<0.01$). Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation. A value of 0.00 means that there is no relationship between variables being tested (Orodho, 2003).

This gave an implication that all the study variables were positively correlated to service delivery. Level of awareness contributes 72.4% to service delivery. Knowledge management system contributes 68.9% to service delivery. Culture change contributes 61.6% to service deliver. Information and communication technology contribute 61.4% to service delivery.

4.7.2 Multiple Regression Analysis

Regression analysis is a statistical tool for the investigation of the relationship between variables. Usually, researcher seeks to maintain the causal effect of one variable upon another. Regression analysis allows you to model, examine and explore spatial relationship, and can help explain the factors behind observed spatial patterns. Regression analysis is also used for prediction.

4.7.3 Model Summary

Model summary provides the coefficient of determination (R^2) which shows proportion of the variance in the dependent variable that is predictable from the independent variable and correlation coefficient (R) shows the degree of association between the dependent and independent variables. The results presented in Table 4.18 present the fitness of model used of the regression model in explaining the study phenomena.

Table 4.18 Multiple Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.802	.644	.634	.3521

Level of awareness, knowledge management system, and culture change, information and communication technology were found to be satisfactory variables in influencing the service delivery. This is supported by coefficient of determination also known as the R square of 64.4%. This means that the independent variables explain 64.4% of the variations in the dependent variable (service delivery). The results further imply that the model applied to link the relationship of the variables was satisfactory. Adjusted R² is a modified version of R² that has been adjusted for the number of predictors in the model by less than chance. The adjusted R² of which was slightly lower than the R² value was exact indicator of the relationship between the independent and the dependent variable because it is sensitive to the addition of irrelevant variables. The adjusted R² indicates that 63.4% of the changes in service delivery are explained by the model.

4.7.4 Model Fitness

Table 4.19 provides the results on the analysis of the variance (ANOVA).

Table 4.19 Model Fitness

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	30.94082	4	7.735294	62.38521	.000
Residual	17.11076	138	0.123991		
Total	48.05157	142			

The results in Table 4.19 indicated that the overall model was statistically significant as supported by a p value of 0.000 which is lesser than the critical p value of 0.05. Further, the

results imply that the independent variables are good predictors of service delivery. This was supported by an F statistic of 62.38521 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

4.7.5 Regression Coefficient

Regression Analysis Coefficients for the study variables are as presented in Table 4.20.

Table 4.20 Regression Analysis Coefficients

	Unstandardized		Standardized		t	Sig.
	Coefficients		Coefficients			
	B	Std. Error	Beta			
(Constant)	.667	.248			2.695	.0079
Level of awareness	.314	.072	.323		4.366	.0000
Knowledge management system	.216	.063	.262		3.425	.0008
Culture change	.179	.070	.166		2.577	.0110
Information and communication technology	.184	.069	.189		2.651	.0089

Regression of coefficients results in Table 4.20 shows that level of awareness has a positive and significant influence on service delivery ($\beta_1=0.314$, $p=0.0000$). It was further established that knowledge management system has a positive and significant influence on service delivery ($\beta_2=0.216$, $p=0.0008$). Culture change was found to have a positive and significant influence on service delivery ($\beta_3=0.179$, $p=0.0110$). Finally, information and communication technology were found to have a positive and significant influence on service delivery ($\beta_4=0.184$, $p=0.0089$). Therefore, the overall regression results imply that there is a positive and significant relationship between knowledge management and human resource service delivery in institutions of higher learning.

The optimal model was;

$$Y = 0.667 + 0.314X_1 + 0.216X_2 + 0.179X_3 + 0.184X_4 \dots \dots \dots \text{Equation 4.1}$$

4.8 Hypotheses Testing

From the regression model computed in Table 4.20, the research hypotheses were tested using the significance level of the coefficients. The research aimed to test the hypothesis with an aim of failing to reject or rejecting the relationship between independent and the dependent variables. The research hypothesis for the study included;

H₀₁: There is no significant effect of level of awareness on service delivery in institutions of higher learning. The regression results in Table 4.20 indicate that there was significant effect of level of awareness on service delivery in institutions of higher learning with a beta coefficient of 0.314 and significance of (p= 0.0000). The study rejected the hypothesis. These results concur with Ngulube and Mngadi (2009) who found out a positive and significant relationship between levels of awareness service delivery in institutions of higher learning.

