

**KNOWLEDGE MANAGEMENT PRACTICES AND
EMPLOYEE PERFORMANCE IN PUBLIC
UNIVERSITIES IN KENYA**

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DOCTOR OF PHILOSOPHY

(Human Resource Management)

**JOMO KENYATTA UNIVERSITY OF
AGRICULTURE AND TECHNOLOGY**

2021

**Knowledge Management Practices and Employee Performance in
Public Universities in Kenya**

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**A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy in Human
Resource Management of the Jomo Kenyatta
University of Agriculture and Technology**

2021

DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

This thesis is dedicated to my family and friends whose patience and words of encouragement all through the journey was unwavering. In a special way, I dedicate this work to my colleagues, whose support, contributions and words of encouragement made the completion of this thesis possible. Above all, I thank the Almighty God for granting me the favor to complete this academic journey.

ACKNOWLEDGMENTS

I take this opportunity to extend my special gratitude to my supervisors: Prof. Wario Guyo, PhD, Prof. Romanus Odhiambo, PhD and Dr. Renson Mwangi, for sacrificing their efforts, time and guidance in the process of writing the report with their enriching comments. I sincerely appreciate their guidance and continuous comments, corrections, ideas and suggestions that made this thesis a success.

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ABBREVIATIONS AND ACRONYMS

CoP	Communities of Practice
CUE	Commission of University Education
ECM	Competency management
HCT	Human Capital Theory
HR	Human Resources
IC	Intellectual Capital
IT	Information Technology
KAMP	Knowledge Mapping
KBV	Knowledge Based View
KCUL	Knowledge Culture
KM	Knowledge Management
KSA	Knowledge, Skills & Abilities
OLER	Organization Learning
OST	Organizational Structure
PUK	Public Universities of Kenya
RBV	Resource Based View

DEFINITION OF KEY TERMS

Adaptive Performance	This is the degree to which an employee is proactive and react to changes at the workplace by showing versatility and flexibility (Park & Park, 2019).
Alliances	Strategic alliances are a mutually beneficial contractual alliance between two or more independent businesses to reach a common goal by sharing their strengths and resources, which increases capabilities, confers a competitive edge, and extends a firm's capabilities through others (Umar, 2020).
Centralized Structure	Refers to the extent to which the center of authority in an organization revolves around a central point (Steiger, Jammou & Galib, 2014).
Clan oriented culture	A culture that promotes a professional community who share a common concern and values and tend to behave as per their norms and beliefs (Njage, Kamau & Muraguri, 2020).
Collaborations	Partnerships between two or more independent enterprises which manage one specific project to improve their competencies (Gachengo, 2018).
Communities of Practice	This is a process through which groups of people learn from each other by interacting on a regular basis on areas of common interest by exchanging ideas and coming up with solutions to improve (Dei & van de Walt, 2020).
Competency Mapping	This is the identification and assessment of existing employee competencies to identify those viewed as having a direct impact of the organization's core

business activities are singled out and reviewed for relevance (Balaid, Zibrani, Rosan, 2012).

Competency Development Involves enhancing and coordinating knowledge assets within an environment that encourages continuous learning and development (Woodman, 2011).

Contextual Performance This is the citizenship behaviour as exhibited by an employee's willingness to go an extra mile to ensure operations are running smoothly even though it will not directly affect their productivity (Menezes, 2012).

Employee Competencies These are the knowledge, skills and abilities possessed by an employee necessary for them to carry out their roles effectively (Prusak, 2013).

Employee Performance This is what is expected from the employee in terms of actual and behavioural outcomes in key results areas of responsibilities which contribute to the attainment of overall organizational performance (Tripathi & Agrawal, 2014).

Explicit Knowledge This is a kind of external knowledge which can be expressed in numbers or words that has the ability to be captured, shared and transferred (Garvey, 2013)

Individual level Learning This is the process by which an individual learns and becomes an expert in a given area (Jimenez-Jimenez & Sanz-valle, 2011).

Integrative structure This refers to the extent to which members of the organization are able to engage in their various activities but coordination is done through formalized systems (Razouq & Awamleh, 2009).

Knowledge	These are cumulative skills and abilities one acquires over time through the processes of experience or learning that enhances their cognitive and analytical capabilities (Ogola, 2010).
Knowledge Champion	This is person who drives the agenda for knowledge mapping by advocating for its benefits in the organization (Lee & Fink, 2013).
Knowledge Culture	This is a component of organizational culture that creates interactive linkages between internal and external cultures that enrich the management of knowledge management in its entirety (Travica, 2013).
Knowledge Initiator	This is the person who shows where and who owns specific kinds in an organization (Lee & Fink, 2013).
Knowledge Management	This is the management of knowledge by way of creating an environment that allows institutions of higher learning effectively utilize their knowledge to achieve institutional objectives (Ogola, 2010).
Knowledge Mapping	It is a technique applies by organizations to help them create structure out of an outflow of information by locating types of knowledge which are relevant for their use in an easy and timely fashion (Schiuma, 2012).
Organizational level Learning	This is setting up a structure and culture that promotes learning activities (Chiva, Grandi & Alegre, 2010).
Organizational Structure	This is a formal way in which organizational actors are allocated roles and how the work activities are integrated (Shabbir, 2017).

Results-oriented culture	This type of culture encourages employees to innovate so as to create new knowledge, by recognizing and appreciating employees' individual preferences (Cole, 2011).
Tacit Knowledge	This is the internal knowledge possessed by an individual and is experience based, not easy to express and embedded in one's personal nature (Sikombe, Phiri & Wright, 2019)
Task Performance	This describes how efficiently and effectively an employee performs their tasks and ultimately impacts on organizational objectives (Pradhan & Jena 2016).
Work Satisfaction	This evaluates the level of an employee's satisfaction with the job in terms of how they feel fulfilled and see potential career prospects (Kianto, Vanhala & Eilmann, 2016).

ABSTRACT

Universities as ‘knowledge intensive’ organizations thrive on the production and dissemination of knowledge and rely heavily on the performance of its employees to facilitate and continually generate and disseminate it. Performance is a multi-component concept and its management has become a strategic focus for public universities in Kenya. This has elicited a broad scope of emerging issues such as the roles played by individual competencies; effect of workforce diversity and work dynamics and growing focus on service delivery as Kenya moves towards Vision 2030. Literature review shows that there are limited number of empirical researches that have been done to study the relationship between knowledge management practices and employee performance. This study sought to contribute to this growing body of knowledge by determining the relationship of specific knowledge management practices with employee performance in public universities in Kenya. Specific objectives focused on the relationships between five knowledge management practices namely: competency management, communities of practice, knowledge mapping, knowledge culture, and organizational learning on employee performance with the moderating effect of organizational structure. Review of literature and identification of knowledge gaps formed the basis of the conceptual model and hypotheses. The study anchored on four theories: resource-based view, knowledge-based view, and human capital theory and intellectual capital theory. The study adopted the positivist research philosophy that tests hypothesis developed from existing theory through measurement of observable social realities. To achieve the objectives, the study used descriptive research design. The unit of analysis was 31 public universities in Kenya. The target population consisted of 26912 teaching and non-teaching staff from the public universities in Kenya. Purposive non-probability sampling method was used to identify a sample size of 227 employees. The study used both primary and secondary data. Primary data was collected using a self-administered questionnaire, based on a five-point Likert type scale. The quantitative data was analyzed using both descriptive and inferential statistics. Descriptive data was used to summarize the data while inferential statistics applied multiple linear regression analysis to test the hypothesized relationships. An analysis of the underlying statistical assumptions was conducted by testing for linearity, normality, homoscedasticity, multi-collinearity and auto-correlation. Results shows that jointly, competency management, communities of practice, knowledge mapping, knowledge culture and organizational learning had a positive and significant effect on employee performance in public universities in Kenya. The study findings further revealed that organizational structure is able to moderate positively between knowledge management practices and employee performance if employees in public universities in Kenya feel empowered by it, and if there are coherent communication channels which facilitate information flow amongst employees to enhance teamwork and cooperation. Public universities in Kenya should therefore adopt employee involvement programs to enhance their performance, growth and competitiveness. This study therefore concludes that the collective effect of competency management, communities of practice, knowledge mapping, knowledge culture and organizational learning moderated with organizational structure affect employee performance and by extension, institutional performance is greater than the individual effect of predictor variables.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In this knowledge era, the growth of the internet has made vast amounts of information accessible to various professionals (Schiuma, 2012). Factors such as globalization, advancements in technology, and workforce diversity combined with the effect of a more educated and informed society have contributed to increased focus on learning and development activities in all types of organizations. These developments have led to the growth of knowledge-based economies where much attention is on how to effectively manage the human capital so they can contribute to national development of a country as expected (Omotayo, 2015).

In view of the critical role played by the workforce and the increased focus on knowledge as a contributor to sustained business success; it is imperative that organizations constantly manage the vast amounts of knowledge available in a manner which will make them remain competitive. Work environments no longer use manual labour-intensive methods of production but rather large scale and specialized methods which are highly mechanized, with clear emphasize on specialized roles and responsibilities (Ibua, 2014).

The modern-day employee sometimes referred to as a knowledge worker has therefore evolved as a result of technological advancements, higher education levels, and up-to-date employee management methods. Knowledge workers are growing kind of employees in both advanced and emerging economies. Their work revolves around knowledge and knowledge work. Knowledge is of two types, explicit and tacit dimensions (Okkonen, Vuori, Helander & Ziamba, 2018). Explicit dimension is the part of knowledge that can be formally expressed through language, script, pictures, formulas, notes and so on. and communication technology (Gao, Ghai & Liu, 2018). Tacit dimension is partly or fully subconscious. It is the part of knowledge we develop through learning by doing and it is responsible for our practical activity. Tacit knowledge is difficult to separate from its human owner and

is therefore intangible in character and makes management of knowledge workers complex (Mladkova, Xouarova & Novy, 2015).

The best practice models on KM put into focus three key factors: Improvement of the knowledge, skills and abilities of employees should be through appropriate recruitment, selection and training methods should be the first priority. Secondly, incentives to ignite desired behavior should be promoted to an extent to which they impact positively on expected performance, using principles of job design to encourage employee participation in decision making and thirdly identifying skill gaps that could be addressed through continuous training, (Akhavan & Pezeshkan, 2014).

From a global perspective, Knowledge management (KM) is seen to play an important role in the higher education institutions (HEIs) success, especially by effectively planning, and coordinating the knowledge management (KM) assets related to intellectual capital. It has been proposed that KM can enrich knowledge sharing and overall performance (Hashim, Osman & Alhabshi, 2015). Universities are considered to be knowledge-intensive organizations, (Howell and Annansingh, 2013; Ramachandran & Yasin, 2013) and knowledge creating institutions, and they are also considered to be in the knowledge business. They create new knowledge through research, disseminate knowledge through teaching and learning, research and development, communication, dissemination of science, and create jobs in return (Fullwood, Rowley & Delbridge, 2013).

Nair (2019) carried out a study on KM practices in higher education institutions in Malaysia and recommended that it was important to develop KM capacity in key areas such as recognition of experts within the institutions, leadership innovation, knowledge sharing and knowledge culture, using technology so as to meet their competitive goals. Mohammad, Manning and Tatnall (2013) in their study on KM in Universities administration showed that KM was affected mostly by cultural factors in Malaysia.

An exploratory study by Nunes, Kanwal and Arif (2017) on KM practices in Higher Education institutions indicated that different factors affect KM in their professional

practices as teaching and non-teaching staff. They concluded that the developed world comprehends the importance of organizational knowledge and the need to manage it as a strategic asset, but developing countries are far behind in their research, understanding and actual implementation of effective KM practices.

There is evidence that KM could be important in supporting universities in teaching and research activities; however, there is also evidence that the approaches adopted by these institutions are passive and inconsistent (Donate & Canales, 2012). However, research into KM in universities is limited (Fullwood et al., 2013). Some studies have examined obstacles to KM in universities in the areas of knowledge creation (Nunes et al 2013; Ramachandran & Yasin. 2013). However, most of this research has been conducted in countries with mature higher education systems.

From the African countries perspective, according to (Suknunan, 2019), the role of KM as a strategic intervention in higher education in developing economies has not been studied extensively. The study revealed that a survey across 20 leading African universities showed that KM does have the potential to positively influence institutional performance, but there was lack of sophisticated and powerful KM infrastructure systems in most Africa's leading institutions and more KM practices are needed in areas of academic teaching, learning and research. Dei & Van de Walt (2020) study found that despite the high level of awareness of knowledge management practices in Ghanaian universities, the impact of communities of practice was insignificant due to the low level of understanding of the concept, non-belonging to one and lack of tools and systems to support communities of practice at the universities.

A study conducted in Tanzania and Uganda by Wanderage, Lwanga and Muhenda (2011), investigated the effects of knowledge management practices on innovations, and found that management development institutes heavily depend on their employee's knowledge to ensure survival in today's highly competitive environment. This knowledge was considered as a valuable asset in an intellectual environment. The study results confirmed a positive relationship between the process innovation and knowledge sharing.

Ojo (2016) stated that in the Nigerian context, only a few studies have examined KM processes in place at universities and concluded that there was need to establish strategies in order for the institutions to achieve competitive edge and improve performance and innovation. Another study by Enakrire & Onyanacha (2020) showed that although KM practices are not new, they are still in their infancy in some academic institutions in Africa. The study concluded that the need to continually share knowledge to improve quality service delivery in universities is important.

In the Kenyan context, studies by (Gichuhi, 2014; Ogola, 2010; Kimile & Kemoni 2015) show that the KM function in Kenyan universities mainly focuses on the activities of library department viewed as the main repository center for knowledge. They note that role of KM in other functional areas in the institutions is still in its initial stages and therefore not fully embedded in their processes. Noor & Salim (2011) stated that majority of public universities in Kenya have not been able to establish a network to enable them share knowledge among themselves, a position shared by Mugalavai & Mueke (2016) who indicated that public universities have concentrated on KM systems, innovations and technological applications with minimal knowledge of the existing tacit and explicit knowledge within their staff.

Mungai (2014) noted that public institutions in Kenya spend much more time in managing explicit knowledge which hinders organizational development and growth over other institutions in performance and target delivery. This concurs with the study by Murumba, Kwanya, Maina & Wangamati (2020) who opine that the process of capturing tacit knowledge is complex and requires time management, communication tools, technological methods and procedure.

Universities have significant opportunities to apply knowledge management practices to support every part of their mission (Ramakrishnan & Yasin, 2012). They need to create and maintain knowledge repositories, improve access to and use of knowledge among staff; and to create learning and sharing environment to add value to knowledge and to handle it as an organisational asset. It is therefore clear that KM will dominate the management agenda for decades as this ultimately determines the competitive performance of organizations. Enakrire & Onyanacha (2020) conclude in

their study that although knowledge management practices are not new, and are practiced in diverse ways such as group discussions/meetings, communities of practice, conferences, seminars and so on, they are still at their infancy stage in some academic institutions in Africa.

The study was anchored on four theories namely: the, resource-based view, knowledge-based view, human capital theory and intellectual capital theory, each of which had an emphasis on different aspects of how the knowledge can be managed within organization so as to have an impact not only on individual but also organizational performance.

1.1.1 Knowledge Management Practices

Knowledge is the concept, skill, experience and vision that provides a framework for creating, evaluating and using the information (Soltani & Navimipour, 2016). Generally, knowledge can be divided into two types, tacit and explicit. Tacit knowledge is the personal and context-specific knowledge of a person that resides in the human mind, behavior and perception (Sikome et al, 2019). Koenig (2012) suggested that explicit knowledge means information or knowledge that is set out in tangible form. According to Goa, et al 2018), there is no agreed definition of KM among the practitioner due to the multidisciplinary nature of the area and the definition presented tends to be biased to the author's view.

What appears common among all varied views is that KM plays a key role in improving the way people work and in promoting an environment that encourages employees to interact through effective communication channels and creating a culture governed by norms and values that affects their behavior, (Grant, 2013). Further, most definitions are in conformity on the right approach on knowledge management and that is how knowledge must be coordinated to be effective through its creation, sharing and dissemination, (Schiuma, 2012).

The study adopted the definition operationalized by (Ogola, 2012) that viewed KM as that approach which entails setting a suitable environment for universities to manage their knowledge through the processes of knowledge creation, capture, and

sharing it in a way that improves employee performance thus achieving institutional objectives. The focus of the study will be on how five distinct knowledge management practices namely, competency management; communities of practice, knowledge mapping, knowledge culture and organizational learning all moderated with organizational structure and how they can be applied to influence employee performance in public universities in Kenya.

According to Chen and Huang (2009), organizational knowledge is created through practice which represents the horizontal structure or the inter-functional relationships that work towards a common goal. The knowledge is then utilized through a process which is the vertical structure of the hierarchy of authority within organizations. They further state that a process is the sum of several practices and both enable the coordinated effort towards management of organizational knowledge. The implication therein is that, using practices in the absence of a process can become unmanageable over time just as using process without practice can cause the knowledge to become obsolete and cease to flow with current changes in the environment (Lin & Wiu, 2014).

Literature review reveals a number of KM practices among them include; learning on a continuous basis; development of a culture that promotes creativity and innovation and focus effective management of competencies (Kianto, Vanhala & Heilmann, 2016). The focus of the study was on five KM practices which have increasingly received recognition, due to their capacity to increase the knowledge base within the organization.

The first KM practice studied was competency management. Universities are academic institutions, staffed with employees with varied levels of competencies who form their primary source of expertise, which must be managed effectively if they are to contribute to achievement of their mission and vision statements (Tripathi & Agrawal 2014).

Second KM practice adopted was Communities of practice due to the fact that universities need to constantly upgrade their knowledge to remain relevant in their respective environments (Dei & Van de Walt, 2020); third, was knowledge mapping

which is about accessing potentially useful information by developing tools that makes it possible to do so in a coordinated manner (Mohamad, et al, 2013); fourth was knowledge culture which consists of basic norms and values which creates an suitable environment for knowledge practices to take thrive (Saeed, Tayyab, Anis-Ul-Haque, Ahmad & Chaudhry, 2010; Bagaja & Guyo, 2015).

The fifth practice of the study was organizational learning which involves the ability of the organization to learn by responding to changes in its environment with employees acting as the learning agents and finally, organizational structure was presented as the moderating variable as it defines the hierarchy of authority and the formal allocation of work roles to facilitate operation of various functions, (Cheng, Niu & Niu, 2014). Employee performance was presented as the dependent variable and was measured in terms of the desired behavioral outcomes displayed by an employee which create value in attainment of institutional goals (Vosloban, 2012).

According to Pradhan and Jena (2016), employee performance signifies an individual's work achievement after exerting required effort on the job which is associated with organizational objectives (Ngesa, Mbithi & Musiega, 2016) indicates that employee performance is reflected by different levels of engagement exhibited by employees during their day-to-day tasks. These engagement types were grouped into three namely: affective, social and intellectual engagements, all of which are linked to the expected level of behavior that an employee should exhibit to enable them perform optimally.

1.1.2 Public Universities in Kenya

Since independence, university education in Kenya has witnessed a rapid expansion in the East African region. It has grown tremendously, both in numbers of institutions and student enrolments (Aketch, Odera, Chepkuto & Okaka, 2012). According to the Commission of University Education (CUE) website, Kenya currently has 31 public chartered universities and 18 private chartered universities, (cue.or.ke). These changes have challenged the sector come up with new approaches of remain competitive and how to generate more income, (Gudo, Olel & Oanda, 2011).

In the recent past, universities in Kenya have come under continued pressure to conduct research that will propel the country to a knowledge-based economy in line with the Vision 2030 which is the blueprint for Kenya's industrialization agenda, (Vision 2030, Republic of Kenya). Universities now create linkages with industry stakeholders so that they are part of the growth towards innovation initiatives around the continent, (Sa, 2010). The country's Vision 2030 acknowledges the role played by education and training of Kenyans in equipping them with knowledge and understanding that (Vision 2030, Republic of Kenya).