H₀₂: There is no significant relationship between knowledge management system and service delivery in institutions of higher learning. The regression results in Table 4.20 indicate that there was significant effect of knowledge management system on service delivery in institutions of higher learning with a beta coefficient of 0.216 and significance of (p= 0.0008). The study rejected the hypothesis. These results concur with Grundstein and Sabroux (2007) who aimed at the organizational learning process in knowledge management system is to increase individual knowledge, to reinforce competencies, and to

convert them into a collective knowledge through interactions, dialogues, discussions, exchange of experience and observations.

H₀₃: There is no significant relationship between culture change and service delivery in institutions of higher learning. The regression results in Table 4.20 indicate that there was significant effect of culture change on service delivery in institutions of higher learning with a beta coefficient of 0.179 and significance of ($p= 0.0110$). The study rejected the hypothesis. These results concur with (Morris, 2000; Sveiby, 1998; Cloete and Snyman 2003) Who found out that organisational culture creates and incorporates KM, including motivation, ability, performance, education, learning, training, trust, behaviour, values and beliefs.

H₀₄: There is no significant relationship between information and communication technology and service delivery in institutions of higher learning. The regression results in Table 4.20 indicate that there was significant effect of information and communication technology on service delivery in institutions of higher learning with a beta coefficient of 0.184 and significance of ($p= 0.0089$). The study rejected the hypothesis. These results concur with Hazeri, Sarrafzadeh and Bill (2007) who in their study, said that knowledge management involves much more than the use of technology, it relies on the use of IT as an enabler. Consequently, while knowledge workers do not need formal qualifications or deep expertise in IT, they do need to have sufficient understanding and skill, that is, a basic level of literacy to be able to use these enablers effectively for their own purposes.

Table 4.21 Summary of Hypotheses Test Results

No.	Variable	β and P value	Deduction
H ₀₁	There is no significant effect of level of awareness on service delivery in institutions of higher learning.	B1=0.314, p=0.0000<0.05	Rejected the null hypothesis
H ₀₂	There is no significant relationship between knowledge management system and service delivery in institutions of higher learning.	B2=0.215, p=0.0008<0.05	Rejected the null hypothesis
H ₀₃	There is no significant relationship between culture change and service delivery in institutions of higher learning.	B3=0.179, p=0.0110<0.05	Rejected the null hypothesis
H ₀₄	There is no significant relationship between information and communication technology and service delivery in institutions of higher learning.	B4=0.184, p=0.0089<0.05	Rejected the null hypothesis

4.9 Discussions of the Findings

The first objective sought to establish how the level of awareness on service delivery in institutions of higher learning. The study found out that the respondents agreed on all aspects of level of awareness. They agreed that KM is a Process of Creation, Assimilation, Retention and Utilization of Knowledge, IT is a Key Part of KM, Knowledge Management is all about the Utilization of ICT, KM is a Type of Process-improvement Method, KM is a Training Programme that all Managers Must Participate, Knowledge Management is the Management of Information, Knowledge and Experience Accessible to a Company and that KM is a Management Trend.

The study findings concurs with Stefik (2014) who found out that knowledge awareness can be better applied in the higher education institution by creating a flexible and

innovative relationship between work and education, helping students to match their talents more closely to their current workplace demands, contributing to the adaptation and assimilation of new knowledge with existing ones as well as contributing to the re-connection of learning with experience.

The second objective sought to establish how the Knowledge management system on service delivery in institutions of higher learning. The study found out that the respondents agreed on all aspects of Knowledge management system. They agreed that our institution has knowledge management systems that stores and retrieves knowledge, the knowledge management system has improved collaboration in the institution, The knowledge management system adopted can locates knowledge sources, the knowledge management system adopted can mines repositories for hidden knowledge and the knowledge management system adopted in my institution, constantly update information.

The study findings concur with Bridgstock (2009) who asserts that students also get more diverse employment information when the University' career centre employed the Knowledge Management because of the fact that employment student advisers with various background expertise give professional advice for the students from different faculties and disciplines.