There are three reasons why knowledge management practices are imperative as management approaches to improve employee performance in Kenyan universities. First, Universities are known to be knowledge-intensive organizations since production and application of knowledge is their core business, (Mungai, 2014). Second, social demand for education has led to a rapid growth of universities which has led to stiff competition among them for qualified faculty and students, (Mohamad et al., 2013). This implies that deliberate efforts must be put to develop and retain knowledge workers in these institutions in order for them to remain competitive. Thirdly, the Kenya Vision 2030 recognizes that for the country to move to a knowledge -based economy, universities must play a key role in producing educated people with requisite knowledge, skills and attitudes. If this is to happen, then further reforms and improvements particularly those involving the performance of employees in universities need to be undertaken, (Otieno, 2013).

1.2 Statement of the Problem

Traditionally, the basic assumption in the relationship between KM and employee performance is anchored on the belief that an organization's ability to generate new knowledge relies heavily on the employees' desire to learn and willingness to share it (Kianto et al, 2012, Liao, 2012, Jimenez-Jimenez & San Valle, 2012). In the era of the knowledge economy, knowledge is the main strategic resource and needs to be managed effectively for competitive advantage to be realized by organizations (Naicker, 2013). Employees play an important role as knowledge assets that create and add value to the goals of organizations (Tripathi & Agrawal, 2014). However,

the uniqueness of the commodity knowledge has generated debates regarding how organizations can manage their knowledge assets to improve their performance (Vosloban, 2012).

Managing this intangible knowledge involves converting individual knowledge into collective knowledge, and it has been argued that this can be done by applying specific knowledge management practices to enhance individual performance (Jokonavic, Zivlak, Okanovic & Dudak, 2020). Unlike physical resources, the organizational has little or no control of this valuable resource knowledge because, it largely depends on the willingness of an employee to use and share it (Tripathi & Agrawal, 2014).

According to studies by (Cranefield & Taylor, 2011; Mora, Deitmer & Vieira, 2010, Fullwood et al., 2013), universities worldwide, particularly those in developed countries, have adopted KM practices as a tools for improving individual and institutional performance. However, in developing countries like Kenya, studies by (Ogola, 2012; Murumba, Kwanya; Maina & Wangamati, 2020, Khamala & Adagala, 2014) show that the level of preparedness to implement some knowledge management practices in public universities in Kenya remains low and still at infancy stages due to several factors.

Empirical studies show that public universities in Kenya are faced with challenges of increased workloads, provision of inadequate training opportunities and difficulty in attracting and retaining qualified staff (Aketch, Odera; Dawo, Simatwa & Okwatch, 2012; Ng'ethe, Iravo & Namusonge, 2012). This culminates into low organizational loyalty and productivity; loss of knowledge and experience, and limited time for research and development activities for employees, (Kaburu & Embeywa 2014; Kilonzo, 2011; Odhiambo, 2011). This poses a challenge if the country is to move into a knowledge- based economy as articulated in Kenya Vision 2030, (Republic of Kenya, 2007).

Empirical evidences show a significant and positive relationship between KM practices and employee performance with 68% to 64% of organizations in developed

countries having or in the process of adopting knowledge management practices with the aim of enhancing employee productivity, (Suknunan, 2019; Supar, 2012). Studies by (Gichuhi, 2014, Dei & Van de Walt, 2020; Enakrire & Onyancha, 2020) also indicate a meaningful positive relationship between KM, organizational/employee and financial performances with 51.9% of firms adopting KM practices to retain expertise and skills.

Despite many empirical evidences, (Raisula, et al., 2012; Syed & Xiaoyan, 2013) that support the relationship between knowledge management practices and employee performance, the situation in public universities in Kenya presents a contradictory situation due to challenges aforementioned, which poses a clear gap that necessitates the need to investigate the relationship between Knowledge Management Practices and Employee Performance in Public Universities in Kenya.

1.3 Research Objectives

The study will be guided by the following objectives:

1.3.1 General Objective

The main objective of the study was to examine the relationship between knowledge management practices and employee performance in Public universities in Kenya.

1.3.2 Specific objectives

To achieve the main objective, the following six specific research objectives guided the study:

- 1) To examine the influence of competency management practice on employee performance in public universities in Kenya;
- 2) To assess the role of communities of practice on employee performance in public universities in Kenya;
- 3) To determine the influence of knowledge mapping practice on employee in public universities in Kenya;

- 4) To identify the effect of knowledge culture practice on employee performance in public universities in Kenya;
- 5) To assess the role of organizational learning practice on employee performance in public universities in Kenya;
- 6) To determine the moderating effect of organizational structure on knowledge management practices and employee performance in public universities in Kenya.

1.4 Research Hypotheses

H₀₁: Competency management practice has no effect on employee performance in public universities in Kenya.

H₀₂: Communities of practice has no influence on employee performance in public universities in Kenya.

H₀₃: Knowledge mapping has no effect on employee performance in public universities in Kenya.

H₀₄: Knowledge culture has no effect on employee performance in public universities in Kenya.

H₀₅: Organizational learning has no influence on employee performance in public universities in Kenya.

H₀₆: Organizational structure has no moderating effect on knowledge management practices and employee performance in public universities in Kenya.

1.5 Significance of the Study

Due to factors like globalization and advancements in technology among others, the knowledge and skills possessed by people are likely to become obsolete if not upgraded from time to time. Employees require to be provided with active support so that they can consistently improve the way they work and bring in new ideas to provide real value to the organization, (Mohammad, 2012). The main contribution of

this study research is therefore the creation of awareness among employees at all levels in public universities in Kenya the benefits of embracing KM practices as tools of not only encouraging personal growth of individual employees but also adding value to their contribution to achieving institutional missions. Employee performance in a knowledge-based economy cannot be underestimated and this study becomes significant to the following individuals and institutions:

1.5.1 Policy Makers

In the recent past, universities in Kenya have come under sharp focus to conduct research that contributes to the country's economic development especially in line with the Vision 2030 which is the blueprint for Kenya's industrialization agenda. Policy makers will use the findings of this study to evaluate the status of the various KM practices studies and what more needs to be done so as maximize the benefits of managing knowledge in the institutions as the country moves to a knowledge-based economy. The results of the study will assist policy makers in making informed decisions on how to review the management of the knowledge workers in line with the models of best practice in KM. The findings of this study may be important in providing insights into which practices in would have a significant impact when applied in the management of the valuable commodity, knowledge so that applicable policy actions can be undertaken to support the country's economic growth.

1.5.2 Practitioners in Public Universities

Universities are institutions staffed with professionals who work together to achieve the goals and objectives. Due to the growth in the number of the institutions, it has increasingly become necessary they invest in programs that support their employees to have requisite knowledge and skills in a fast changing world in order to remain competitive. This study will therefore provide the senior leadership in universities with knowledge on the benefits of adopting KM practices for sustained superior employee performance. Effective management of human resources significantly reduces resistance to change, and is likely to improve intentions of employees to remain with the institutions.

1.5.3 Knowledge in Human Resource Management

University-industry collaborations and linkages are important in building relevant manpower capacity required to enhance economic development. The findings from this study will strengthen the stakeholder's role by providing them with insights as to how they can build appropriate environments that promote the exchange and application of individual, group and organizational knowledge for better performance. From the findings presented by the study, top managers in the corporate world may be able to evaluate the needs assessment and thereafter design and implement programmes that effectively address any learning or performance gaps. The findings may also be useful providing deeper insights on the application of KM practices in organizations.

1.5.4 Research

Findings of this study will contribute to new knowledge in both commercial and academic research endeavors. The findings of the study will provide a better understanding of the relationship between KM practices and employee performance while clarifying the moderating effect of organizational structure. Students and researchers may use the findings as a basis for future studies particularly in areas that cover other factors within the management of KM that are likely to have an impact on the performance of employees in universities. Scholars around the world may gain an understanding of how different KM practices can be applied to encourage the desired behavior from the employees to not only create but also share their knowledge and contribute to organizational success.

1.6 Scope of the Study

The study focused on five KM practices which were used to determine their relationship with employee performance namely, competency management, knowledge mapping, communities of practice, knowledge culture and organizational learning all moderated with organizational structure. The study explored areas that may have direct impact on employee performance in the 31 public universities in Kenya. The focus was on how the specific knowledge management practices can be

applied to not only enhance employees' contribution to the organization but also impact on the overall institutional performance. One of the largest and older university, Jomo Kenyatta University of Agriculture and Technology (JKUAT) was used for the pilot study and therefore excluded from the study. The collection of data took two months given that the universities were located in different parts of the country and this involved some travelling.

The need for further research on the specific factors in each of the practices accords with the suggestions of (Minbaeva, Foss & Snell, 2009) who indicated that there was a need to study further specifically how KM practices can impact the development of knowledge. The study drew respondents from employees of the 31 public universities in Kenya which The respondents consisted of teaching and non-teaching staff.

1.7 Limitations of the Study

The current study limited itself to five key practices which were viewed as possessing dominant knowledge management attributes after extensive literature review. These practices included: competency management, communities of practices, knowledge mapping, knowledge culture and organization learning. These practices were all moderated with the variable organizational structure. The dependent variable was employee performance which is considered an integral part of overall organizational performance.

Although, there are alternative methods which could have been adopted to model the research, the study limited itself to simple and hierarchical modeling approach. Appropriateness of regression modeling was authenticated through execution of regression model diagnostic tests. Data was collected through primary and secondary sources. Even though there are alternative data types, the study limited itself to quantitative data which was gathered through use of questionnaires. To mitigate this challenge reliability and validity of research instrument was carried out.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature reviewed in this chapter presents the theoretical framework of the study; the variables in the study and the proposed conceptual framework, critique of the review is then presented; the research gap is discussed and finally a summary of the review is presented.

2.2 Theoretical Review

The study was anchored on four theories which included, Resource-Based View (RBV), Knowledge-Based View (KBV), Human Capital Theory (HCT) and Intellectual Property Theory (IPT). RBV focuses on the strategic resources of the firm as determinants of gaining competitive advantage. KBV suggests that knowledge development and deployment leads to superior performance. The main focus of HCT is that it is the people who have the capabilities that they can use to create economic benefits to the firm. IPT focuses on the rationale for the need to manage and account for knowledge as the main input and output of universities given its intangible nature.

2.2.1 Resource- Based View

RBV of the firm was initially introduced by Barney (1991) as a managerial framework to exploit strategic assets to achieve sustainable competitive advantage. According to RBV, it is significantly easier to exploit new opportunities using resources and competencies that are already available, rather than having to acquire new skills, traits or functions for each emerging opportunity (Almarri & Gardner, 2011). A strategic resource is an asset with characteristics like uniqueness and difficulty in copying or substituting it, (Ketchen & Short, 2015), and competitors are unable to find ways to take advantage of its benefits, (Nguyen, 2010).

The nature of the strategic resources is either tangible like physical assets or intangible like the knowledge and skills of employees, image of the firm and its culture, (Rothermel, 2012). This implies there that intangible resources can be viewed as more of strategic resources (that is, valuable, unique, hard to copy, and cannot be easily replaced) than tangible resources, (Barney, 1991).

Another key term in the resource-based view is capabilities. Whereas resources refer to ownership of resources, capabilities are about the ability of the organization or what it is able to do, (Ketchen & Short, 2015). According to Barney (1990), the relationship between the sources of advantage and relevant strategies can be challenging in practice and this means that managers must continually search for ways of developing and refining the strategies to achieve the desired balance. Ambula (2015) advocates that identification of core competencies and investing in organizational learning is one of the ways of nurturing and maintaining them.

This study suggests that the collective effect of competency management, communities of practice, knowledge mapping, knowledge culture, organizational learning moderated with organizational structure affect employee performance and by extension, firm performance is greater than the individual influence of predictor variables, thus lending support to the proposition of RBV and consistent with (Kehoe & Wright, 2013) proposition that a synergistic effect rather than a set of independent practices leads to competitive advantage.

2.2.2 Knowledge Based View

This theoretical concept is of the view that knowledge has a life cycle in terms of its applicability within an organization or at the external environment as professional knowledge. The focus of this study is on the use of knowledge for organizational for internal purposes. As an outgrowth of the resource-based view, the knowledge-based view focuses upon knowledge as the most strategically important of the firm's resource (Cheng, Wang & Qu, 2020). According to this view, its rationale is based on the fact that certain key decisions need to be made by the top management regarding the management of knowledge.

One decision is on the development of professional knowledge internally and modalities of doing it with an option of when it would be desirable to draw upon external expertise, and internal and external knowledge when jointly used through consultants. A third could be on how the internal knowledge can be marketed beyond organizational boundaries (Salina & Wan Fadzilah, 2010). This study focused on how the internal knowledge can be leveraged through the use of communities of practice and knowledge mapping, within a culture and structure that encourages knowledge sharing. Recent studies have pointed out the role of knowledge management (KM) and employees' knowledge sharing practices (Singh, 2019) in the enhancement of firm performance and the development of a firm's competitive advantage (Santoro, Bresciani & Giudic, 2019)

This view further proposes that the aforementioned decisions and others can only be effective if organizational members are accorded professional support in their day-to-day activities which include clarity of instructions, free flow of information, constant review and improvement of recurring tasks and transparent coordination techniques, (Salina & Wan Fadzilah, 2010). Furthermore, a study by Aminga (2015), recommends implementation of KM practices policy to improve institutional accountability and performance in public universities.

Another study by Gichuhi, (2014) also recommends the adoption of KM strategies to empower employees with techniques of creating and utilizing their knowledge. All these basic functions were aligned to the objectives of this study which were focused on combining management of employee core competencies within a knowledge culture and supportive structures of communities of practices, knowledge mapping and organizational learning.

2.2.3 Human Capital Theory

This theory contends that it is the responsibility of an organization to protect and maintain the standards of its core competences by investing in continuous learning and development programs (Becker, 1964). The theorists of human capital approach to knowledge management argue that the concept of knowledge and its management

can be understood in the context of its intellectual capital (Gillies 2011) and that the capacity of people to learn is of equal value with other factors of production

A study by Gillies (2017) suggests that the impetus to improve employee skills is driven by the desire to increase their productivity. This implies that the wider the variation in skill(s) each employee has from another, the higher is their value to the organization since it provides it with a unique set of skills not easy to be copied by their rivals, (Ulrich & Lake, 1991). In addition, Holden & Biddle (2017) opine that it is the individual skills and knowledge within a firm that amounts to its economic advantage at the marketplace.

According to Barney (1991) employees can only be valuable to the organization if they meet four requirements: first, the skills must be valuable to the extent of impacting positively to the process of production through increased quantity and quality to sustain the customer base; second, the uniqueness of the skills possessed by employees be that which increase within a given environment and thirdly, the overall value of the human capital investment cannot be matched by competitors. Finally, technology or other substitutes are not able to override or replace a firm's human resources if they are to provide competitive advantage over the long term.

Drawing from the above propositions, this study proposed that KM practices leads to added value to universities' processes, they increase the skills possessed by the knowledge workers which in turn contribute to improved institutional performance.

According to Bae and Patterson (2014), the survival of modern day organizations depends on the degree to which they invest in supporting their knowledge workers as sources of desired organizational performance. In a knowledge economy, it is the inherent abilities and skills of the workforce operating within suitable structures, practices and policies within an organization that add value it is intellectual or knowledge capital (Mahoney & Kor 2015). The challenge in managing this capital is that the firm has no control over it unlike organizational knowledge (Coff & Raffie, 2015). It is therefore clear why management of knowledge as a key contributor to individual performance has received much attention as a key strategic issue in many organizations.

2.2.4 Intellectual Property Theory (IPT)

The theory grew out of the proposition that intangible assets like technical know-how and customer loyalty are of much higher value than physical assets (Wiig, 1997). Intellectual property rights play an essential role in the safety and protection of the knowledge produced by a firm's employees in the knowledge economy (Modonado-Guzaman, Lopez-Torses, Garza-Reyes, Martinez-Couarrubias, 2016). Knowledge is increasingly being recognized as the key asset of the modern economy and is therefore strategically important that it is managed and protected by organizations, (Passi, Luoma & Valkokari, 2010). The theory postulates that intangible assets like customer loyalty and technical know-how and trademarks are of much higher value than the physical assets of an organization because they control and provide power at the market place (Perri & Adersson, 2014).

IPT leans strongly on the value of knowledge in an organization. The theory is about assets like employees' knowledge and skills and their individual connections, the organizational culture and structure, and the type of technology used that gives a company both internal and external powers, (Passi et al, 2010). In this theory organizational knowledge is seen as key and whose management involves striking a balance between existing knowledge, what is required, and what its relevance to the projects and programs of the organization is, commonly referred to as the "knowledge portfolio". It is necessary that the portfolio is coordinated and utilized for optimum results. (Baskerville & Dulipovici, 2006).

The creation of knowledge in universities is through research or through dissemination of the same to students in preparation for building networks with the various stakeholders. It is a fact then that universities' inputs and outputs are to a large extent intangible by nature, (Can˜ibano & Sa´nchez, 2008) which need to be managed in a balanced manner in order to obtain desired employee outcomes. Furthermore, this calls for continuous research and improvement of existing knowledge in order to remain relevant in a dynamic knowledge-based environment. The need for management and accountability for knowledge possessed by employees

justifies the implementation of appropriate KM practices to achieve desired employee outcomes, (Ramirez, 2011).

In conclusion, although the theories present different perspectives, they are useful in explaining the concepts of the study from the management of core competencies, to managing the existing knowledge, building platforms for sharing that knowledge, creating a culture that encourages growth of knowledge within structures and systems that support their implementation to influence superior performance among employees in public universities in Kenya. Given that each theory has some limitations, this study sought to integrate the ideas of the various theoretical approaches to enrich the conceptual framework of the study. Since knowledge and employee skills and abilities are intangible assets which adhere to (Barney, 1991) conditions namely rare, valuable, imperfectly imitable and non-substitutable, RBV provides the main anchorage for the study.

2.3 Conceptual Framework

A conceptual framework is a graphic representation of research variables, and how they relate with one another which have to be in a research (Miles & Huberman, 1994). The schematic diagram presented in Figure 2.1 shows the relationship between seven variables of the study namely: competency management, communities of practices, knowledge mapping, knowledge culture, and organizational learning (independent variables); organizational structure (moderating variable) and employee performance (dependent variable). Knowledge management practices were defined by nine elements: employee competency mapping and employee monitoring and development, collaborations and alliances, knowledge mapping initiators and champions, market and professional cultures and individual and institutional learning processes. Centralized and integrated organizational structures represent the moderator elements while task, contextual, adaptive performances and work satisfaction will indicate outcomes of employee performance in public universities in Kenya.

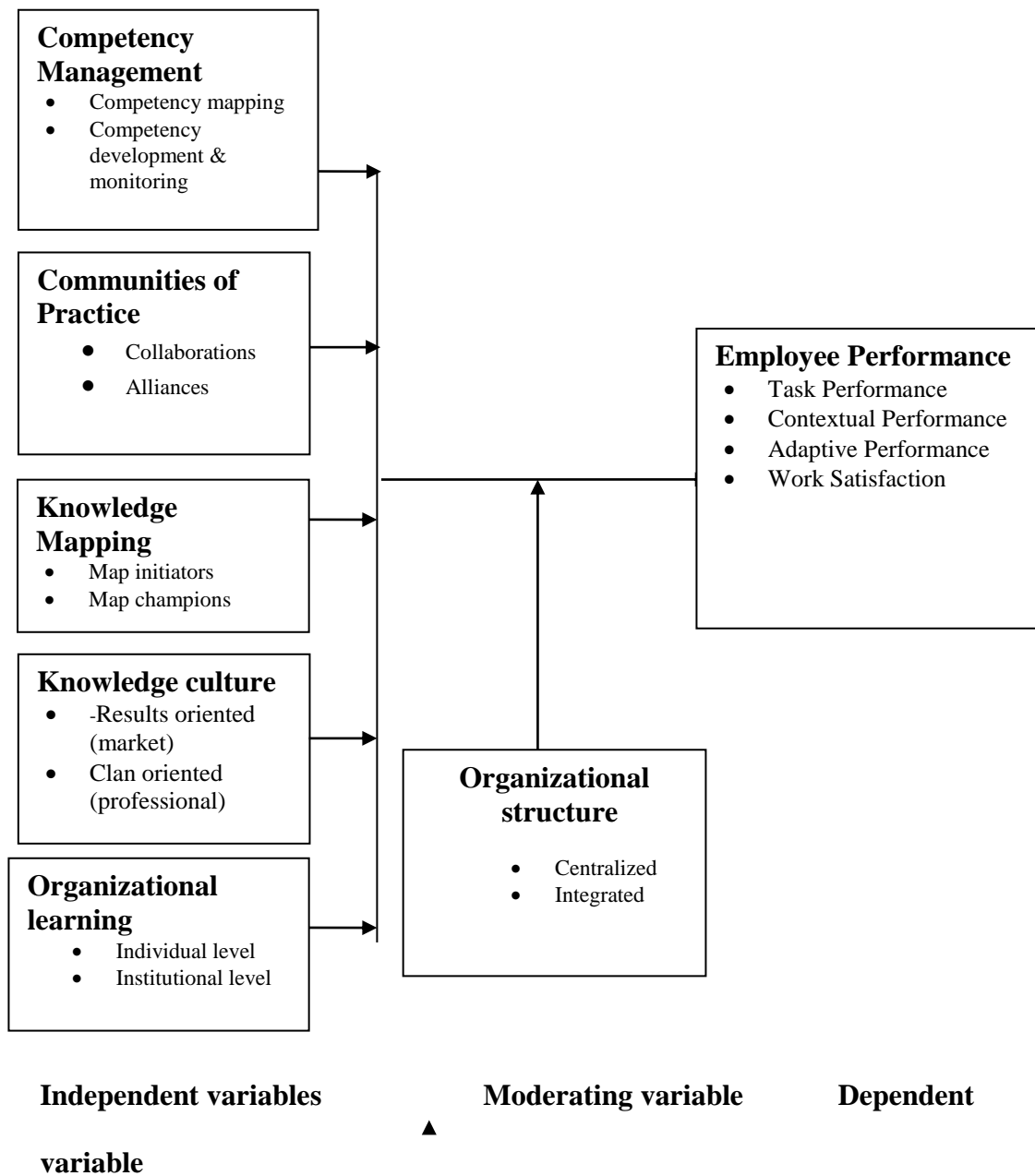


Figure 2.1: Conceptual Framework

2.3.1 Employee Performance

According to Pradhan and Jena (2017), employee performance signifies an individual's work achievement after exerting required effort on the job which is associated with organizational objectives. In the study by Mohamad (2012), employee

performance was viewed as what an employee while carrying out respective tasks and responsibilities is able to achieve by way of actual outcomes, during a specific time zone. If viewed in this way, performance is then seen as a series of achievements/results within a defined period hence requires a broad spectrum of evaluative techniques to accurately measure and reflect the pattern of performance during the time.

According to Tripathi (2014), performance is a multi-component concept and on the fundamental level one can distinguish the process aspect of performance that is behavioral engagement from the expected outcome. Garvey (2010) notes that the changes in the business environment require a wider range/scope of evaluation covering behaviors expected from either party that is from both employer and employee perspectives. This is further alluded by the study of (Ngesa, Mbithi, & Musiega, 2016), where they indicated that employee performance could be evaluated at three levels of engagements: affective engagement measures the attitude and level of satisfaction that employee exhibits while performing their tasks, social engagement evaluates how proactive and adaptable the employee is at enhancing how they work and any changes that arise, and finally the intellectual engagement measures the level of commitment and involvement while in their carrying out their jobs. This concurs with performance indicators stated by (Güngör, 2011) which included good interrelationships, efficiency and effectiveness, engagement and involvement.

In view of this broad measurement spectrum, this study adopted four indicators to measure the levels of employee performance: First is task performance which describes how efficiently and how effectively an employee performs their tasks and ultimately impacts on organization's objectives (Pradhan & Jena 2017). It was measured in terms of how well the employee is able to accomplish their tasks with least time and effort, that is efficiency and the extent to which the intended result is achieved that is effectiveness and how desirable in terms of time is the completion of the job affecting achievement of institutional objectives that is timeliness in delivery. The second indicator of employee performance the study adopted was contextual performance. This is known as the citizenship behavior and exhibited by an

employee's willingness to go an extra mile to ensure the university is operating effectively even though it will not directly affect their productivity (Menezes, 2012).

This was measured in terms of creativity, contribution and participation in allocated work assignments. The third measure was adaptive performance which is the degree to which an employee is able to be proactive and react to changes at the workplace in an appropriate manner emphasis being on versatility and flexibility which are virtues that lead to positive attitudes particularly in times of change and better management of stress (Shoss, Witt & Vera, 2012).

Final measure of employee performance was work satisfaction which evaluates the level of an employee's satisfaction with the job in terms of how they feel fulfilled and potential career prospects. It is one of the most researched phenomenon in the domain of human resource management and organizational behavior (Culibrk, Delic, Mitrovic & Culibrik, 2018). A review of literature shows that job satisfaction which is described as the level to which an employee likes or dislikes their current job (Kianto, Vanhala & Eilmann, 2016), affects the levels of motivation and commitment to the institution, and ultimately makes them consider separation.

Factors that influence an employee's intention to remain with an employer have been studied widely and include, reward and remuneration; nature of job, opportunities for advancement among many others (Garvey, 2013). Literature review shows that knowledge management has been studied widely but KM practices have not been directly linked as possible factors that can improve employee performance levels. To bridge this gap in the literature, the study sought to investigate how the study variables representing KM practices can influence the performance of employees in public universities Kenya.

2.3.2 Competency Management

Competencies refer to the preferred attributes, skills and abilities required by an employee to do their job satisfactorily. These competencies vary depending on the type work and level in an organization but some basic similarities can be found in all jobs in terms of the quality and quantity of expected outcomes (Garvey, 2013).

Competency management is the way companies manage organizational competencies of groups and individuals (Silva, Ribeiro, Alvarez, Cagnato, 2019). As a method of management, its primary objective is to define the competencies that are needed for the organization to obtain and continuously sustain success according to organizational goals. Therefore, competency management is considered important for the achievement of the organization's goals, to improve business processes, and customer services (Skorkova, 2016). It is also believed that, for an organization, adopting competency management means to assume a strategic posture aligned with the established organizational goals, whatever they might be. This aspect allows us to infer that this management method can be used in different contexts and that there are benefits that can be obtained from the use of the explicit process of strategic formulation (Prabawati et al, 2017).

Competency management supports the integration of human resources planning with business planning by allowing organizations to assess the current human resource capacity based on their competencies against the capacity needed to achieve the vision, mission and business goals of the organization. Specific human resource strategies, plans and programs to address gaps (e.g., hiring and staffing; learning; career development; succession management; etc.) are then designed, developed and implemented to close the gaps (Purushotham, Somasundaram, Krishna, Naik 2015). Competency management is critical for organizations that seek to align their workforce with business objectives. However, ensuring that organization staff members have the proper skills and competencies to consistently perform the tasks may pose a challenge. A system used to evaluate current strengths and needs within an organization and then implement the necessary corrective actions needs to be put in place. Competency management is a proactive gap analysis approach (Simon, 2010).

Competence is the state or quality of being adequately or well qualified, having the ability to perform a specific role. Identifying core competencies of employees helps organizations to identify golden employees & helps them to develop those who have a chance to prove themselves in the long run. Competencies determine the value and

potential of an organization's intellectual capital and its ability to sustain competitive advantage (Prusak, 2013).

For the public universities to achieve desirable commitment levels, employees need to be motivated and provided with triggers of job satisfaction like opportunities for advancement and training. This has to happen within a supportive culture which provides performance-contingent incentives and room for creativity and innovation, right jobs for the right skills, adequate communication channels and appropriate leadership styles, (Lukasiewicz, 2009).

As a KM practice, competency management is a systematic process that entails the following steps: First is identification and assessments of existing employee competencies so that those viewed as having a direct impact on the organization's core business activities are singled out and reviewed for relevance (Kodwani, 2009). The second stage is about maintaining core competencies: The status of the main knowledge assets (competencies and skills) is then recorded and steps are taken to ensure that they are equally shared within the organization in an effective manner. Third step is competency diagnosis which involves identifying the skills gap and/or challenges that may exist that may hinder the institution from achieving its mission and vision (Schiuma, 2012).

The fourth stage is about developing competencies: This involves enhancing and coordinating knowledge assets within an environment that encourages continuous learning and development. This is a complex undertaking since attainment of sustainable competitive advantage requires a resource that is cannot be copied easily (Woodman, 2011). The process calls for a multi-faceted approach using different techniques to influence the growth of skill and competencies (Lei, 2014).

Lastly is competency monitoring which is the evaluation of employee performance to ascertain strengths and weakness and areas of potential improvement in order to ensure that the competency remains relevant in the foreseeable future? The study focused on the first step which is competency mapping to identify current competencies and any gaps that may exist and putting strategies in place to sustain

them, and the last step which was competency development and monitoring, concerned with building competencies through continuous professional support and performance evaluation (Prusak, 2013).

2.3.3 Communities of Practice

Communities of Practice (CoP) are groups of people, who share a common interest in a particular area of knowledge, and learn by exchanging and sharing ideas as they interact regularly on how they can perform better as professionals, (Salalah, 2011). CoP not only provide a forum for individuals to learn from each other, it also focuses on the daily challenges at work, building creative and innovative ideas of improving ways and tools of working and developing issues in the particular field and identifying what has been obsolete and what remains relevant. Secondly, for organizations to remain invincible in the face of competition, they need to access all kinds of knowledge, (Lei, 2014).

This can only occur if regular interactions and sharing of knowledge takes place between experts. Thirdly, CoP have received recognition as important pathways for KM to promote the development of an organization's intellectual capital. This is done through supporting and encouraging knowledge sharing platforms and putting in place policies that encourage continuous learning and development among employees (Mohajan, 2017).

Universities hire professionals with varied expertise whose primary role is to contribute to the generation and improvement of new and existing knowledge (Cranfield, 2011). Since they are known to be knowledge organizations, it is imperative for them to improve how they manage their knowledge to be able to react appropriately to emerging issues within their competitive environments.

These environments both experience rapid developments and changes which require establishment of inbuilt capabilities to respond and manage the forces of change, (Kilika, et al., 2012). This implies that the management of the knowledge workers needs to be well organized and coordinated so that as professionals they are able to

see value in participating in sharing platforms like CoP and the universities also stand to gain by encouraging the practice.

It is important that the balance between implementation of KM practices and institutional objectives is handled tactfully. There is a risk that if the KM practice is too broad then it may lack adequate ownership from relevant individuals since expectations may be unclear to many and may ultimately seem like a top management driven initiative. Similarly, if the initiative is too narrow, then it may stifle adequate levels of interactions between the experts to achieve desired outcomes, (Venkatraman & Venkatraman, 2018). It is important to mention that the basis of developing CoP is to not only enrich interactions internally and externally so that institutions get access to useful knowledge, but also enrich their capacity to build creativity and innovation ideas by sharing valuable knowledge for its current and future needs (Dobrai, 2011).

According to Wenger and Wenger (2015), interactions between employees plays an important role especially in view of the tacit knowledge which is largely personal and is not easily shared or exchanged unless it is within a suitable context or environment that encourages that to happen. Many studies aforementioned (Venkatraman & Venkatraman 2018; Dobrai, 2011; Wenger & Wenger, 2015), all agree that knowledge can be generated in different ways be it through training, education, experience, or sharing among others in the context of interacting as a group both within and outside the institution.

This study proposes to measure the extent to which universities can foster collaborations/alliances both internally and externally as ways of improving their employee's knowledge base which include, partnerships with other institutions, attendance to conferences and seminars, benchmarking, among many others (Bolisani & Scarco 2014).

2.3.4 Knowledge Mapping

The management of knowledge in organizations today lies on the ability of the organization to effectively access and leverage the knowledge they currently possess

by establishing what is and is not useful or relevant for now and future purposes. In an attempt to deal with this challenge, many organizations create a record of knowledge, which is known as the knowledge spread (Balaid, 2012). The main dilemma even with an established inventory of knowledge is the ability to access the relevant knowledge as quickly as would normally be required. To address this challenge, organizations have embraced knowledge mapping as a technique which enables a structure to be created out of a large amount of useful and complex information available at any given time (Davies, 2011).

According to Watthanon and Mingkhwan (2012), employees would normally search for knowledge from either their colleagues, different types of documents or the internet. This knowledge is located in various places and forms, and often takes some more time to get what is required in a timely fashion impacting on employee performance. A knowledge map becomes useful in simplifying the navigation and easily pinpoints where exactly the required knowledge can be found within a knowledge environment, (Balaid, Rozan, Hikm & Memon 2016).

According to Lee and Fink, (2013), a knowledge map only directs or guides the user to the location of required knowledge but does not hold any in itself. It is therefore a useful method for sharing knowledge within organizations and helps in the creation of groups of people who may share a common concern and easily link them to particular kinds of knowledge that they may find useful. In the same breath, knowledge mapping helps organizations distinguish between what is important knowledge and whether or not it needs to be protected, or if it requires a review in view of emerging issues (Zhang & Zhang, 2017).

Since knowledge presents itself in various forms like tables or databases, a knowledge map not only saves time in tracing the exact knowledge required but in the long run save costs for the organization by improving implementation of processes such as learning & development and recruitment, (Watthanon & Mingkhwan, 2014). Knowledge maps are also able to enhance the flow of information among organizational members and in coordinating research projects and programs by facilitating sharing relevant information, (Lee & Fink, 2013).

Knowledge in universities is regarded as the key resource for production as well as its final product.

Studies by Gichuhi, (2014) and Ogola, (2010) show that the KM function in public universities in Kenya mainly focuses on the activities of Library Department viewed as the main repository centre for knowledge. The role of KM in other functional areas in the institutions is still in its initial stages and therefore not fully embedded in their processes. If fully developed as a practice, knowledge mapping can be useful to counter the challenge of how to organize and coordinate the vast amounts of knowledge that becomes available in an ever changing knowledge environment of academic departments (Murtaza, 2015).

One way of doing this can be through development of effective ways of training employees and forging stronger relations with external stakeholders (Balaid, et al, 2012).

Knowledge mapping as a practice is made up of four main players. First is the knowledge initiator/maker who handles the details of how the knowledge map will flow which is graphic tool used to show where and who owns particular kinds of knowledge in a specified setting. Second person is the map user who uses the maps to complete a task and generate learning opportunities or gaps; the map innovators monitor and review the maps by making any changes to the current maps on a need to need basis.

Finally, are the map champions who drive the agenda for knowledge mapping by advocating for its benefits in the organization (Lee & Fink, 2013). The type of map champion depends on the power they yield within the structure of the organization. A top management driven champion has the adequate support to push the agenda of the knowledge map in a stronger way.

A people driven champion has the support of the employees and one includes participation of members with a common concern/ interest which creates a healthy knowledge base, (Ho, 2009). The study adopted knowledge map initiators and champions as the measurable sub variables because they provide the necessary push

for knowledge mapping development as a useful tool by promoting its agenda on an institutional-wide basis (Skorkova, 2016).

2.3.5 Knowledge Culture

Every organization has a culture that is unique and distinct from any other, which evolves over a long period of time and is a reflection of the core values, beliefs and norms of the organization. An organization's culture presents itself in two clear ways, the visible and the unseen. The visible aspect is about the values, beliefs and philosophy of an organizations whereas the unseen is about the unspoken basic assumptions, values and norms that directs how employees' behavior and their attitudes in the organization (Tseng 2011).

The culture of an organization influences how it is able to create a suitable environment to improve the performance of its employees (Cole, 2011). According to Cavalier and Lombardi (2015) the "psychological climate" of the organization, can either support or present a hindrance to implementation of the KM process in most organizations. An organizational culture that is supportive in promoting knowledge creation initiatives and sharing of the same is in a better position to build a strong knowledge base which has a direct relationship with performances both at individual and team levels (Davoren, 2015).

Knowledge culture can therefore be defined as that part of an organization in which its values, beliefs and norms influence the manner in which knowledge is utilized to attain competitive advantage (Eaves, 2014). The extent of the influence of this type of culture is to a large extent dependent on the type that exists in the organization and the willingness of the employee to share their knowledge (Pirkkalainen & Pawlowski, 2014; Pawlowski & Bick, 2012). The outcome is a function of the willingness of the individual to share their knowledge with the organization.

Organizational culture presents itself in various forms. The results-oriented culture encourages employees to innovate so as to be able to create new knowledge, by recognizing and appreciating employees' individual preferences, (Cole, 2011). Tightly controlled organizations have formally well written policies and standards,

which encourage attention on efficiency and timely delivery (Shih and Huang, 2010). It is not easy for employees to create or share knowledge in such cultures. In job-oriented cultures, focus is on effective performance of tasks and pays little attention to the needs of the employees (Suppiah & Sandhu, 2011). This type of culture is about employee productivity only and elicits a higher degree of commitment and loyalty to the organizations. In this type culture, employees exhibit willingness to share their own knowledge so as to improve the way they work (Woodman and Zade, 2011).

A closed cultural organization tends to be very inward looking and rather secretive to a good extent. The induction period for a new entrant takes a little longer before they are fully accepted and their knowledge sharing is tightly controlled. Lastly in professionally driven cultures, individuals develop a sense of identity from the kind of work they do, even though their personal values may not be consistent to those of their employer (Chang & Lin, 2015)). They continue to state that a professional culture promotes a professional community who share a common concern and values and tend to behave as per their norms and beliefs. Employees who regard themselves as professionals are committed to their practice and are normally guided by a professional code of conduct.

According to Intezari, Taskin & Paulen (2017), successful KM initiatives rely on three main types of organizational infrastructure: knowledge culture, organizational structure and knowledge technology. Each of these infrastructures are critical for organizations to manage their culture effectively, however, it is the knowledge culture that p the most fundamental role as it deals with people, the main source of knowledge (Cavalier & Lombardi, 2015). This study adopted the results-oriented and professional-oriented cultures to measure the extent to which their contrasts can have an impact on the knowledge culture in public universities in Kenya and they are also the types commonly found in academia (Eaves, 2014).

2.3.6 Organizational Learning

According to Chiva, Ghauri and Alegre (2014), organizational learning (OL) is the process through which organizations change or modify their mental models, rules, processes or knowledge by maintaining or improving their performance. Since knowledge is ever changing and its management and creation is inherently challenging, organizational learning provide means by which it can be improved by identifying and reviewing mistakes in order to continuously remain competitive (Cheng, Niu & Niu, 2014).

Organizational learning is about effective management of organizational assets by engaging in development of new knowledge (Wu & Chen, 2014). The learning process takes place by combining four tools: first is using inside and outside sources to acquire knowledge; second is ensuring that employees all over the organization get to know about the knowledge acquired known as knowledge spread; third is analysis by individuals so that they make sense of the knowledge by creating forums for interactions and sharing which leads to effective decision making; and, finally, the organizations stores the knowledge for future use in repositories or rules and regulations, (Liao & Wu, 2009).

Senge (1990) indicates five principles that can be applied in an organization that engages in learning activities. These principles are developed at four distinct levels within the organization: one is at the individual level where the individual learns and becomes an expert in a given area; two is at group level which is learning that takes place within a group or team, three is at the organizational level which involves setting up a structure and culture that promotes learning activities; and four is at inter-organizational level which is learning from each other especially from understanding the rare competences possessed at different functional areas. The last principle of organizational learning, states the effective learning at the four levels can only take place effectively if it is a central senior management activity driven by their commitment by according necessary support at each level and promote their interactions.

The concepts of single-loop and double-loop learning types of learning are important in organizational learning. Single-loop learning at the four levels that is individual, group and organizational and inter-organizational happens when employees continually analyse their work processes by comparing actual outcomes and the standard set with an aim to make improvements along the way. In double-loop learning on the other hand, participants at these levels of learning challenge why and how the processes are actually carried out with an aim of improving the methodologies, (Rerup & Levinthal, 2014; Chiva, Grandi & Alegre, 2010).