The third objective sought to establish how the cultures change on service delivery in institutions of higher learning. The study found out that the respondents agreed on all aspects of cultures change. They agreed that Leadership change has led the institution employees to move in the same direction with a common purpose and goals, Culture change through knowledge management had led to shared experiences of

employees, Introduction of contract terms has affected job security of staffs hence internal competition is high, The institution has shifts to a culture of management by walking around whereby leadership are aware of operational realities and employees are aware of the competitive pressures facing the firm and The institution has adopted the measuring of customer satisfaction for every interaction and use this data to give regular performance feedback to staff hence quality service delivery.

The study findings concur with Muchaonyerwa and Mutula (2017) who asserts that the only possible with the recognition and support from the top management. Only when top management acknowledges the value of knowledge management, and knowledge management could be created and developed.

The last objective sought to establish how the information and communication technology on service delivery in institutions of higher learning. The study found out that the respondents agreed on all aspects of information and communication technology. They agreed that ICT facilitate the institution in sharing of knowledge and information, Information Technology strengthens the self-action of employees, Information and Communication Technology facilitate the effective use of institutional resources, ICT simplifies the choice and opportunity capture, create, share/transfer and reuse of knowledge process in the institution and ICT has played a central role in the primary literature of knowledge management. The study findings concur with Chigada and Ngulube (2015) who noted the advancement in information processing technology, combined with widely available access to high-speed networks, provide organizations with unparalleled opportunities to formalize the collection, protection and use of knowledge.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings as per the study objectives, conclusions based on those findings and recommendations which are based on the study findings.

5.2 Summary of the Findings

5.2.1 Level of Awareness

The first objective sought to establish how the level of awareness on service delivery in institutions of higher learning. The study found out that the respondents agreed on all aspects of level of awareness. They agreed that KM is a Process of Creation, Assimilation, Retention and Utilization of Knowledge, IT is a Key Part of KM, Knowledge Management is all about the Utilization of ICT, KM is a Type of Process-improvement Method, KM is a Training Programme that all Managers Must Participate, Knowledge Management is the Management of Information, Knowledge and Experience Accessible to a Company and that KM is a Management Trend.

The study findings also showed that level of awareness was statistically significant and has a positive influence on service delivery. The study rejected the null hypothesis that there is no statistically significant influence of level of awareness on service. The study findings also revealed that level of awareness has a positive influence on service delivery in institutions of higher learning. This implied that KM is a Process of Creation, Assimilation,

Retention and Utilization of Knowledge. IT is a Key Part of KM which utilizes ICT and all Managers Must Participate.

5.2.2 Knowledge Management System

The second objective sought to establish how the Knowledge management system on service delivery in institutions of higher learning. The study found out that the respondents agreed on all aspects of Knowledge management system. They agreed that our institution has knowledge management systems that stores and retrieves knowledge, the knowledge management system has improved collaboration in the institution, The knowledge management system adopted can locates knowledge sources, the knowledge management system adopted can mines repositories for hidden knowledge and the knowledge management system adopted in my institution, constantly update information.

The study findings also showed that Knowledge management system was statistically significant and has a positive influence on service delivery. The study rejected the null hypothesis that there is no statistically significant influence of Knowledge management system on service. The study findings also revealed that knowledge management system has a positive influence on service delivery in institutions of higher learning. This implied that institutions have knowledge management systems that stores and retrieves knowledge which has improved collaboration in the institution, collaboration in the institution and constantly update information.

5.2.3 Culture Change

The third objective sought to establish how the cultures change on service delivery in institutions of higher learning. The study found out that the respondents agreed on all

aspects of cultures change. They agreed that Leadership change has led the institution employees to move in the same direction with a common purpose and goals, Culture change through knowledge management had led to shared experiences of employees, Introduction of contract terms has affected job security of staffs hence internal competition is high, The institution has shifts to a culture of management by walking around whereby leadership are aware of operational realities and employees are aware of the competitive pressures facing the firm and The institution has adopted the measuring of customer satisfaction for every interaction and use this data to give regular performance feedback to staff hence quality service delivery.

The study findings also showed that cultures change was statistically significant and has a positive influence on service delivery. The study rejected the null hypothesis that there is no statistically significant influence of cultures change. The study findings also revealed that culture changes have a positive influence on service delivery in institutions of higher learning. This implied that Leadership change has led the institution employees to move in the same direction with a common purpose and goals. It has further led to shared experiences. It has also affected job security of staffs hence internal competition is high. Finally, it has made the institution shift to a culture of management by walking around whereby leadership are aware of operational realities and employees are aware of the competitive pressures facing the firm.