Jimenez-Jimenez and Sanz-valle (2011) further alludes that effective organizational learning can only take place in the presence of an environment that is not stressful and contains adequate incentives and motivation levels to enhance job satisfaction and employee commitment. Other factors that promote organizational learning at the four levels according to (Chiva et al., 2014) include: opportunities for learning for individuals, culture of sharing and creativity, learning in a team to build on interpersonal skills, employee empowerment and creating systems and forums where individuals can interact and share what they have learnt. The role of leadership cannot be ignored in promoting any type of learning since they are the drivers of the implementation of all other factors within the organization.

A study by Sisia (2015) opines that knowledge management influences organization learning and recommends that organizations should invest in creating departments with the main responsibility of overseeing the implementation of KM processes. As a practice, organizational learning relies on the suitability of a supporting environment that encourages learning and knowledge creation for effective learning to take place (Ives & Combs, 2012). The culture has to be one that people value and trust one another and feel self-driven to come up with new ideas to improve the methods of working and learning from each other's unique abilities and competencies, (Ibua, 2014; Suppiah & Sandhu, 2011). As Rerup & Levinthal, (2014) note, organizations that survive the competition of the modern environments will be those that empower their people to innovate and continuously learn at all levels. This study measured learning at individual and institutional levels since individual learning empowers the

employees to create and share new knowledge hence perform better and institutional learning thrives within a structure and culture that encourages learning activities.

2.3.7 Organizational Structure

Organizational structure is the context within which relationships between jobs, systems, operating processes, people and groups are coordinated in order to achieve organizational effectiveness (Ahmady, Mehrpour, Nikooravesh, 2016). According to (Mahmudasalehi et al, 2012), organizational structure can also be viewed as the formal allocation of duties and tasks in an organization to facilitate organization and control towards a common goal. This organization of the structure ensures that the allocated tasks are clear in terms of what is expected from each individual. Organizational structure then can be seen the main propeller of change since it provides the structure within which all processes and decisions take place.

According to Dedahanov, Rhee and Yoon (2017), organizational structure can be viewed from different angles: the line of authority dimension consists of the various positions that exist in an organization, a kind of organizational chart; the specification of distinct jobs done within the organization are covered in the functional component; and the reporting relationships amongst positions and distance from the seat of power reflects the centrality dimension. Communication among employees is critical in the implementation of KM practices and the influence of organizational structure cannot be overemphasized. Secondly, organizational structure indicates exactly where and who makes decisions regarding management of knowledge in any organization and thirdly it ensures that new ideas are implemented in an efficient and effective manner by incorporating changes in daily activities to influence performance (Zheng, Yang & McLean, 2010).

Knowledge management practitioners argue that any organizational structure has a direct impact on how effectively knowledge can be transferred or created within it. This is because organizational structure produces knowledge resources since they are enriched in structural relationships when employees create, apply and share knowledge. This can be reflected structurally by the pace at which knowledge flows

through the various ranks to become effective in terms of its relevancy (Liao, Chuang & To, 2011).

This study focused on the two important aspects of organizational structure namely: centralization and integration because they define points at which decisions are made in the organization which can facilitate the implementation of KM practices in different ways. Centralization refers to the extent to which the center of authority in an organization revolves around a central point so that all decisions are made at that point. Integration on the other hand is the extent to which members of the organization are able to engage in their various activities but coordination is done through formalized systems, (Steiger, Hammou & Galib, 2014). The two dimensions play an important role in directing and controlling how an organization ultimately performs (Liao, et al., 2011).

Table 2.1: Operationalization of Variables

Variable	Prox y	Indicator	Category of Data	Measur e
Dependent variable				
Employee Performance	EMP	Task Contextual Adaptive Work Satisfaction	Ordinal	Likert Scale
Independent variables				
Competency management	EC M	Competency Mapping Competency development & monitoring	Ordinal	Likert Scale
Communities of Practice	CoP	Collaborations Alliances	Ordinal	Likert Scale
Knowledge Mapping	KM AP	Knowledge Map Initiators Knowledge Map Champions	Ordinal	Likert Scale
Knowledge culture	KCU L	Result oriented (market) Clan oriented (professional)	Ordinal	Likert Scale
Organizational Learning	OLE R	Individual level Institutional level	Ordinal	Likert Scale
Organizational structure	OST	Centralized Integrated	Ordinal	Likert Scale

2.4 Empirical Review

2.4.1 Competency and Employee Performance

Competencies are those skills and behaviors which an individual has which contribute to how well they are able to perform their roles (Silva et al, 2019)). Competency can also constitute an individual's capacity to perform according to expectations by exhibiting desirable abilities which are measurable (Eicker, Kochbeck & Schuler, 2014). Competency management as a practice is therefore about managing these competencies so that they create value to the organization by contributing to its competitive advantage (Balaid, et al., 2016).

A study by Zaim, Yasai & Unal (2013) investigated the impact of individual competencies on organizational performance in Service industries in Turkey. Findings revealed that the relationship is positive and that the management of competencies is a significant contributor towards individual performance since it provides job satisfaction and commitment and eventually intention to stay with the organization. Another study by Sparl, Zindarsic, Kasper, Muhlbache & Kovac (2013) on the management of competencies and organizational performance in Slovenia and Austria showed a positive relationship between individual behavior and organizational behavior with managerial leadership skills being most significant. Both of these studies were limited to a few service sectors and countries thus the results cannot be generalized to a wide extent.

A study by Prusak (2013) investigated the effect of managing employee competencies as one of the ways of developing intellectual capital in companies in the United Kingdom. The study concluded that competencies play a key role in evaluating the current skills and building the potential of the employees in an organization which ultimately impact the status of its intellectual capacity. The results presented in the study apply only to selected aspects (motivation and job design) of the relationship between competency management and employee performance, and cannot therefore be applied to make broader conclusions and generalizations about the relationship.

A study by Murtaza (2015) investigated the gap between employee competencies that existed and those required in the Tourism sector in India and concluded that efficient management of those competencies enhances the functions of the various departments and contributes positively to the overall performance and satisfaction of the employees. The results emphasized the need for resource allocation in terms of funds and time for continuous training and development programs to achieve higher performance.

A study by Ngesa et al., (2014) on the influence of performance management practices on employee engagement in public universities in Kenya indicated that there is a positive correlation between performance management review and

employee engagement in these institutions. Another study by Yusuf & Wanjau (2014) on factors affecting implementation of KM practices in State Corporations in Kenya found that Government organizations employees lack the requisite skills and competencies to effectively implement the practices.

As a KM practice, competency management starts with identifying the competencies currently available and matching them to what is required. These competencies have then to be developed in line with the strategic goals of the organization and continually reviewed to keep them relevant and in this way, they can influence employee performance (Cranefield & Taylor, 2011). Methods of building employee competencies include job design, benchmarking, and training and development among other ways (Skorkova, 2016). This study focused on assessment of existing competencies, then mapping them to institutional requirements by developing and monitoring them to determine how they can be made more effective in their relationship with employee performance.

2.4.2 Communities of Practice and Employee Performance

Communities of Practice (CoP) are informal groups of people who engage in social learning on a subject of common interest for a period of time which may be medium or long term and, in the process, share ideas on how they can improve specific aspects of doing things in the shared concern (Laves, 2014). A study by Chong, Yen & Gan, (2014) on the Strategies and Barriers of knowledge sharing among faculty in universities in Malaysia concluded that performance evaluations that were deemed fairly done and rewards that were non-financial in nature were associated with knowledge sharing intentions in private universities while financial rewards and recognition, opportunities to research and publish influenced the same in public universities. This implies that employees do require some level of motivation to share and participate in CoP.

According Lopez-Saez, Real and Valle (2010) who studied the utilization of the Socialization, Externalization, Combination and Integration (SECI Model), on KM processes concluded that the management of tacit knowledge requires a different approach from the management of explicit knowledge because of its inherent

nature, embedded in the human mind. This approach of the study revealed must be appealing to such an extent that the individual develops a desire to share it. CoP are viewed as one of the ways of promoting innovation by facilitating the sharing of the tacit knowledge within a group.

A study by Bagaja and Guyo (2015) on the impact of sharing knowledge on the performance of public universities in Kenya showed that the sharing practice among employees in the institutions can only be effective if there is a major change in employee behavior and the organizational culture. This is echoed by a study of (Israilidis, Siachou, Cooke & Lock 2015), which sought to identify the factors that affect knowledge sharing in a multinational organization. The study found that employees' ignorance on the benefits of sharing knowledge is likely to hinder their willingness to share it which has a negative impact on the organization's performance.

The study concluded that lack of awareness limits the ability of an individual to appreciate the impact of changes in the environment due to their poor adaptability skills. Employees' performance relies to a large extent on what they know, and are able to do, which can then be enriched by engaging in knowledge sharing activities like CoP, being trained or attending seminars and conferences (Venkatraman & Venkatraman, 2018). Understanding of individual variables that contribute to knowledge sharing behavior is important if the public universities are to manage their knowledge assets effectively for improved performance.

According to Mugalavai and Muleke, (2016) study on CoP in selected public universities in Kenya, findings indicated that although a high volume of knowledge is generated within the institutions, there were insufficient sharing mechanisms in place to enable the knowledge creators contribute to existing body of knowledge. This was attributed to lack of recognition and incentives to do so and recommended the development of a knowledge sharing model to suit the needs of the institutions.

The benefits of CoP on employee performance have been demonstrated as significant particularly in relation to sharing of knowledge. CoP enrich personal skills; facilitates buildup of networks and collaborations; group members develop a

standard language; and develop a professional code of ethics that members must follow (Dobrai, 2011). As organizations that are primarily engaged in the knowledge business, public universities in Kenya need to focus on enhancing employee performance by improving the management of its knowledge in order to respond effectively to the rapid changes that occur in their environments and remain relevant by investing in the development of CoP as a KM practice.

2.4.3 Knowledge Mapping and Employee Performance

The growth of information technology has produced enormous data which has had a significant impact on and led to debates on how both individual and organizational knowledge can be managed. The challenge for organizations is how to use the knowledge to gain competitive advantage. It is for this reason that knowledge mapping has emerged as a practice that can be used by employees to identify critical knowledge (Liu, et al, 2017).

A knowledge map is a visual tool that guides a user where to find certain types of knowledge within a group or an organization as it points at individuals who may be the masters in specific fields (Passi, Luoma & Valkokari, 2010). Knowledge mapping is therefore the process through which an organization develops reviews and improves tools of how knowledge is shared among employees (Lee & Fink, 2013).

Hellstrom & Husted (2004) studied knowledge mapping and intellectual capital in the Academic Environments and concluded that knowledge mapping is a useful guide in managing intellectual capital in academic environments by making available types of knowledge easily accessible in a cost-effective manner which empowers faculty in line with the mission and vision of the institution. The study however, only concentrated on knowledge mapping as a practice without addressing its interrelationships with other practices which also affect the performance of academicians.

Lee and Fink (2013) did a study on knowledge mapping: “encouragement and impediment to adoption” and the results showed that factors such as the flow of communication where appointment of a knowledge management champion promoted

the use of knowledge mapping which had a positive impact of employee performance. Barriers to implementation of knowledge mapping included lack of adequate technological infrastructure. The focus of the study was on views of the employees on ways that KMaps can be promoted. The study limited itself to factors that promote and hinder the adoption of knowledge mapping, but did little to present a holistic view of the relationship of the other factors that can affect employee performance.

A study by Hakim, Sensuse, Budi, Mishbah and Khusni (2020) found that although the set-up of KMaps can be time consuming at the beginning, the benefits are much more when the systems are well established. The findings of a study by (Ho, 2009) on the relationship between knowledge management enablers and performance, indicated that knowledge mapping is an ongoing activity by in an organization in an effort to make accessible required knowledge quickly by identifying the location, its value and owners so that it is continually improved in application.

It has been suggested that institutions such as universities would benefit from a structure for ‘knowledge mapping in academics’ by providing pathways to easily access specific types of knowledge easily and fast enough given the volume of knowledge they handle in their day-to-day activities. This structure can provide solutions to how knowledge can be shared amongst employees more effectively or superior ways of training them, (Lee & Fink, 2013).

2.5.4 Knowledge culture and Employee Performance

Knowledge culture is that part of an organization’s culture that affects how knowledge is shared and leveraged among organizational members and comprises the values, beliefs and norm (Travica, 2013). A study by Chang & Lin (2015) on the “relationship between organizational culture and the KM process showed that cultures which are job and results oriented are likely to affect positively in building the employee willingness to participate in the KM process but a culture where levels of formalization and standardization that is strict rules and regulations, has negative effects. According to a study by Bagaja & Guyo, (2015) on the how knowledge sharing can affect organizational performance in public universities in Kenya, the

conclusion was that knowledge sharing can only be effected when there is a major cultural change within the institution which would reflect on the behavior of the employees. The study focused on knowledge sharing as a driver for organizational performance but employee performance is a function of several other factors not addressed in the study hence its generalization was limited.

A study by Mohaydin, (2007), on how KM practices can be used in improving performance in Malaysian universities found that info-culture has an impact on how effectively KM initiatives can be put in place with info-structure have the highest impact. The study focused more on the storage and dissemination side of the KM process which limited its applicability on the effect on individual performance. A study by Yusuf & Wanjau (2014) on to investigate what factors influence the adoption in State Corporations in Kenya found that the existing organizational culture in those Corporations do not support and encourage knowledge sharing and therefore lack defined KM initiatives. This challenge was compounded by lack of competencies and skills to implement KM practices.

An organizational culture that promotes knowledge sharing and innovation is likely to impact the overall performance of an organization at employee and team levels, Ajmal & Koskinen, (2008). The culture of an organization also affects employee performance and motivation levels and they are likely to put more effort in their work since they feel more committed to achieve the goals of the organization (Travica, 2013).

In order to build a culture that is likely to build desired behaviors and outcomes from employees, every effort must be made to recruit people who share similar values and beliefs as that of the organization in order to solidify the corporate culture. In the same light, institutions should try and link their culture to how they evaluate their employees' performance, (Davoren, 2015). The existing organizational culture influences how the sub culture of knowledge will evolve and determine its success. The ability of the knowledge culture to influence the behavior of the employees in a way that they create value for sustained competitive advantage depends on the trust

and confidence they derive from policies and practices that the organization adopts to promote sharing of knowledge, (Cole, 2011).

2.4.5 Organizational Learning (OL) and Employee Performance

OL is a process through which an institution is able to learn how to deal with new, unique situation and problems thus becoming more skilled and competent. Cheng et al (2014) described OL as the manner in which organizations generate and maintain their knowledge thereby improving their process and leverage on the skills of their employees. An empirical study by Jain & Moreno (2014) to examine the effect of organizational learning on a firm's performance and KM practices in India's engineering firms confirmed that components of OL like partnerships, reward and recognition, performance evaluation all affect how KM is practiced within an organization. But since it was carried out in heavy engineering firms, which is only one division of large public organizations, the level of generalization is limited. A study by Nafei, (2014) on the relationship between KM and OL from employee perspectives in Saudi Arabia Bank employees revealed that there are differences in employee evaluative attitudes towards KM and OL and confirmed a significant relationship between the two variables. Since the study was confined to the Banking sector, the findings may not be interpreted widely to other industries or sectors but clearly showed the variability of how OL is viewed by employees.

According to Liao and Wu, (2009) empirical research on how knowledge management, organizational learning and organizational performance relate in Taiwan knowledge intensive firms, findings confirmed that KM affects organizational performance through OL. The study used a cross-sectional design with questionnaires, rather than longitudinal studies which would have made it possible to follow up the flow of knowledge and performance over a specific period of time. Since the study was confined to a single country, the findings may not be useful in a different cultural environment.

A study by Akpotu and Lebari, (2014) to determine the relationship between knowledge acquisition and the performance of administrative employees in Nigerian Universities concluded that the relationship was significant. The study further

concluded that an appropriate environment must be cultivated to motivate employees to acquire new knowledge which will ensure sustained superior employee performance. A study by Ambula (2015), on the learning organization, KM, employee outcomes and performance of in the manufacturing sector in Kenya revealed that the learning organization, employee outcomes and knowledge management have a more significant impact on non-financial performance than the effect of the individual outcomes. The study further confirmed that the learning organization has a significant influence on how employees perform in the organization.

A study by Turyasingura (2011) on the interdependency of KM and OL in the higher education sector in Uganda conclude that KM practice relate positively with OL and that OL play a key role in encouraging learning at various levels within an institution. OL purposes to create new knowledge by using organizational assets in an effective way. As a practice, OL will only succeed if the environment presents favorable conditions for learning, the structure allows for employees to share knowledge through clear communications channels and appropriate technology is adopted to support learning for sustained competitive advantage (Jimenez-Jimenez & Sanz-valle, 2012).

2.4.6 Organizational Structure and Employee Performance

The structure that governs how an institution is run determines how the activities are organized and conducted. Organizations in the 21st Century conduct their business in an environment in which knowledge is power (Ahmady et al, 2016). As organizations strive to be the best in their industry, the way they manage their knowledge has become a key facilitator, (Chong, Chong & Gan, 2011). While the role of knowledge management for organizational success is widely recognized, few empirical studies have specifically focused on the impact of organizational structure type(s), which have the ability to increase competitive advantage of an organization have been done, (Guidice, Heames & Wang, 2009).

A study by Shabbir, (2017) to examine the impact of organizational structure on employee performance in brewing firms in Nigeria showed that the types of

reporting layers that an organization has significantly affects its performance and the formalized type with rules and regulations clearly spelt out in writing has a significant positive effect on employee performance. The study indicated that adopting appropriate structures is the foundation on which employee performance thrives. The study was limited in its national context and may therefore not be applicable in other contexts.

Another study by Kessler (2007) done assessed the effect of organizational structure on the job performance of faculty members at University of South Florida suggested that faculty members who work in environments which encourages creativity, innovation and teamwork exhibit higher levels of job satisfaction and productivity levels compared to those who work are in a mechanistic structure which is more controlled and centralized in terms of authority. A study by Madueyi, Oke & Fadey (2015) on the impact of organizational structure on organizational performance relied on secondary sources for data collection and the findings showed that organizational structure has a positive impact on organizational performance and recommended that organizations endeavor to have well defined structures in place in order to achieve its objectives.

According to a study by Thomas (2015) on the effects of organizational structure on job satisfaction in the financial sector in Nigeria, the relationship between organizational structure and of job satisfaction is driven by factors such as need for achievement, power and autonomy by employees. The study concluded that appropriate organizational structures increases the productivity of the employees.

A study by Fullwood, Rowley and Delbridge (2013), on how knowledge is shared amongst academics in United Kingdom revealed that respondents who were willing to share their knowledge believed that doing so would promote better team work spirit and also act as a catalyst to broaden their external networks. Respondents were however neutral on the role that the organizational structure plays in regard to knowledge sharing intentions of individuals.

Structure influences knowledge management through developing channels of communication to facilitate knowledge flow and how it is utilized (Kipley & Lewis,

2011). Knowledge assets are generated from a mixture of the structure, culture and strategy of an organization. Knowledge sharing practices can only be effective if the structure within which it is transferred from one person to another is well defined in terms of the inter relationships amongst the organizational participants (Liao et al., 2011). Negative.

Table 2.2: Summary of Empirical evidence on relationship between variables and employee performance

No.	Variable	Positive	Negative	Non-Significant
1	Competency management	Zaim, Yasai&Unal (2013); Sparl&Znidarsic (2009); Prusak (2013); Murtaza (2015); Ngesa et al. (2014)	Ramirez, Lorduy& Rojas (2007)	
2	Communities of Practice	Lopez &Riveria, (2010); Israilidis et al. (2015); Mohaydin, (2007) Schenkel &Teigland (2008); Mugalavai&Muleke (2016)	Chong, et al. (2014); Bagaja (2015)	
3	Knowledge Mapping	Lee & Fink (2013); Al Hakim et al. (2020); Ho, (2009)		
4	Knowledge Culture	Chang & Lin (2015); Bagaja (2015); Mohaydin et al. (2007); Yusuf &Wanjau (2014)		Mohamad, et al. (2013)
5	Organizational Learning	Jain & Moreno (2015); Nafei, (2014); Liao & Wu (2009); Ambula (2015); Turyasingura (2011)		
6	Organizational Structure	Shabbir (2017); Kessler (2007); Maduenyi, Oke & Fadey (2015); Thomas (2015)	Fullwood et al. (2013)	

2.5 Critique of the Literature Review

All the theories upon which this study is anchored upon, that is the Intellectual capital theory, the knowledge-based and resource-based views and human capital theory all agree that management of knowledge is important to enable a firm attain competitive advantage, Chang & Lin (2015). KM research has elicited a broad scope of emerging issues like knowledge generation and dissemination, measurement of intellectual capital that reflects strategic priorities and value created, the application of best practices in the discipline and buildup of appropriate infrastructure that

promotes knowledge sharing amongst the employees (Rasula, Vuksic & Stemberger, 2012).

KM being is a process that is ongoing and changes over time because knowledge itself is embedded in individuals and practices that promote its existence. It is evident, due to its continuous nature, individuals and groups are participants at different stages of the process which lead to desirable outcomes, and that is competitive advantage, (Pawlowski & Bick, 2012; Pirkkalainen & Pawlowski, 2014). These outcomes to a large extent are dependent on the willingness of an individual to participate in the process by way of creating, applying or transferring the knowledge they possess, (Eaves, 2014).

The role of individuals in the KM process is important and deserves that recognition. Universities are made up of different kinds of professionals who handle knowledge that is specific for their areas of interest. The professionals participate in the KM process at different levels, some create and some apply and other disseminate and others still do all at one time or the other (Suknunan, 2019). For the purposes of effectively managing the knowledge in these institutions, proper assessment of the needs and contributions of these professionals be done to ensure that they are aligned to strategic priorities and remain relevant. Studies in Kenya by (Thiga, 2012, Omieno 2012) and in other parts of the world, (Bhusry, et al., 2012; Supar, 2012) have a focus on technological infrastructures and how these impacts KM initiatives.

There is no doubt on the role of technology in the process of KM and implementation of the practices, but the role of the human input cannot also be underestimated (Mugalavai & Mueke, 2016). Organizational knowledge requires the individual knowledge to complete its knowledge base (Honarpour, Jusoh & Nor, 2012), one that is generated by creating linkages and synergy between the different practices, a unique product of the organization's culture and history. In order to maintain the power and control at the market place, an organization needs to combine the right balance between technology and people approaches in the management of its knowledge (Liu et al, 2017). This is because technology improves the efficiency of how people work and facilitates the flow of knowledge in the institution, and people

share that knowledge through platforms like communities of practice to enrich it and become innovative. The focus of this study was to investigate how different KM practices can be used to influence employee performance in public universities in Kenya, all moderated with the organizational structure.

2.6 Summary of Literature Review

Literature review reveals that the role of universities at any given time is three fold: teaching to disseminate knowledge and skills for future production to students; two is research and development to broaden the scope of human knowledge by encouraging innovation and three, provide service to society by generating leadership in various capacities. With rapid changing economic environments, the role of universities as knowledge producers has attracted keen attention from different stakeholders as to the relevancy of their missions to the needs of the society. Knowledge management has emerged in response to this challenge, as one of the approaches they can use to leverage the knowledge they produce and apply it in ways that will not only meet their objectives but the society at large.

Further review of the literature showed that managing knowledge is a continuous endeavor that consists of four key processes; knowledge generation, acquisition, storage and dissemination of knowledge. Each of these processes has specific practices/activities which are carried out to make the process successful. These practices are many according to literature review but six were identified as commonly used in most organizations namely: competency management; communities of practice; knowledge mapping; knowledge culture; organizational learning and used organizational structure. These were the predictor variables that were used to measure their influence on employee performance moderated with the presence of the organizational structure.

The concept of employee performance is widely covered in literature. The description of the concept is not easy since it has different meanings depending on the criteria used to describe it. For the purpose of this research, employee performance was seen as the desirable outcomes from an employee that conforms to the expectations of the employer. The study used the six afore mentioned variables

to determine what impact they may have to produce the desirable outcomes. Organizational structure set the tone for the speed at which information flows within the institutions and the interrelationships that develops therein. The variable was used as a moderator variable. The KM practices if adopted would enable the universities to share their knowledge, to improve the level of teaching and research and ultimately achieve superior employee performance.

Many studies indicate that adoption of KM practices in organizations significantly improves job satisfaction leading to better performance among employees. By implementing continuous improvement policies and programmes, employees become more creative and innovative. The review shows that by effectively managing the knowledge worker, building a healthy and rich relationship between institutional management and its knowledge assets and developing knowledge management practices that complement the capability of the knowledge assets, public universities in Kenya are likely to experience an improved performance from their employees at all levels.

2.7 Research Gaps

It is evident from the literature review that even though employee performance has been widely researched and a broad range of factors identified as having a cause and effect relationship with it, the focus on KM practices as one of the factors as been limited. Most of the studies focus on the processes of knowledge management without specific reference to the activities that affect their implementation more so the impact on employee performance, (Chong et al, 2014). Secondly, the review further identifies a gap in the local context with majority of the studies being carried out in developed economies. In Africa, studies are few (Akptou & Lebarah, 2014, Bagaja & Guyo, 2015) and fewer in Kenya with most of the studies focusing on IT as a KM enabler as shown by studies of (Thiga, 2012; Kilonzo, 2012).

This study will seek to fill the gap by focusing on the role specific KM practices can play at different stages of the KM process and the influence they can have on employee performance in public universities in Kenya. This research viewed knowledge management from a holistic perspective and contended that the processes

need to be defined beyond the technological perspective and social perspectives and determine the impact it ultimately has on desired outcomes in terms of performance which sustains the institutions' competitive advantage.

The role of technology in KM however cannot be underestimated in terms of building the appropriate infrastructure for effective implementation, (Chang & Lin, 2015), but the process of converting information into knowledge can only happen through employees who can only do that when policies and practices encourage the processes of knowledge creation, sharing and application, (Schiuma, 2012). A review of the literature reveals that many universities in developed countries have embraced knowledge management practices to improve the management of their knowledge assets as the world moves towards a knowledge economy, (Mora, 2010). In Kenya, Vision 2030 clearly stipulates the role universities play in developing capacity through training of employees towards becoming an industrialized economy, but this cannot be achieved without focused research being done on management techniques that can be used to achieve this objective. Many of the empirical studies done in Kenya are biased towards management of knowledge from a technological viewpoint with limited focus on how these platforms can be applied to influence employee performance in public universities in Kenya.

Furthermore, there has been slow progress on integration of success factors proposed by KM scholars, (Chang et al. 2008). This implies that there is a gap in terms of theories that unify all these success factors necessary for effective KM implementation. In an effort to contribute towards the body of knowledge that will develop an integrated model of the KM success factors, this study used six KM practices which are viewed as key contributors to KM success to determine how they can impact the performance of employees in public universities in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses the methodology that was used to achieve the objectives of the study. It comprises of the research design, target population, sample size, data collection methods, pilot study, data analysis and presentation.

3.2 Research Philosophy

The study was anchored on the positivist research paradigm. The positivist position is derived from natural science and is characterized by the testing of hypothesis developed from existing theory (hence deductive or theory testing) through measurement of observable social realities (Saunders, Lewis, & Thornhill, 2009). It assumes that reality is fixed, directly measurable, and knowable and that there is just one truth, one external reality and thus provides an objective reality against which researchers can compare their claims and ascertain the truth (Creswell, 2008).

Positivism presumes the social world exists objectively and externally, that knowledge is valid only if it is based on observations of this external reality and that universal or general laws exist or that theoretical models can be developed that are generalisable, can explain cause and effect relationships, and which lend themselves to predicting outcomes (Creswell, 2008; Saunders *et al.*, 2009). This is appropriate for this study since we seek to determine the relationship between knowledge management practices and employee performance which is a biased towards both quantitative study thus eliminating subjectivity.

3.3 Research Design

Research design is the conceptual structure that guides the manner in which research is carried out by highlighting how the data will be collected, measured and analyzed, (Kothari 2013). Further, Oson & Onen (2009) posits that through descriptive research design, questions pertinent to what is happening, how it has happened and

why it has happened can be answered. Cooper & Schindler (2011), further indicates that a descriptive study is concerned with finding out the what, where and how of a phenomenon.

The study used descriptive research design to enable the researcher generalize the findings to a larger population, to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation as illustrated by studies of (Akpotu & Lebarah, 2014; Idua, 2014; & Lopez-Saez, et al., 2010). The design was appropriate for the study since it yielded rich data that led to important recommendations and had the ability to collect a large amount of data for detailed analysis. The design was also preferred because it allowed the researcher to combine both qualitative and quantitative data and simplified the data collection exercise from the respondents through use of close ended questions, (Cooper & Schindler, 2011).

3.4 Target Population

The complete enumeration of all the elements under consideration in a study is known as target population, (Polit & Beck, 2004). According to Commission for University Education website (www.cue.or.ke), Kenya has 31 public chartered Universities. The target population was drawn from employees working in 31 public universities and six constituent colleges. The public universities had 13 032 teaching staffs and 13 419 non-teaching staffs while constituent colleges had 226 teaching staffs and 235 non-teaching staffs. The target population is as shown in Table 3.1.

Table 3.1: Target Population

Staff category	Number	Percentage
Teaching staffs	13258	49
Non-teaching staffs	13654	51
Total	26912	100

Source: (CUE University Statistics, 2018)

3.5 Sampling Technique

A sampling frame is a complete list of all the members of the population that we wish to study. Sample is a subset of the total population which is selected to be the true representative of the target population. A sample is selected through sampling process (Oso & Onen, 2009). Sampling techniques can be either probabilistic or non-probabilistic, in the former there are equal chances of respondent being selected while in the latter the respondent is selected through subjective criteria, (Kothari, 2013).

The study used stratified sampling method that uses a stratum which is a subset of the population that shares at least one common characteristic, (Kothari, 2013). This technique allows the researcher to perform a sound study on a small sample selected to provide information which is rich in qualitative context in order to answer research questions and meet the specific objectives. Additionally, the method has a higher statistical precision compared to simple random sampling because the variability within the subgroups is lower compared to the variations when dealing with the entire population. This also means that it requires a small sample size which can save a lot of time, money and effort of the researchers. The sample size for employees was calculated based on Yamane's formula (Yamane, 1967).

$$n = N / (1 + N * e^2)$$

where, n= the sample size, N = the size of population, e = the error of 5 percentage points

$$n = 26912 / (1 + 26912 * 0.066^2) \quad n = 227.$$

By using Yamane formula with sampling error of 6.6% level of significance yielded a sample of 227 from a target population of 26912. Resultant sample from each stratum was distributed as shown in Table 3.2.

Table 3.2: Sample Size Public Universities

Staff category	Number	Percentage
Teaching staffs	111	49
Non-teaching staffs	116	51
Total	227	100

3.6 Data Collection Method

According to Creswell (2008) a research instrument is a specific tool that assists in the collection of research data by way of measuring, quantifying or observing the data of interest. The principle instrument for data collection used was a questionnaire which was administered to the selected deans, administrators in the library, human resources and information technology departments. Secondary data was collected by carrying out literature review in books and relevant journals.

There are some merits which are associated with questionnaires for example; they are easier in administration and cost effective in data collection when the sample drawn is big, (Kothari, 2013). According to Oso & Onen (2009), the use of questionnaires gives respondents a chance to reflect on the questions which deserves more attention and they are better off compared to other alternatives such as focus group discussions since they can have either open or closed ended questions.

The main advantage of a structured questionnaire is that it gives the researcher an opportunity to solicit for data which can be in immediate usable form. On the other hand, the use of open-ended questionnaires gives an opportunity to the respondents to give an independent opinion in regard to the research at hand. Prior to the data collection exercise, the researcher personally visited the selected universities and presented an introduction letter accompanied by an approval from Ministry of Education to carry out a study on Knowledge Management Practices and Employee Performance in Public universities in Kenya. The data was collected through drop and pick method; the questionnaires were dropped in the respective departments in the specific universities and had them picked after a period of two weeks.

3.7 Pilot Study

There are possibilities of research instruments errors; these errors can be minimized through pretest of the research instruments in order to determine their reliability. According to Kothari (2007) a pilot study is paramount in a study so as to be in a position to make corrections in the research instrument prior to the actual study. Similar methods of data analysis to be applied in the final research will be used so as to ascertain the applicability of the research instrument. The researcher engaged 23 Deans/directors and senior management employees from Jomo Kenyatta University of Agriculture & Technology which represented 10 per cent of the sample size of 227 employees.

The measurement instrument (a questionnaire) required self-completion by participants with the assistance of two research assistants. The questionnaire had 2 sections, section A was for personal information, while section B covered the study variables. An important factor was to ensure that the questionnaire items accurately addressed the research questions. The pilot also tested whether the questionnaire was comprehensible and appropriate, and that the questions were well defined, clearly understood and presented in a consistent manner.

According to Sekaran and Bougie (2013), it is important to pretest the research instrument so as to examine their validity and reliability. Selected employees participating in the pilot study were issued with the questionnaires and their inputs on how to improve the questionnaire were put into consideration. According to Kothari (2011) the essence of pretesting research instruments is to minimize ambiguity and vagueness of instrument measurement. Moreover, researcher ability to detect instruments weakness and highlights areas which deserve alignment to meet its intended objective.

3.7.1 Validity of the Research Instruments

According to Paton (2000), validity is the quality attributed to a proposition or measure of the degree to which they conform to establish knowledge or truth. An attitude scale is considered valid, for example, to the degree to which an instrument

can measure what it ought to be measuring. It therefore refers to the extent to which an instrument asks the right questions in terms of accuracy. According to Neuman (2000), validity is the accuracy and meaningfulness of inferences which are based on research results. The researcher discussed the items in the instrument with the supervisors, lecturers from the department and colleagues. Advice given by these people helped the researcher determine the validity of the research instruments. The advice included suggestions, clarifications and other inputs.

3.7.2 Reliability of the Research Instrument

A research instrument is perceived to be valid if it yields similar results after being administered to different group of respondents, (Oso & Onen, 2009). In order to test the reliability of the instrument to be used in the study, a pilot study was carried out among selected deans and administrators working at Jomo Kenyatta University of Agriculture & Technology and a reliability coefficient was computed. Cronbach's alpha was used as an internal consistency reliability test (Chen & Krauss 2004) argued that this method is appropriate if every component instrument is measured by more than one response. The alpha measure's reliability using coefficient value ranging from 0 to 1 with the value closer to 1 depicting a more reliable research instrument. The acceptance level of the reliability of the instrument was 0.7 (Nullay, 1978).

3.8 Data Analysis and Presentation

After the data collection, the questionnaires were coded, entered and analyzed using Statistical Packages for Social Scientists (SPSS) version 22. The social demographic characteristics of the respondents were analyzed using descriptive statistics. According to Brace, Kamp & Snelgar (2003), descriptive statistics are statistical tools used to summarize large volumes of data with very few figures. In order to answer the research questions both descriptive and inferential statistics were carried out. The main inferential statistics carried out in the study was correlation analysis which showed the strength of the relationship between variables under investigation. Exploratory factor analysis (EFA) was used to test for construct validity and reduce dependency among the study variables. According to (Hair, et al., 2009), EFA is

carried out to help to reduce a large number of variables into manageable set of factors. Factor loadings should be 0.7 or higher for exploratory purposes. Past studies such as that of (Brown, 2006) had a threshold of 0.4 as the minimum.

Multiple regression analysis was carried out to show the nature of the relationship between dependent and independent variables, (Kothari, 2011). The level of significance was tested at 5% whereby if the p value will be less than 0.05 then there was enough evidence to reject the null hypothesis and accept the alternative hypothesis (Kothari, 2011). A multivariate regression model was used to link the independent variables to the dependent variable as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \epsilon \dots \dots \dots 3.1$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 Z + \beta_7 Z * X_1 + \beta_8 Z * X_2 + \beta_9 Z * X_3 + \beta_{10} Z * X_4 + \beta_{11} Z * X_5 \epsilon \dots \dots \dots 3.2$$

Where ; Y = Employee Performance

X₁ = Competency management

X₂ = External Networks/Communities of Practice

X₃ = Knowledge Mapping

X₄ = Knowledge Culture

X₅ = Organizational Learning

Z= Organizational Structure

In the model, β_0 = the constant term while the coefficient $\beta_i = 1 \dots 5$ was used to measure the sensitivity of the dependent variable (Y) to unit change in the predictor variables. μ is the error term which captures the unexplained variations in the model.

3.8.1 Diagnostic Tests

Regression diagnostics are used to evaluate the model assumptions and investigate whether or not there are observations with a large, undue influence on the analysis, (Ghasemi et al, 2010). Before fitting the regression model, the following tests were carried out:

Linearity Test. This aims to determine whether the relationship between independent variables and the dependent variable is linear or not. Linear regression needs the relationship between the independent and dependent variables to be linear. Scatter plots were adopted to test for linearity between independent and dependent variables under examination.

Homoscedasticity Test: Homoscedasticity refers to whether residuals are equally distributed, or whether they tend to bunch together at some values, and at other values, spread far apart. The Breusch–Pagan test, which performs an auxiliary regression of the squared residuals on the independent variables was used. If the plot does not vary with the independent variables then the set of data will be taken to be homoscedastic, (Cook & Weisberg, 1983).

Normality Test. Prior to regression analysis, all variables were subjected to normality check. To test for normality test histogram of error terms was drawn (Ghasemi, et al., 2010). The data is normally distributed if its mean is zero and standard deviation 1.

Test for Autocorrelation. It is usually assumed that the error terms are independent unless there is a specific reason to think that this is not the case. Normally such an assumption can be violated if there is a known temporal component on how the observations were drawn. The most direct way to determine if there exists dependency is by producing a scatter plot of the residuals versus the time measurement for that observation (assuming the data is arranged according to a time sequence order). If the data are independent, then the residuals should look randomly scattered about 0. However, if a noticeable pattern emerges (particularly one that is

cyclical) then dependency is likely to be an issue (Ben-Gal, Morag & Shmilovizi, 2004). In the current study, Durbin Watson was used to test for autocorrelation.

Test for Multicollinearity. The term Multicollinearity refers to a situation in which there is an exact (or nearly exact) linear relation among two or more of the input variables, (Breunig, Kriegel, Ng, & Sander, 2000). Exact relations usually arise by mistake or lack of understanding. Multicollinearity is mainly caused by the data collection methods applied, constrained sample or population from which the data is drawn, poor model specification and model over definition, (Ben-Gal et al., 2004). To assess Multicollinearity, it should be noted how well each independent (X) variable is predicted from the other X variables as what is the value of individual R^2 and a variance Inflation Factor (VIF). When R^2 and VIF values are high for any of the X variables, the fit is affected by multicollinearity, (Ben-Gal et al., 2004).

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 Introduction

This study envisaged to examine the influence of knowledge management practices on employee performance in Public universities in Kenya. The study specifically, examined the influence of employees' competencies management; communities of practice; knowledge mapping; knowledge culture; organization learning and moderating influence of organization structure. In this chapter findings and discussions will be presented as per the study objectives and hypothesis.

4.1.1 Response Rate

According to Sekaran and Bougie (2013), response rate is defined as the proportion of accurately and completely filled questionnaires in relation to the total issued. Primary data was gathered from public universities with a sample of 227 out of which 202 questionnaires were correctly and accurately filled. This constituted approximately 91 percent of total samples. According to Cooper and Schnidler (2014), the response rate was appropriate since most of social science studies have an average response rate of 80 percent. Further, the response rate was consistent with Abdow (2018) who reported a response rate of 94 percent on an examination of the influence of strategic leadership on strategic direction of petroleum companies in Kenya.

Table 4.1: Response Rate

Questionnaire	Frequency	Percentage
Returned	202	89
Non-returned	25	11
Total	227	100

4.2 Pilot Analysis

According to Sekaran and Bougie (2013), it is important to pretest the research instrument so as to examine their validity and reliability. Selected employees hailing from Jomo Kenyatta University of Agriculture & Technology which did not participate in the final study were issued with the questionnaires and their inputs on how to improve the questionnaire were put into consideration. According to Kothari (2011), the essence of pretesting research instruments is to minimize ambiguity and vagueness of instrument measurements. Moreover, it enables the researcher to have the ability to detect instruments weakness and highlight areas which deserve alignment to meet its intended objective.