5.2.4 Information and Communication Technology

The last objective sought to establish how the information and communication technology on service delivery in institutions of higher learning. The study found out that the respondents agreed on all aspects of information and communication technology. They

agreed that ICT facilitate the institution in sharing of knowledge and information, Information Technology strengthens the self-action of employees, Information and Communication Technology facilitate the effective use of institutional resources, ICT simplifies the choice and opportunity capture, create, share/transfer and reuse of knowledge process in the institution and ICT has played a central role in the primary literature of knowledge management.

The study findings also showed that information and communication technology was statistically significant and has a positive influence on service delivery. The study rejected the null hypothesis that there is no statistically significant influence of information and communication technology on service. The study findings also revealed that that information and communication technology on service delivery in institutions of higher learning. This implied that ICT facilitate the institution in sharing of knowledge and information, strengthens the self-action of employees, facilitates the effective use of institutional resources, simplifies the choice and opportunity capture, creates, share/transfer and reuse of knowledge process in the institution and plays a central role in the primary literature of knowledge management.

5.3 Conclusions of the Study

From the findings it was concluded that the level of awareness of the respondents on knowledge management was still low, though they defined knowledge management correctly, other skills were highlighted to be required in the institution. Further findings on the level of awareness revealed that there is still need for additional knowledge management officers in the institution, there existed limited training policies and refresher trainings on knowledge management.

On the relationship between knowledge management and employee individual productivity, the study found a significant relationship between the variables, the findings further indicated knowledge management helped the institution in better decision making in storage and retrieval of information in which they most utilized the internet.

On culture change on employees' performance that use of knowledge management Systems would impact, it was concluded that knowledge management needs organizations which are open to change, also individual learning and training is likely to occur in employees through the use of knowledge management. It was also identified that most employees in the departments fear of being penalized for errors.

On the role of information and communication technology in managing organizations human resource knowledge, the study concluded that indeed information communication technology plays a role in managing knowledge, as shown in the findings, there was an indication that most of them used IT in their everyday assignments, this systems was indicated to be often used particularly for storage and summarization, emails was also noted to be mostly used in the institution. The organization should therefore embrace the use of IT in their various departments.

5.4 Recommendations of the Study

The following recommendations were made based on the results;

1. The university to aggressively train its staff on the importance of information sharing since it has a positive effect on the overall performance.
2. Institution's training policy to be implemented and to include periodical staff rotation in the institution.

3. The university to put in place procedures that will guide individual to share information. This will lead to improvement of individual productivity.
4. The organization need to improve the knowledge management systems not only to include internet but also other systems like emails, data warehouse, routine decision making and other networks.
5. The university should ensure that its connectivity is sufficient to enable sharing of information.
6. To ensure they are achieved, the university needs to consider employing a knowledge management officer.

5.5 Suggestions for Further Research

The study was done in Masinde Muliro University of science and technology. Further research is encouraged to include other universities both public and private in Kenya. Further research is encouraged to establish the moderating effect of organizational factors namely management style, organizational structure among others on the relationship between independent and dependent variables.

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APPENDIX I: Letter of Introduction to respondents by the Researcher

MOI UNIVERSITY,

P.O. Box 3900 - 30100,

ELDORET.

Dear Participant,

RE: LETTER OF INTRODUCTION

I am a Master of Science in Human Resource Development candidate in the School of Business and Economics at Moi University, Eldoret. I am carrying out a research on Effect of knowledge management on service delivery in Masinde Muliro University of Science and Technology, Kenya.

This is to request for your responses through filling the attached questionnaire. By giving your responses you will be contributing towards generating knowledge that will influence policy decisions on knowledge management in institutions of higher learning.

The results are confidential and are strictly for academic use. Your honest participation will be highly appreciated.

Yours faithfully,

NELLY JELIMO

**APPENDIX II: Questionnaire for Employees at Masinde Muliro University of
Science and Technology**

Background Information

This questionnaire has five (5) Sections. Please fill the information needed by filling the gaps appropriately. You are required to respond to all questions in all the five Sections.

SECTION (A) - PERSONAL DATA

(PLEASE TICK THE APPROPRIATE BOX)

- (1) Gender of the respondents - Male [] Female []
- (2) Academic level
- Secondary []
- Post-secondary []
- Graduate []
- Post Graduate []
- (3) Which department are you attached to.....
- (4) Current occupation
- (5) For how long have you been in the current occupation?
- Less than 12 months []
- 12 months – 24 months []
- 25 months – 36 months []
- 37 months – 48 months []
- 49 months and []

**SECTION B - AWARENESS OF KNOWLEDGE MANAGEMENT AS A WAY OF
ENHANCING SERVICE DELIVERY**

(1) What is your understanding on the term human resource knowledge management?

Tick appropriately.

- Employee knowledge capture and storage.
- Knowledge sharing between employees.
- Identification and application of essential skills
- Culture change within employees through knowledge sharing.
- Use of information technology to store essential information derived from employee's knowledge, skills and experience.

1. In this section the study is interested in your view of effect of knowledge management awareness on service delivery in the institution. Read each of the statements and answer by ticking in the appropriate category that best fits your opinion. The categories are: **5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1=Strongly Disagree**

	KNOWLEDGE MANAGEMENT AWARENESS	5	4	3	2	1
1.	KM is a Process of Creation, Assimilation, Retention and Utilization of Knowledge					
2.	IT is a Key Part of KM					
3.	Knowledge Management is all about the Utilization of ICT					
4.	KM is a Type of Process-improvement Method					
5.	KM is a Training Programme that all Managers Must Participate					
6.	Knowledge Management is the Management of Information, Knowledge and Experience Accessible to a Company					
7.	KM is a Management Trend					

Please rate the extent to which process are practiced in your institution?

The categories are: **3 = High, 2 = moderately, 1=Low**

	Level of Knowledge Management Awareness	3	2	1
1.	Knowledge creation			
2.	Knowledge capture			
3.	Knowledge organization			
4.	Knowledge storage			
5.	Knowledge dissemination			
6.	Knowledge application			

2. In this section the study is interested in your view of effect of knowledge management system on service delivery in the institution. Read each of the statements and answer by ticking in the appropriate category that best fits your opinion. The categories are: **5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1=Strongly Disagree**

	Knowledge Management Systems	5	4	3	2	1
8.	Our institution has knowledge management systems that stores and retrieves knowledge					
9.	The knowledge management system has improved collaboration in the institution					
10.	The knowledge management system adopted can locates knowledge sources					
11.	The knowledge management system adopted can mines repositories for hidden knowledge					
12.	The knowledge management system adopted in my institution, constantly update information					

3. In this section the study is interested in your view on culture change in the institution. Read each of the statements and answer by ticking in the appropriate category that best fits your opinion. The categories are: **5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1=Strongly Disagree**

	Culture change	5	4	3	2	1
13.	Leadership change has led the institution employees to move in the same direction with a common purpose and goals.					
14.	Culture change through knowledge management had led to shared experiences of employees.					
15.	Introduction of contract terms has affected job security of staffs hence internal competition is high					
16.	The institution has shifts to a culture of management by walking around whereby leadership are aware of operational realities and employees are aware of the competitive pressures facing the firm					
17.	The institution has adopted the measuring of customer satisfaction for every interaction and use this data to give regular performance feedback to staff hence quality service delivery					

4. In this section the study is interested in your view on information and communication technology in the institution. Read each of the statements and answer by ticking in the appropriate category that best fits your opinion. The categories are: **5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1=Strongly Disagree**

	Information and Communication Technology	5	4	3	2	1
18.	ICT facilitate the institution in sharing of knowledge and information					
19.	Information Technology strengthens the self-action of employees					
20.	Information and Communication Technology facilitate the effective use of institutional resources.					
21.	ICT simplifies the choice and opportunity capture, create, share/transfer and reuse of knowledge process in the institution					
22.	ICT has played a central role in the primary literature of knowledge management					

5. In this section the study is interested in your view on service delivery in the institution. Read each of the statements and answer by ticking in the appropriate category that best fits your opinion. The categories are: **5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1=Strongly Disagree**

	Service Delivery	5	4	3	2	1
23.	Our clients are satisfied with our work					
24.	The institution has been able to achieve effective service delivery					
25.	Collaboration between various component, internally and externally for teaching and research has been improved					
26.	Use of knowledge management in the institution has led to effective training and career development process of students and staffs					
27.	The use of knowledge management has boost institution services for quality delivery					