4.2.1 Reliability Analysis

As shown in Table 4.2 reliability of the research instrument was tested using Cronbach Alpha coefficient. This coefficient ranges from 0 to 1, and the closer it is to 1, the better the research instrument. In this study it ranged between 0.7 and 0.9, this showed that the research instrument was reliable.

Table 4.2: Reliability Analysis

Variables	Number of items	Cronbach's Alpha	Comments
Competency Management	18	0.843	Accepted
Communities of Practice	16	0.889	Accepted
Knowledge Mapping	16	0.888	Accepted
Knowledge Culture	20	0.761	Accepted
Organization Learning	20	0.855	Accepted
Organization Structure	13	0.819	Accepted
Employee Performance	29	0.823	Accepted

4.2.2 Validity Analysis

Construct and face validity of the research instrument was tested. According to Mugenda and Mugenda (2008), construct validity is tested to examine the degree to which the research instrument measures what it was intended to measure. Expert opinion was sought from supervisors on the suitability of measurement scales

adopted in the study. Continued input was incorporated at different stages of the research proposal development until the final copy was adopted for data collection.

As shown in Table 4.2, Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy and Bartlett’s test of sphericity were applied to examine the degree of attributes relationship. Saunders et al., (2014) argued that KMO is adopted to examine suitability of exploratory and confirmatory factor analysis to analyze the data. According to (Hair et al., 2010), though KMO coefficient ranges from 0 to 1, acceptable minimum in social sciences is 0.5 with those from 0.7 to 0.8 considered as good and above 0.8 are seen as great. KMO coefficient for the study was good (0.672) and Bartlett’s test of sphericity had chi square value of 19994.23 and p value of 0.00. At 5% level of significance, measurement attributes were related and they warranted exploration using factor analysis.

Table 4.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.672
Bartlett's Test of Sphericity	Approx. Chi-Square		19994.23
	Df		3
	Sig.		8646
			0.00

4.3 General Information

Background information of respondents is paramount in social science since it can be used to group respondents into heterogeneous groups. In the study, gender, age, highest level of education, department current deployed and university experience were sought and presented as shown below.

4.3.1 Gender

Pictorial presentation shown in Figure 4.1 shows that majority 74 percent of respondents working in public universities were male as compared to 26 per cent female. This shows unequal gender representation and violation of constitutional requirements on two third gender rule. This is confirmed by a study by (Gitaka &

Machogu 2016), which revealed that 66 per cent of males are the ones appointed at senior levels in public universities in Kenya while only 34 per cent were female. Male dominance in public universities can be attributed to unequal uptake of postgraduate qualifications which is mostly a requirement especially amongst faculty members. As Raburu (2011) findings reveal, very few women have progressed into senior academic and professional ranks and that, the pace is slow due to socio-cultural attitudes towards them and their roles in Kenyan society.

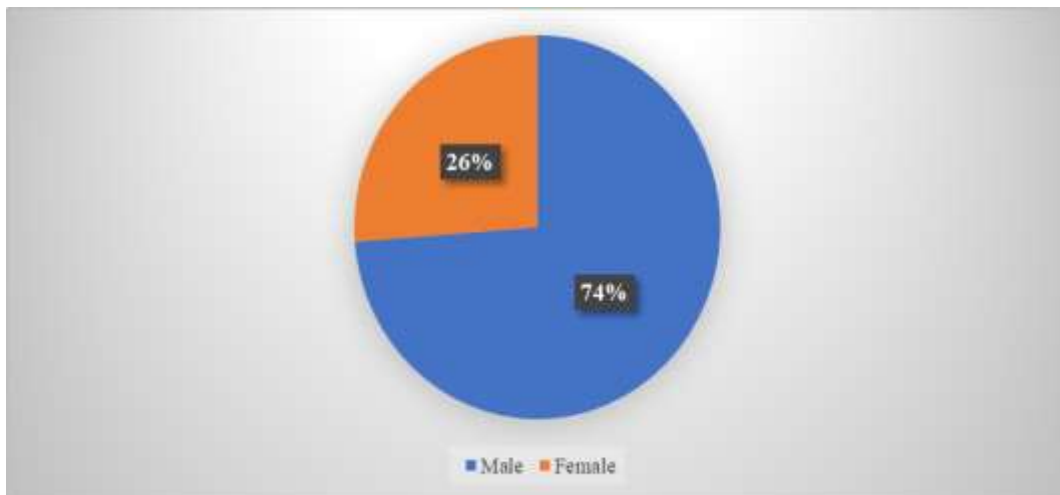


Figure 4.1: Gender

4.3.2 Age

Respondents age distribution revealed that majority 41.6 percent were aged between 41 to 50 years, followed 25.7 percent aged between 31 to 40 years, with 22.8 percent aged between 51 and 60 years. This shows mixed aged representation in departments of public universities in Kenya, this would enhance managerial transitioning and promotes sharing of knowledge across different ages.

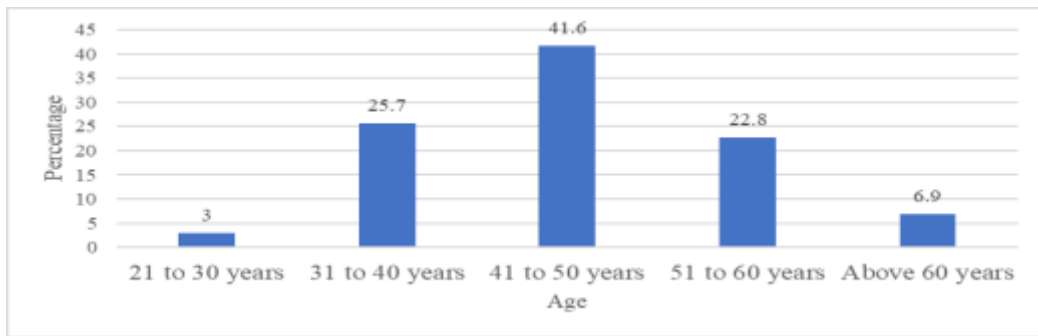


Figure 4.2: Age

4.3.3 Highest Level of Education

Further, the study examined highest level of education, pictorial presentation in Figure 4.3 revealed that 53 percent of respondents were post graduate graduates, followed by 25 percent university graduates and 22 percent college graduate. These findings depict higher formal education qualification amongst senior employees in public universities. This is anticipated naturally since they are custodians of knowledge management and decision making in public universities. Furthermore, highly educated persons are better informed thus may provide better insights on how knowledge management practices can be used to improve influence employee performance in public and private entities. This concurs with the study of (McFarlane, 2008) who asserts that the knowledge worker is a magical outcome of education and technology, who needs to be continually supported to contribute to institutional goals.

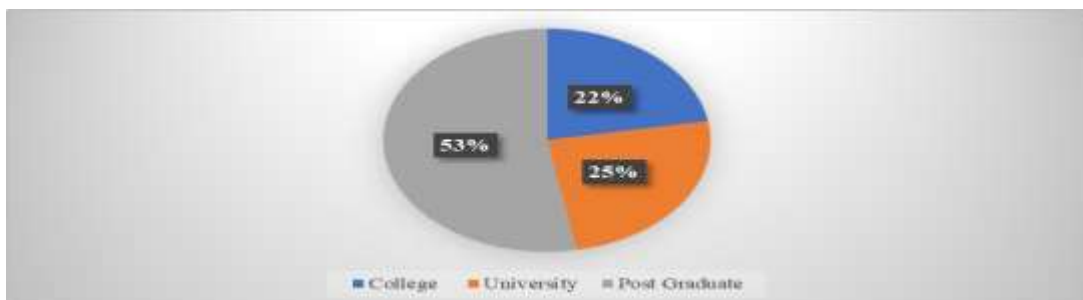


Figure 4.3: Highest Level of Education

4.3.4 Departments

For managerial efficiency employees in institutions are grouped into different departments. As shown in Figure 4.4 most 43.6 percent of respondents were from faculties, followed 26.2 percent in human resources department, 17.3 percent in other departments such as, ICT, food and catering, housekeeping and others and 12.9 percent from library. It is expected that there will be a skewed distribution of employees in faculties since there are the backbone of university core business.

These findings are in congruence with Jafri, Ismail, Khurram and Soehod (2014) who argued that organization efficiency is an output of specialization and strategic positioning of an organization. Moreover, Gopalan (2017) reported that decision making in an organization is dependent on its skills composition. Kar, Sharma and Borah (2011) in their support for formally equipped decision makers argued that complexity and uncertainty of working environment calls for formal training so as to aid in simulation of alternative decision criterion. Further, efficiency of decision making has significant influence employee's performance.

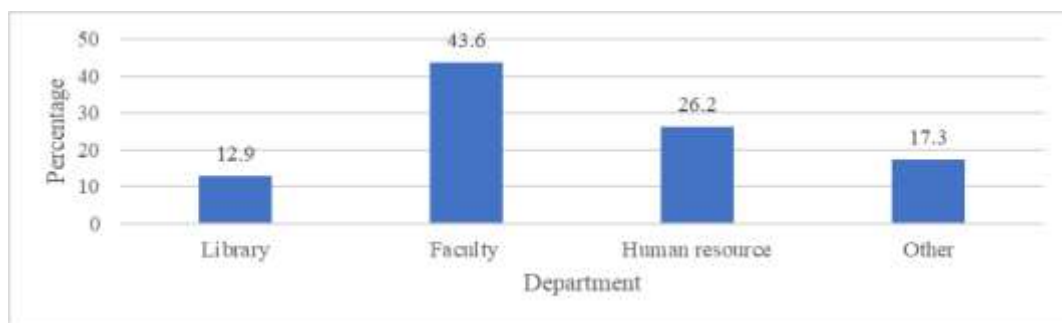


Figure 4.4: Department

4.3.5 Job Experience

Job experience within an institution may lead to individual understanding of different facets of knowledge management such as knowledge culture; organization learning and employees' core competencies and knowledge mapping. As shown in Figure 4.5 majority of the respondents have served in public universities for more than five years as accounted for 35.6 percent between 5 to 10 years and 35.1 percent between

11 to 20 years. Further, public universities seem to be recruiting continuously on their managerial positions since 17.3 percent had less than 5 years and 11.9 percent had more than 20 years. These findings agreed with Nafei (2014) who argued that there are anticipated variations on employee’s capacity to manage knowledge depending on experience in a given area. This is supported by a study by Quinones, Ford & Teachout, (2006) which showed that task experiences correlated highly with job experience. Additionally, literature review indicates that strategic leadership is a long-term objective of any organization, (Nguyen, 2013).

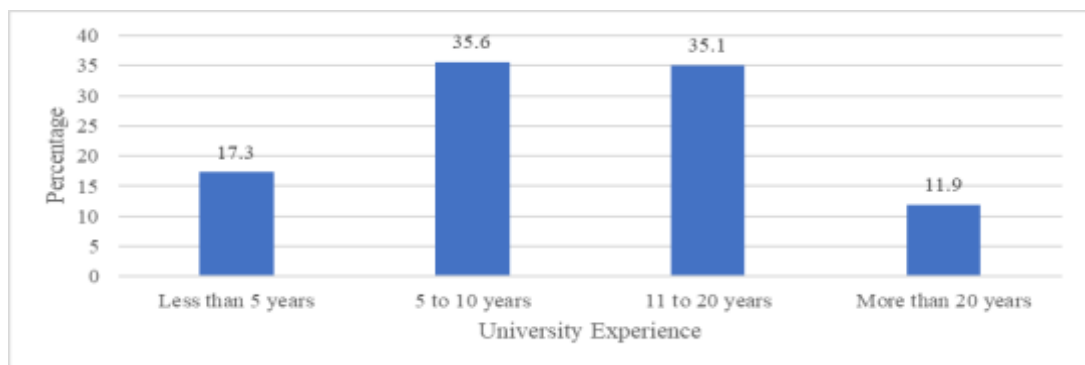


Figure 4.5: Job Experience

4.4 Descriptive Statistics for Study Variables

Descriptive statistics are adopted to describe variables under investigation as per their respective statistical distribution. According to Sekaran and Bougie (2013) descriptive statistics such as; mean, frequency and percentage can show how study variables are distributed and standard deviations can depict how they variance from their means. Maximum and minimum means, frequencies and percentages can be used to show the range of deviations. In this study mean, standard deviation, frequency and percentage are used to summarize competency management, communities of practice, knowledge mapping, knowledge culture, organization learning, organizational structure and employee performance.

4.4.1 Descriptive Statistics of Competency management

The first objective of the study examined the influence of competency management on employee performance in public universities in Kenya. Employees competencies refer to the unique capabilities possessed by individuals that enable them perform their work effectively. These skills may vary according to job requirements but there are some common attributes that are expected in nearly all types of jobs, (Garvey, 2010). Competency management as a KM practice therefore focuses on how to create more value from the individuals by using their knowledge and skills to achieve institutional goals. This value can only be significant to the extent to which the employees are involved with their work and want and can use their own abilities and potential to achieve these objectives, (Alessandria & Secundo, 2009).

In regard to respective universities employees' competencies as shown in Table 4.4 majority agreed or strongly agreed 42.1 percent that their universities had vision and mission statements that were clearly and easily understood by employees. Secondly, majority 51.5 percent strongly agreed and 39.1 percent agreed that their universities recognized their knowledge as an asset base. Majority 48 percent strongly agreed and 45.5 percent agreed that their university encouraged team work, discussions and collaboration to improve communication between colleagues. Further, majority 52.5 percent strongly agreed and 42.1 percent agreed that their universities discussed individual performance and agreed on areas which needed improvements. Majority 56.9 percent strongly agreed and 38.6 percent agreed that their universities encouraged employee's participation in decision making process and majority 57.4 percent and 39.1 percent agreed that their universities improved task efficiency through knowledge sharing using intranets and electronic bulletins.

These findings agreed with Stockley (2007) who argued that there is need to consistently review key competencies which are likely to have an impact on an individual's performance. It is through such an audit that individual skills gap can be easily identified and corrective measures adopted to improve the performance. Additionally, Eicker et al., (2014) supported the idea to align employee competencies with organizational needs as this would likely improve involvement/engagement

with a respective institution. These results were in congruence with Zaim et al., (2013) who reported that tracking employee competencies had significant influence on not only employee behavior but also overall organizational performance and intention to remain with the institution. Further, Sparl et al., (2013) called on adoption of robust employee skills management system which would create strong sense of association among the employees.

At the respective universities majority strongly agreed mean = 4.5 and standard deviation of 0.8 that there are open to new ideas. Secondly, majority agreed mean = 3.7 and standard deviation of 1.1 that their universities keep abreast on new developments in their areas. Thirdly, majority agreed mean = 3.9 and standard deviation 1.1 that they effectively build networks and build alliances with key individual groups. Further, majority agreed mean = 4.1 and standard deviation of 0.8 that their employees are encouraged to support and respect each other. Moreover, majority either agreed mean = 4.1 that they have common mission and feeling of belonging in a team or individual are assisted to achieve their potential through personal development. Majority 40.1 percent and 28.7 percent strongly agreed that their employees' inventory and skill gap is regularly updated and 27.7 percent agreed and 28.7 percent strongly agreed that their internal employees are given chance whenever vacancies arose. On average employees agreed mean = 4.1 competencies management in public universities had influence on their performance.

These findings mirrored the study of Prusak (2013) who reported the need for patenting intellectual capacities so as to protect employee talents which can be made possible by promoting knowledge sharing approaches, skill tracking and development of ways to upgrade them on a continuous basis. Through such strategies, employee motivation levels can be improved which translates to better performance. Further, a study by Murtaza (2015) recommended that organizations invest in developing skills and allocate resources to progress the careers of their staff. This is further mirrored by study of Yusuf & Wanjau (2014) who reported that employees in state Corporations in Kenya have deficit skills which hampered their job performance.

Table 4.4: Descriptive Statistics of Competency management

My university	n=202						Me an	Std. Dev
	SD	D	NS	A	S A			
Has mission and vision statements that are clear and easily understood by employees	5	5	5.9	.1	.1	4.1	1.1	
Recognizes my knowledge as part of their asset base	3	3	3	.6	.5	4.3	0.9	
Encourages teamwork, discussions and collaboration to improve communication between colleagues	1	1.5	4	.5	.48	4.4	0.7	
Assesses my individual work performance regularly and discuss improvement areas	1.5	2.5	1.5	.1	.5	4.4	0.8	
Provides opportunities for continuous growth and development of employees	2.5	4	2.5	.6	.5	4.3	0.9	
Encourages active employee participation in the process of decision making	1.5	1.5	1.5	.6	.9	4.5	0.7	
Employees improve task efficiency by sharing knowledge through intranets and electronic bulletins'		2	1.5	.1	.4	4.5	0.6	
At my university				39	55			
Am open to new ideas and approaches	1.5	3.5	0	.1	.9	4.5	0.8	
I keep abreast of new developments in my discipline area	5	11.9	3	.6	.2	3.7	1.1	
I effectively develop networks and build alliances with key individuals and groups	6.4	7.9	8.9	.48	.7	3.9	1.1	
Employees are encouraged to help and respect each other	1.5	3.5	4	.51	.7	4.1	0.8	
There is a feeling of belonging to a team	2	5.4	4	.1	.1	4.1	1.0	
Individual team members are helped to reach their potential through personal development	1	5.9	3	.1	.6	4.1	0.9	
Different methods are used for encouraging employees to share knowledge like training, mentoring, coaching etc.	3.5	11.4	8	.6	.7	3.8	1.1	
There are processes to determine gaps in individual skills	3.5	11.9	9	.6	.2	3.9	1.1	
There are processes to track on employee's progress in skills acquisition	11.4	15.8	7	.2	.8	3.3	1.3	
Employee skills, inventory and skill gap analysis are regularly updated	4	6.9	3	.1	.7	3.8	1.0	
Internal employees are given priority when a vacancy occurs	8.4	21.3	9	.7	.7	3.5	1.3	
Overall Average						4.1	1.0	

**SD- Strongly disagree. D- Disagree, NS-Not sure, A-Agree, SA- Strongly agree*

4.4.2 Descriptive Statistics of Communities of Practice

The second objective of the study assessed the influence of communities of practices on employee's performance in public universities in Kenya. Communities of practice (CoP) were perceived as the synchronization of employees networking capacities within agreed knowledge sharing platforms (Salalah, 2011). There are groups of people who have a common interest in a certain area and interact regularly to learn

how to perform better. This was in line with Ramachadran et al., (2009) who supported intra and inter organization platforms for sharing and disseminating knowledge among stakeholders. According to Garavan and Carbey (2007), it is through such interactions that employees exchange new ideas and create new knowledge and behaviors that improves performance within an organization.

Concerning CoP in Public universities in Kenya, majority 44.1 percent agreed and 30.2 percent strongly agreed that they represent an area of common interest for a number of staff/customers/clients/partners. Secondly, majority 47 percent agreed and 34.7 percent strongly agreed that they currently have clear focus on their organization theme/mission. Thirdly, majority mean = 4.1 and standard deviation of 1.0 agreed that their CoP accords them a sense of belonging. Further, majority 41.6 percent agreed and 22.8% strongly agreed that CoP aides in relationship building. Moreover, majority 46.5 percent agreed and 24.8 percent strongly agreed that CoP helps in networking. Also, 42.1 percent agreed and 23.3 percent strongly agreed that they benefit in their daily work from relationships they have built. Majority agreed mean =3.7 and standard deviation 1.2 that CoP has enhanced their willingness to participate in university activities. Majority agreed 41.6 percent and 22.8 percent strongly agreed that CoP has motivated them to share work related knowledge. Further, majority agreed mean = 3.5 and standard deviation 1.2 that CoP has broken down communication barriers amongst members. Finally, majority 39.1 percent agreed and 36.1 percent strongly agreed that CoP has built an agreed set of communal resources over time.

These findings mirrored the study of Chong et al., (2014) who reported that there is need to develop measures that would enhance knowledge sharing amongst public and private universities citing both monetary and recognition factors being the main hindrances. If eliminated, the scholars added, employees would be willing to share knowledge in defined forums. Additionally, the study mirrored that of Lopez-Saez et al., (2010) that supported the need for building externally generated knowledge by developing institutional support for accessing the same. Indeed, such efforts will help in optimizing the use of resources to improve performance within organizations, (Bagaja & Guyo, 2015).