APPENDIX III: NACOSTI Research Authorization



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349,310571, 2219420
Fax: +254-20-318245,318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

31st August, 2015

NACOSTI/P/15/2424/7039

Nelly Jelimo
Moi University
P.O. Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Knowledge management and its effects on human resource service delivery in institutions of higher learning: Case of Masinde Muliro University of Science and Technology,”* I am pleased to inform you that you have been authorized to undertake research in **Kakamega County** for a period ending **30th June, 2016.**

You are advised to report to **the Vice Chancellor, Masinde Muliro University of Science and Technology, the County Commissioner and the County Director of Education, Kakamega County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

Said Hussein
SAID HUSSEIN
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Vice Chancellor
Masinde Muliro University of Science and Technology.

]
The County Commissioner
Kakamega County.

APPENDIX IV: NACOSTI Research Permit

**THIS IS TO CERTIFY THAT:
MS. NELLY JELIMO -
of MOI UNIVERSITY, 0-30100
ELDORET, has been permitted to conduct
research in Kakamega County**

**Permit No : NACOSTI/P/15/2424/7039
Date Of Issue : 31st August,2015
Fee Recieved :Ksh 1,000**

**on the topic: KNOWLEDGE
MANAGEMENT AND ITS EFFECTS ON
HUMAN RESOURCE SERVICE DELIVERY
IN INSTITUTIONS OF HIGHER LEARNING:
CASE OF MASINDE MULIRO UNIVERSITY
OF SCIENCE AND TECHNOLOGY**



**for the period ending:
30th June,2016**

.....
**Applicant's
Signature**

.....
**Full Director General
National Commission for Science,
Technology & Innovation**

APPENDIX V: Research Authorization – Kakamega County Commissioner

MINISTRY OF EDUCATION SCIENCE & TECHNOLOGY

Telephone: 056 - 30411
 FAX : 056 - 31307
 E-mail : wespropde@yahoo.com
 When replying please quote.



COUNTY DIRECTOR OF EDUCATION
 KAKAMEGA COUNTY
 P. O. BOX 137 - 50100
 KAKAMEGA

STATE DEPARTMENT OF EDUCATION

REF:WP/GA/29/17/VOL.II/

11th February, 2016

Nelly Jelimo
Moi University
P. O. Box 3900 – 30100
ELDORET

RE: RESEARCH AUTHORIZATION

The above has been granted permission by National Council for Science & Technology vide letter Ref. NACOSTI/P/15/2424/7039 to carry out research on "**Knowledge management and its effects on human resource service delivery in institutions of higher learning: Case of Masinde Muliro University of Science and Technology, Kakamega County, Kenya**" Kakamega County, for a period ending 30th June, 2016.

Please accord her any necessary assistance she may require.

MURERWA S. K. (MRS)
 COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

APPENDIX VI: Research Authorization – Kakamega Country Director of Education

REPUBLIC OF KENYA



THE PRESIDENCY

MINISTRY OF INTERIOR & CO-ORDINATION OF NATIONAL GOVERNMENT

Telegrams
 Telephone: 056-31131
 Fax-056-31133
 Email-cckakamega12@yahoo.com

COUNTY COMMISSIONER
 KAKAMEGA COUNTY
 P.O BOX 43-50100
 KAKAMEGA

When replying please quote

REF: ED.12/1/VOL.II/65

DATE: 11TH FEBRUARY, 2016

NELLY JELIMO
 MOI UNIVERSITY
 P.O. BOX 3900 – 30100
 ELDORET

RE: RESEARCH AUTHORIZATION

Following your authorization vide letter Ref: NACOSTI/P/15/2424/7030 dated 31st August, 2015 by National Commission of Science, Technology and Innovation to undertake research on *“Knowledge management and its effects on human resource service delivery in institutions of higher learning: Case of Masinde Muliro University of Science and Technology,”* for a period ending 30th June, 2016.

I am pleased to inform you that you have been authorized to carry out the research on the same.

A handwritten signature in black ink, appearing to be 'W. Omollo'.

W. OMOLLO
 FOR: COUNTY COMMISSIONER
 KAKAMEGA COUNTY

COUNTY COMMISSIONER – KAKAMEGA