At the respective universities, 29.2 percent agreed and 29.7 percent strongly agreed that their respective employees are assisted to access important information through journals, research reports etc. Secondly, majority either agreed mean = 4.1 that their institution purchased important information which was missing or employees were encouraged to share knowledge in line with their common areas of interest. Further, majority mean = 4.0 agreed that they are either supported internally for example being allocated rooms for meetings or employees were encouraged to join professional networking and associations. Also, majority agreed mean = 3.6 and standard deviation 1.2 that their employees were encouraged to be active in external professional networks and associations. On average majority agreed mean = 3.8 and standard deviation =1.1 that communities of practice had influence on employee performance in their respective universities.

These findings collaborated with Israilidis et al., (2015) who argued that inability of an organization to create knowledge sharing platforms depicts its inability to access and take advantage of internal and external opportunities thus exposing it to potential threats and competition which affects performance at individual, group and organizational levels. Also, the findings mimicked those of Lovarte & Riveria (2007), whose model evaluates organization information needs and aligns it to development of CoP. Moreover, creation of external links aids the employees acquire to current knowledge in the industry and contributes significantly to an institution's ability to perform well by developing its knowledge spread. Schenkel & Teigland, (2008) further advocate for creation of appropriate communication channels to promote the growth of harmonious knowledge sharing platforms and alignment of information needs to its core competencies. In contrast, the study refuted findings by Mugalayai & Muleke (2016) who found insufficient knowledge generation within public universities in Kenya which was attributed to lack of employee recognition for those who shared their knowledge. This was supported by a study of Thiga, (2012) which showed that dissemination practices in public universities requires more improvement to by encouraging vibrant knowledge sharing practices among employees. This study showed that this situation has since changed since employees in public universities are encouraged to continuously generate and share their knowledge.

Table 4.5: Descriptive Statistics of Communities of Practice

My CoP	n=202					Mean	Std. Dev
	SD	D	NS	A	SA		
Represent an area of common interest for a number of staff/customers/clients/partners	3	8.4	14.4	44.1	30.2	3.9	1.0
Currently has a clear focus in its theme	2.5	6.9	8.9	47	34.7	4.0	1.0
Gives me a sense of belonging	2.5	7.4	9.9	36.6	43.6	4.1	1.0
Helps me build relationships with others	3.5	7.9	24.3	41.6	22.8	3.7	1.0
Helps me network with others	4.5	6.4	17.8	46.5	24.8	3.8	1.0
Benefit my daily work from the relationships established	5.4	12.4	16.8	42.1	23.3	3.7	1.1
Is mainly driven by the willingness to participate	5.4	15.3	12.9	37.6	28.7	3.7	1.2
Motivate me to share work-related knowledge	10.4	8.9	16.3	41.6	22.8	3.6	1.2
Breaks down communication barriers among members	5.9	16.3	20.3	33.7	23.8	3.5	1.2
Builds up an agreed set of communal resources over time	6.4	9.4	8.9	39.1	36.1	3.9	1.2
At my university							
Employees are assisted to access important information through journals, research reports etc.	15.8	13.9	11.4	29.2	29.7	3.4	1.4
If important information is unavailable within, the institution buys it	2.5	5	14.9	38.6	39.1	4.1	1.0
Employees are encouraged to share knowledge among common interest groups e.g. research groups	0	9.4	10.4	38.6	41.6	4.1	0.9
Supports activities of common interest groups e.g. room for meetings	5.4	3	11.9	47	32.7	4.0	1.0
Employees are encouraged to join external professional networks and associations	5	6.4	13.9	37.6	37.1	4.0	1.1
Employees are encouraged to be active in external professional networks and associations	5.4	12.9	23.8	30.7	27.2	3.6	1.2
Overall average						3.8	1.1

**SD- Strongly disagree. D- Disagree, NS-Not sure, A-Agree, SA- Strongly agree*

4.4.3 Descriptive Statistics of Knowledge Mapping (KMAP)

The third objective of the study determined the influence of knowledge mapping on employee performance in Public universities in Kenya. Knowledge mapping is the initial stage of inventory management of knowledge within an organization. KMaps are tools which are developed to point at ways by which required knowledge can be accessed easily in an effective manner, (Lee & Fink, 2013). They further state that

accessing knowledge easily saves on time and effort for employees which in turn make them more efficient in completing their tasks.

As shown in Table 4.6 majority 39.6 percent agreed and 30.7 percent strongly agreed that they have structured way of collecting data. This enhances gathering of information which may otherwise be frustrating if carried out in a non-objective approach. Secondly, majority 31.7 percent agreed and 24.3 percent strongly agreed that there is a structured way of collecting and keeping documents in Public universities in Kenya. This creates an avenue of consolidating and harmonizing similar information which is then disseminated or stored for future application. Thirdly, majority 39.1 percent agreed that and 24.8 percent strongly agreed their universities update their handbooks and work guidelines which were frequently used to inform employees on new organization developments. There is need for continuous communication so that there is constant flow of information to enable employee actions be aligned with the changes that take place within the institutions either internally and externally from time to time. This will not only enhance performance but also minimize conflicts emanating from breakdowns from poor communication. Additionally, majority 46 percent agreed that universities were providing access to information required to perform their duties. Majority 63.4 percent agreed and 18.8 percent strongly agreed that they have guidelines as to whom information should be submitted to. Further, majority 43.6 percent strongly agreed and 35.6 percent agreed that their universities have clear guidelines to where information should be submitted.

Majority either agreed mean = 4.0 that their universities had designated people who offered advice on work related issues on a need by need basis or groups had emerged as a result of sharing common information. Also, majority either agreed mean = 4.1 that their universities had groups that met regularly to evaluate information needs or employees used the intranet to share information within their institutions. Further, majority agreed mean = 3.9 and standard deviation = 1.1 that public universities had structured way of processing and sharing information required by employees. Moreover, majority either agreed mean = 4.0 that public universities had channels of retrieving and accessing information through people and technology. Majority 47

percent strongly agreed and 35.6 percent agreed that public universities have processes of skills gaps identification and majority 45 percent strongly agreed that they have directory of skills, knowledge, individual relationships and resources. On overall majority agreed mean = 3.9 and standard deviation 1.0 that knowledge mapping had influence on performance of employees in Public universities in Kenya.

The findings mirrored the study by Hellstrom & Husted, (2004) study which showed that knowledge mapping assists in coordination and access to different information sources which empowers employees and gives them the ability to become creative which in turn improves their individual performance. Similarly, Lee and Fink (2013) argued that knowledge mapping affects how employees behave in a positive way since they have easier access to requisite knowledge in an organized manner which encourages creativity and innovation as they seek to improve their day-to-day activities.

Moreover, these findings concurred with Driessen et al., (2007) who argued in favor of development of a customized organizational tool designed to help gather and disseminate of information as and when the need arises. This they argued would not only ease the access of and retrieval of data but also use it effectively whenever required. Further, in tandem with Ho (2009), the study agreed that through knowledge mapping, employee performance can be enhanced since it easier to identify barriers to optimal performance within an organization especially those attributed to lack of information. In this regard, knowledge mapping is viewed as a tool that can assist to create a harmonious communication framework between members of the organization.

Table 4.6: Descriptive Statistics of Knowledge Mapping

My university	n=202					Mean	Std. Dev	
	SD	D	NS	A	SA			
Has a structured way of collecting data	5.4	8.9	15.3	39.6	30.7	3.8	1.1	
Has a structured way of collecting and keeping documents	7.9	3	18.8	31.7	24.3	3.5	1.3	
Facilitates communication and knowledge sharing between individuals and groups	5	4	11.	19.8	39.1	24.8	3.7	1.1
Updates manuals and handbooks which are frequently used to inform employees of new developments	6.9	9.9	20.3	30.7	32.2	3.7	1.2	
Provides access to information resources required to perform my work	4	5.9	9.9	46	34.2	4.0	1.0	
Has clear guidelines as to whom to submit information	3	2.5	12.4	63.4	18.8	3.9	0.8	
Has clear guideline as to where to submit information	1.5	4	15.3	35.6	43.6	4.2	0.9	
Has designated people who offer advice to me on work-related issues when required	5.4	5.9	10.4	39.1	39.1	4.0	1.1	
Groups have emerged that share what they know as effectively as they should	3	5.9	12.9	44.1	34.2	4.0	1.0	
Groups hold regular meetings to review emerging or new developments	2.5	5.4	10.9	39.6	41.6	4.1	1.0	
Employees regularly use intranets to share information on processes within the institution	2	7.9	7.9	45.5	36.6	4.1	1.0	
Has structured processes of knowing what information is required	5.9	5	15.8	40.1	33.2	3.9	1.1	
The channels of accessing and retrieving of information (e.g. through people and technology) are available	2.5	7.4	18.3	35.1	36.6	4.0	1.0	
Information sources at my university are well labeled and easily accessible	3	5.4	10.9	49.5	31.2	4.0	1.0	
Has processes to identify gaps between required skills and current skills	4.5	5.9	6.9	35.6	47	4.2	1.1	
Has a database of skills, competencies and types of resources	2.5	4.5	15.3	32.7	45	4.1	1.0	
Overall average						3.9	1.0	

**SD- Strongly disagree, D-Disagree, NS- Not Sure, A-Agree, SA-Strongly agree*

4.4.4 Descriptive Statistics of Knowledge Culture

The fourth objective of the study identified influence of knowledge culture on employee performance in public universities in Kenya. According to Cole (2011), an organization's culture is the backbone of how well an organization can perform since it has the capacity to create a working environment that is driven by core values shared by all employees which are geared towards achieving competitive advantage.

Ajmal & Koskinen (2008), perceived organization culture to be a mixture of regular ways of doing things which makes employees behave in a certain way reflective of the mission and vision of the organization. As Travica (2013) indicates, knowledge culture then becomes a form of organizational culture that creates a link between individual, group and external knowledge to facilitate the management of the entire knowledge management process. According to Davoren (2015), there is need for to create a knowledge culture within an organization so as promote avenues for knowledge creation and sharing, which are aligned to the needs of the organization and individuals.

As shown in Table 4.7 majority 44.6 percent agreed that employees in public universities in Kenya understood their institutions' mission and vision statements. Secondly, 55 percent agreed that they valued one another's unique strengths and abilities in Public universities in Kenya. Thirdly, 37.6 percent agreed that they make use of one another's unique strengths and abilities in Public universities in Kenya. Also, 44.1 per cent agreed that they participate in information sharing in their institutions. Further, 36.1 percent strongly agreed and 34.2 percent agreed that employees in public universities in Kenya support and trust each other. Also, majority 43.6 agreed and 34.7 percent strongly agreed that they share information and experiences in public universities in Kenya. A study by Mathis & Jackson (2011) shows that firms that have a good culture also tend to have efficient employee training programs which impact positively on skills flexibility.

These findings corroborated with Chang & Lin (2015) who supported the need to align components of knowledge culture with the needs of employees so as to develop healthy working environment conducive for desired employee performance. Similar sentiments were echoed by Mason & Pauleen, (2009) who argued in favor of creation of a culture that encourages employees to share their knowledge regularly and make it become a routine or a way of doing things on a day-to-day basis to increase their performance. In Kenya, Bagaja and Guyo (2015) called for alignment of employee behaviors to a knowledge sharing culture to enable them acquire new knowledge to improve their performance and better utilize other scarce resources effectively. Further, the study concurred with Mohaydin (2007) who argued on the

need for creation an info-culture and info-structure in Malaysian universities so as to enhance individual performance.

Concerning conduct of respective universities majority mean 3.9 and standard deviation 1.0 agreed that public universities in Kenya provide a suitable atmosphere for information sharing. Secondly, majority mean = 4.0 and standard deviation = 1.0 agreed that public universities encourage employee participation in decision making. Thirdly, majority mean = 4.4 and standard deviation = 0.7 agreed that public universities support team spirit. Further, 48.5 percent strongly agreed and 32.2 percent agreed that public universities encourage attendance to seminars and workshops. Also, majority 48.5 percent strongly agreed and 36.6 percent agreed that in Public universities in Kenya trust exist amongst staffs. Majority 64.4 percent strongly agreed and 27.7 percent agreed that public universities in Kenya have opportunities for sharing knowledge. Majority agreed mean = 4.0 and standard deviation = 1.1 that in public universities employees are encouraged to generate new ideas and innovations. Moreover, it was agreed mean = 3.7 and standard deviation = 1.1 that in Public universities in Kenya those who came up with new ideas were highly respected and those sharing knowledge were perceived as experts (mean = 3.8, standard deviation = 1.2). Also, majority mean = 4.0 either agreed that Public universities in Kenya encouraged brainstorming and discussions as solution gathering strategies or teams were delegated to solve emerging issues and challenging projects. On overall majority agreed that knowledge culture has influence on employee performance in Public universities in Kenya mean = 4.0 and standard deviation= 1.0.

The study findings echoed Davoren (2015) who argued that organization structure has significant influence on how effective a knowledge culture evolves over time. A study by Yusuf and Wanjau (2014) however revealed that, State Corporations in Kenya did not have adequate knowledge sharing mechanisms and this therefore restricted the flow of information within respective departments which may have contributed to the slow development a vibrant knowledge sharing culture within them. Otunga (2016) found that there was significant positive relationship between power, culture and productivity in universities in Kenya. Owino (2020) study

indicated that organizational culture is a major source of sustainable competitive advantage in the microfinance industry in Kenya. A study by Ongwae, Lagat & Odunga (2018) offered support to the key roles of culture and structure in positively influencing employee performance in Kenyan universities. Further Mwangi & Waithaka (2018) concluded that cultures of power, task, role and person influences the performance of public universities in Kenya.

Table 4.7: Descriptive Statistics of Knowledge Culture

To what extent do employees	N=202					Mean	Std. Dev
	SD	D	N	A	SA		
Understand the university's mission and vision statements	2.5	7.9	5.9	39.1	44.6	4.2	1.0
Value one another's unique strengths and abilities	0.5	7.4	10.9	26.2	55	4.3	1.0
Make use of one another's unique strengths and abilities	2	9.9	19.3	37.6	31.2	.9	1.0
Participate in sharing of information	4.5	11.9	19.8	44.1	19.8	3.6	1.1
Support and trust each other	4.5	11.4	13.9	34.2	36.1	3.9	1.2
Share information and experiences	1.5	5.4	14.9	43.6	34.7	4.0	0.9
My university							
Provides a conducive atmosphere to share information with others	4	6.4	18.3	41.1	30.2	3.9	1.0
Encourages employee participation in decision making	2.5	5.9	18.8	36.1	36.6	4.0	1.0
Encourages team spirit	1	0.5	6.9	41.6	50	4.4	0.7
Has a working environment that is open, conducive and harmonious	0.5	4	14.4	33.7	47.5	4.2	0.9
Trust exists among staff	2	5	26.2	34.7	32.2	3.9	1.0
Attendance to seminars and workshops is encouraged	2.5	4.5	12.4	32.2	48.5	4.2	1.0
New ideas and innovations are encouraged and recognized	3.5	11.4	11.9	32.2	41.1	4.0	1.1
Trust exists among staff	2	2.5	10.4	36.6	48.5	4.3	0.9
We have opportunities to share knowledge	0	3.5	4.5	27.7	64.4	4.5	0.7
We are encouraged to generate new ideas and innovations	3	7.9	17.3	34.7	37.1	4.0	1.1
People who come up with new ideas and innovations are highly respected	4	9.9	26.7	33.2	26.2	3.7	1.1
The employees sharing knowledge are perceived as experts	5.9	8.4	19.3	33.2	33.2	3.8	1.2
Brainstorming and discussions are encouraged as means for getting solutions	2.5	8.4	14.4	36.6	38.1	4.0	1.0
Teams/groups are given new and challenging projects to address emerging issues	3	8.9	14.4	33.7	40.1	4.0	1.1

Overall Average	4.0	1.0
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**SD- strongly disagree, D- Disagree, NS- Not sure, A-Agree, SA-Strongly agree*

4.4.5 Descriptive Statistics of Organization Learning

The fifth objective assessed the influence of organization learning on employee performance in public universities in Kenya. Organization learning was perceived as the organization's capacity to effectively take action in response to the dynamic nature of both its internal and external environments, (Liu & Wu, 2009). An organization capacity to learn is dependent on how knowledge through its knowledge management practices is coordinated so as to be proactive to environmental changes thus experience success. According to Garavan and McCarthy (2008), organization learning must be a continuous process and its success relies on how effectively the resources are utilized.

As shown in Table 4.8 majority 44.6 percent agreed and 35.1 percent strongly agreed that employees in public universities in Kenya were confident with their work. Secondly, majority agreed mean = 3.7 and standard deviation = 1.2 that public universities in Kenya gives them time to learn. Thirdly, majority 42.1 percent agreed and 34.7 percent strongly agreed that public universities accept negative feedback from its employees without being defensive. Further, 22.8 percent agreed and 27.7 percent strongly agreed that public universities encourage staff rotation to broaden their skills. Also, majority 48 percent strongly agreed and 33.2 percent agreed that employees of public universities in Kenya scan the external environment as they assess future risks and opportunities. Majority mean = 4.5 and standard deviation = 1.3 agreed that public universities employees are always looking for better ways to execute their duties.

Majority 42.6 percent agreed and 36.6 percent strongly agreed that there are stated policies on the amount and types of training that the employee can expect to receive. Further, 52.5 percent strongly agreed and 31.7 percent agreed that in Public universities in Kenya group work is seen as valuable. Also, 46 percent strongly agreed and 31.2 percent agreed that in public universities employees share success

with others. In addition, 34.7 percent strongly agreed and 27.2 percent agreed that there share failures with others. On average (mean =3.6) employees in Public universities in Kenya agreed either they are motivated in new ideas generation and innovations or brainstorming and discussions are encouraged as a means of getting solutions. Majority mean = 3.9 and standard deviation = 1.1 agreed that they have realistic though challenging vision and mission statements in Public universities in Kenya. Further, majority 32.7 percent strongly agreed and 29.7 percent agreed that they have relevant performance indicators for their institutions and they agreed their public universities are learning organizations (mean = 4.0). Moreover, majority mean = 4.3 either agreed that public universities in Kenya has learnt lessons from various sources available to staff or they have systems of evaluating feedback or training outcomes. On average employees from public universities agreed that employees of Public universities in Kenya collaborate with the external community to enrich their experiences (mean = 4.2). On overall, majority agreed that organization learning had an influence on employee performance in public universities in Kenya (mean = 3.9, standard deviation = 1.1).

These findings agreed with Jain and Moreno (2015) which reported a significance correlation between organization learning and organization performance. Similarly, the study was congruent to Nafei (2014) who reported that positive attitude changes were reported amongst banking employees in Saudi Arabian Banks upon incorporation of organization learning culture. The studies of Turyasingura (2011) and Ongwae et al, (2018), also reported a significant and positive relationship between organization learning on employee performance in institutions of higher learning in Uganda. These results contrasted in an aspect with that of Ambula (2015) who reported that though organization learning significantly influenced employees' outcomes in manufacturing companies in Kenya, its influence on financial performance was not significant. However, studies by Liao et al., (2012) and Turyasingura (2011) observed that organizational learning had a significant relationship with organizational commitment, job satisfaction, and work performance.

Table 4.8: Descriptive Statistics of Organization Learning

	n=202					Mean	Std. Dev
	SD	D	N	A	SA		
Employees feel confident in their work	1.5	4.5	14.4	44.6	35.1	4.1	0.9
Time is given to learn (eg. Study leave)	3.5	8	16.8	32.2	31.7	3.7	1.2
Employees accept negative feedback without becoming defensive	3.5	7.9	11.9	42.1	34.7	4.0	1.0
Employees are encouraged to participate in job rotations to broaden their knowledge and experience	12.9	15. 8	20.8	22.8	27.7	3.4	1.4
Employees scan the external environment (customers, suppliers, competitors.) to assess future risks and opportunities	3.5	5	10.4	33.2	48	4.2	1.0
Individuals look for new and better ways to work	8.9	21. 3	14.9	25.7	29.2	3.5	1.3
There are clear policies on the amount and types of training that the employee can expect to receive	3	5	12.9	42.6	36.6	4.1	1.0
Group work is seen as valuable	5.4	5.9	4.5	31.7	52.5	4.2	1.1
We share our successes with others	4.5	5.9	12.4	31.2	46	4.1	1.1
We share our failures with others	5.4	8.4	24.3	27.2	34.7	3.8	1.2
We have opportunities to share knowledge	4.5	10. 9	26.2	23.8	34.7	3.7	1.2
We are motivated to generate new ideas and innovations	6.4	15. 8	18.3	32.7	26.7	3.6	1.2
Brainstorming and discussions are encouraged as a means of getting solutions	5.4	17. 3	19.8	28.7	28.7	3.6	1.2
We have a realistic yet challenging vision and mission statements	5	8.4	12.4	38.6	35.6	3.9	1.1
We have relevant performance indicators for our business	6.9	13. 9	16.8	29.7	32.7	3.7	1.3
We are a learning organization	5	6.4	9.4	40.1	39.1	4.0	1.1
Continuous searches for opportunities for continuous learning for employees are undertaken	13.4	11. 9	15.8	28.7	30.2	3.5	1.4
Lessons learnt from various sources are made available to all staff	0.5	1	12.9	42.1	43.6	4.3	0.8
There are systems of evaluating feedback/outcomes of training	1	4.5	10.9	36.1	47.5	4.3	0.9
Employees collaborate with external community to enrich learning experiences	3	2	11.9	40.1	43.1	4.2	0.9
Overall average						3.9	1.1

**SD- Strongly disagree, D- Disagree, NS- Not Sure, A-Agree, SA-Strongly agree*

4.4.6 Descriptive Statistics of Organization Structure

Further the study investigated the moderating influence of organization structure on the role of knowledge management practices on employee performance in Public universities in Kenya. Organization structure shows roles and reporting structure as well as coordination of different of various functional activities within an organization. In addition, Mohmoudsalehi (2012) perceived it as a kind of organogram which defines the relationship between employees clearly pointing at who are the decision makers and who reports to them.

As shown in Table 4.5 majority 55 percent strongly agreed and 32.2 percent agreed that public universities in Kenya have lines of authority that encourage interactions and sharing of knowledge. Secondly, majority 45 percent strongly agreed and 29.2 percent agreed that in public universities, the organization structures support strategic direction. Thirdly, majority 38.6 percent strongly agreed and 36.1 percent agreed that public universities organization is characterized with high trust. Also, majority agreed mean = 3.5 agreed that in Public universities in Kenya individuals understand their roles and they contribute to performance and mean = 3.8 agreed that team work is an essential part of their organization activity. Further, majority 55.4 percent strongly agreed that in public universities coordination of information facilitates transfer of new knowledge across functional boundaries. Also, majority 48 percent agreed and 38.1 percent strongly agreed that there is a standardized reward system for knowledge sharing.

Majority mean = 4.1 either agreed that public universities has processes designed to facilitate knowledge sharing and functional boundaries or their team roles were clearly defined. Also, majority 42.1 percent agreed and 40.6 percent strongly agreed that in public universities team roles are clearly defined. Further, majority 48 percent strongly agreed and 38.6 percent agreed that in Public universities in Kenya there is support and guidance from supervisors and superiors. Majority 59.4 strongly agreed and 30.2 percent agreed that the structures in Public universities in Kenya have opportunities for career growth and other professional development for employees.

Finally, majority 49 percent agreed and 36.1 percent strongly agreed that in public universities managers frequently examine knowledge for errors or mistakes.

These findings agreed with Canter et al., (2009) who argued that there is need for a well set out organization structure to achieve optimal benefits from the business environment. Similar sentiments were echoed by Shabbir (2017) in Nigeria when the study reported that organization structure affected employee motivation and by extension their performance. In fact, reliability of organization structures is anchored on clarity of roles and duties of respective employees. Kessler (2007) found that universities tend to develop alternative operational guidelines to counter negative employees' behaviors which influence their behavior in desirable ways. In addition, Madueyi et al., (2015) supported the need for clarity of organization structure so as to achieve superior performance and enhance alignment to the vision and mission to long term goals. Thomas (2015) and Ongwae et al., (2018) also mirrored the findings by reporting positive influence of organization structure on employee motivation in Nigerian banking sector and public universities in Kenya respectively.

Table 4.9: Descriptive Statistics of Organization Structure

n=202							
	SD	D	N	A	SA	Mean	Std. Dev
Lines of authority encourage interactions and sharing of knowledge	3.5	4	5.4	32.2	55	4.3	1.0
The organization structure supports our strategic direction	2	7.4	16.3	29.2	45	4.1	1.0
We have an organizational structure characterized by a high degree of trust	3	8.4	13.9	36.1	38.6	4.0	1.1
Individuals understand how their work contributes the performance of the institution	6.9	8	21.3	28.2	26.7	3.5	1.2
Teamwork is an essential part of organizational activity	4.5	7.4	19.3	39.6	29.2	3.8	1.1
Organizational structure encourages employee participation in decision making	7.4	4	8.9	27.2	45	3.9	1.3
Coordination of information facilitate the transfer of new knowledge across functional boundaries	3	3.5	10.9	27.2	55.4	4.3	1.0
There is a standardized reward system for sharing knowledge	3	3	7.9	48	38.1	4.2	0.9
Processes are designed to facilitate knowledge exchange between functional boundaries	1	5	15.3	39.6	39.1	4.1	0.9
Team roles are clearly defined	2.5	4	10.9	42.1	40.6	4.1	0.9

Support and guidance from supervisors and other superiors is available	0.5	3	9.9	38.6	48	4.3	0.8
Structure has opportunities for career growth and other professional development for employees	1	2.5	6.9	30.2	59.4	4.5	0.8
Managers regularly check on status of knowledge for errors/mistakes	1.5	5.9	7.4	36.1	49	4.3	0.9
Overall average						4.1	1.0

**SD- strongly disagree, D- Disagree, NS- Not sure, A-Agree, SA-Strongly agree*

4.4.7 Descriptive Statistics on Employee Performance

Employee performance was perceived as the positive outputs by an employee from the inputs that have been utilized in an organization (Yakok, 2008). On the other hand, Mohamad (2012), perceived employee performance as visible outcomes within a specific period of time period in relation to inputs that were used. Employees performance is therefore measured in terms of the quality and quantity outcomes achieved as per set standards and benchmarks stipulated to be achieved. A study by Gungor (2011) indicated that evaluation of employees should include additional parameters like timeliness of output, inter personal relations or team spirit and presence at work.

As shown in Figure 4.6 the study examined the rating of public universities employee performance in the past three months. Results showed that 50 percent of employees had attended 41 to 60 percent of their duties in the past three months; this was followed by 42.1 percent who had attended around 61 to 80 percent. It was commendable that most employees had persistently been attending to their duties in the past three months. Job attendance is an indicator of an employee's level of job satisfaction as reflected in the study by Huang, Han, Park & Seo (2010) which showed that job satisfaction is the extent to which individuals like or dislike their jobs which translates into actual behavior and ultimately performance. However, a study by Philemon, (2006), indicated that job attendance can only be viewed as positive if an individual's engagement levels are high to transform to expected performance.

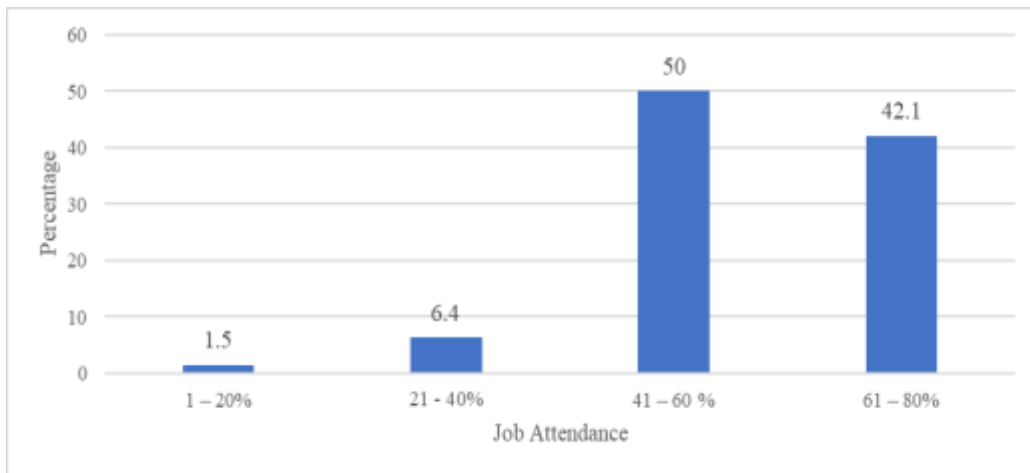


Figure 4.6: Rating on Job Performance in the Previous Three Months

Further, the study examined public universities in Kenya employees' meetings attendance in the past three months. As shown in Figure 4.7 majority 49.5 percent had attended all meetings held in the past three months, followed by 39.1 percent who had attended at least 61 to 80 percent of meetings. This attendance is commendable and would indicate that there exist adequate communication channels to enhance application of knowledge management practices as expected in Public universities in Kenya. This concurs with a study by Anitha (2014) who reported that effective communication with employees on a regular basis makes them feel part of the organization and keeps them informed of any changes taking place. This is also mirrored by the study of Philemon (2006) who indicated that due to the changing meaning of work in modern day business world, employee measurement range needs to be broadened so as to capture as fully as possible different aspects of their job performance. A study by Odero & Makori (2015) found that there was a positive and significant relationship between employee involvement and performance amongst part time lecturers in public universities in Kenya. Sundi (2013)) proposed five criteria that could be used to measure performance: work quantity, work quality, work independence, timeliness and individual relationships. A study by Yusuf, Mohamed & Kazeem (2014) showed that employee performance is reflected by their ability to achieve set objectives within required timeliness and parameters.

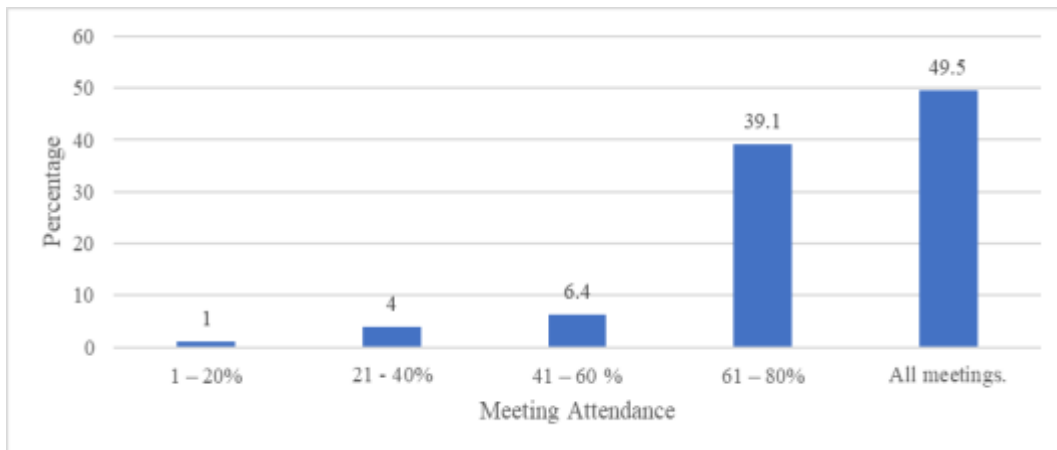


Figure 4.7: Rating on Meetings Attendance in the Past Three Months

As shown in Table 4.10 the study examined the rating amongst employees in public universities on individual employee performance. Majority 59.9 percent reported that at all times and 33.7 percent often performed quality work in the past three months. Secondly, majority 61.9 percent reported that at all times the quantity of their work is always high. Also, majority 52.5 percent at all times managed to do their work on time. Majority 55.4 percent reported that at all times they keep in mind quality of work they have achieved in their work. Also, 49.5 percent and 60.4 percent reported that at all times they have no trouble in setting priorities in their work and they think that their customers are satisfied respectively. Further, majority 58.4 percent reported that at all times they consider their customer wishes in public universities. Similarly, 53 percent of employees in Public universities in Kenya reported that at all times they are able to separate main issues from side issues in as they perform their duties. In addition, 35.6 percent and 27.7 percent reported that at all times and often respectively they do not fail to complete their work as intended. This is mirrored by the studies of Yusuf et al., (2018) and Rath & Conchie (2009) which indicated that employee performance is how an employee achieves set goals/objectively in a timely manner. Finally, majority 41.1 percent reported that at all times they are rewarded for sharing information. This mirrors the study by Ngesa et al., (2016) which emphasized the importance of evaluating employee performance from affective, social and intellectual engagement levels in order to reflect a complete view of their performance according to institutional expectations.

A study by Gungor, (2011) concurs that employee performance should reflect not only their quantity and quality outputs but also their contextual and adaptive performances. Nguyen et al., (2015) states that though there have been many studies carried out to examine various factors that affect employee performance, very few have examined more than three factors at one time, something that this study has attempted to do.

Table 4.10: Rating on Quality of Employee Performance

	n=202					Mean	Std. Dev
	N	R	S	O	A		
The quality of my work in the last three months was high	1	0.5	5	33.7	59.9	4.5	0.7
In the last three months, the quantity of my work was been high	1	4	5.4	27.7	61.9	4.5	0.8
Am able to schedule my work to have it completed on time	1.5	5.4	9.4	31.2	52.5	4.3	0.9
I am aware of what is expected of me to achieve desirable results in my work	0.3	2	4	38.6	55.4	4.5	0.7
I am able to set my priorities right in my work	5	3.5	5	38.6	49.5	4.3	1.0
I have received no complaints from customers on my work in the last three months	1	0	5.9	32.7	60.4	4.5	0.7
The wishes of customers take top priority in my work	1.5	2.5	8.4	29.2	58.4	4.4	0.9
I have ability to set apart main issues from side issues at work	5	4	10.9	27.2	53	4.2	1.1
It does not takes me long to complete my work tasks as intended	6.9	8.4	21.3	27.7	35.6	3.8	1.2
I am rewarded for sharing knowledge	5.9	4.5	16.8	31.7	41.1	4.0	1.1
Overall average						4.3	0.9

**N-Never, R- Rarely, S-Sometimes, O-Often, A-All the times*

As shown in Table 4.11 majority 41.1 percent of respondents strongly agreed and 31.2 percent agreed that they are able to meet their targets in Public universities in Kenya. Secondly, majority mean = 3.8 and standard deviation = 1.2 agreed that they are able to fulfill their responsibilities. Thirdly, majority 47.5 percent agreed and 32.7 percent strongly agreed that they collaborate well with their respective employees. Further, majority 36.1 percent agreed and 25.2 percent strongly agreed that employees in public universities understand each other well. Similarly, 51.1 percent strongly agreed and 40.1 percent agreed that they understand other

employees very well. In addition, majority mean = 4.4 either agreed that they come up with creative ideas in their work place or are open to criticism. Also, majority mean = 4.4 either agreed that they try to learn from feedback they receive from fellow employees or they take challenging tasks whenever they are available. Majority strongly agreed mean = 4.5 that either they start new tasks once they have completed others or they seek for help when need arises. Further, majority mean = 4.3 agreed that they take initiatives whenever they are problems to be solved. This mirrors the study of Vosloban (2012) which showed that the quality of job performance is reflected by the extent to which the job holder effectively carries out their designated tasks that contribute to the achievement of the of organization's vision. Moreover, the study of Anitha, (2013) which showed that employee performance is affected with the environment in which tasks are performed, supervisor-subordinate relationships, relationships with co-workers, reward and recognition and general employee engagement levels.

At their respective work places majority agreed mean = 4.4 agreed that in public universities in Kenya they continuously update their job knowledge. Additionally, majority mean = 4.3 agreed that they work at keeping their job skills up to date. Further, majority strongly agreed mean = 4.6 and 4.5 that they come up with creative solutions to new problems and they are able to cope with unpredictable situations at work respectively. Finally, majority mean = 4.4 either agreed that they easily adjust to changes in their work place or recover fast after difficult work situations in their places of work. On overall majority were satisfied with their current state of their job performance (mean = 4.3; standard deviation= 0.9). This concurs with the study of Philemon (2006) which revealed the importance of broadening of the measurement spectrum for employee performance to be in tune with the changing requirements in a dynamic environment. According to Pradan & Jena (2016), effective task performance requires more both cognitive ability and task skills acquired through technical knowledge and ability to apply that knowledge without direct supervision.

Table 4.11: Descriptive statistics on status of Employee Performance

	n=202					Mean	Std. Dev
	SD	D	N	A	SA		
I am able to meet my targets	4	6.9	16.8	31.2	41.1	4.0	1.1
I am able to fulfill my responsibilities	5	15.3	13.4	27.7	38.6	3.8	1.2
Collaborations with others goes well	3	4.5	12.4	47.5	32.7	4.0	0.9
Other employees understand me well when I tell them something	7.9	13.9	16.8	36.1	25.2	3.6	1.2
I understand others well when they tell me something	1.5	2.5	5	40.1	51	4.4	0.8
Communication with others leads to desired results	1	3.5	6.9	28.7	59.9	4.4	0.8
I am able to come up with creative ideas at work			3.5	39.6	56.9	4.5	0.6
I am proactive in ensuring a problem to be solved	4.5	1.5	2.5	39.6	52	4.3	0.9
I start new tasks myself when new ones are finished	0.5	1	3.5	38.1	56.9	4.5	0.7
I ask for help when needed	0		5	42.6	52.5	4.5	0.6
I am open to criticism of my work	2.5	1	6.9	31.2	58.4	4.4	0.9
I am able to acquire new information from the feedback from others on my work	2	4.5	5	31.2	57.4	4.4	0.9
I take on challenging work tasks, when available	3.5	0	5.9	34.2	56.4	4.4	0.9
I try to be updated on new knowledge in my job	1	4	2.5	38.6	54	4.4	0.8
I work at keeping my job skills up-to-date	3.5	3	5.4	34.7	53.5	4.3	1.0
I am able to suggest creative solutions to new problems	0	0	5.9	32.2	61.9	4.6	0.6
I consider myself to be adaptable in event of sudden changes	0	3	6.9	25.2	64.9	4.5	0.8
I easily adjust to regular changes in my work	1	2.5	4.5	37.1	55	4.4	0.8
I am able to adjust quickly after major challenges in my work	1	3.5	4	39.1	52.5	4.4	0.8
Overall average						4.3	0.9

**SD- Strongly Disagree, D- Disagree, NS- Not sure, A-Agree, SA- Strongly agree*

4.5 Exploratory Factor Analysis

According to Sekaran and Bougie (2013) factor analysis is executed to factors to those which have high explanatory power in the subject under examination. Factor analysis is grouped into exploratory (EFA) and confirmatory factor analysis (CFA). According to Kothari (2014). EFA is carried out to explore degree of interconnectedness amongst study variables. Upon dimension reduction through EFA

there are factor loadings which are generated, they range from 0 to 1 with those close to 1 depicting high degree of interrelationship. According to Tabachnick & Fidell (2007) factor loading of less than 0.32 shows poor loading, fair loading is exhibited by factor loading of 0.33 to 0.45; those with 0.46 to 0.55 are considered good and very good have 0.56 to 0.63 above 0.7 shows excellence. Those attributes whose factor loadings were greater than 0.5 were retained for subsequent analysis in the study.

4.5.1 Exploratory Factor Analysis on Competency management

As shown in Table 4.12, elements in competency management had good factor loadings since they had coefficients greater than 0.5. The highest was 0.701 as accounted by ECM12 followed by 0.684 for ECM13 and the least was 0.26 for ECM3.

Table 4.12: Exploratory Factor Analysis on Competency management

Component	Factor Loading
ECM1	0.625
ECM2	0.518
ECM3	0.26
ECM4	0.422
ECM5	0.517
ECM6	0.443
ECM7	0.353
ECM8	0.488
ECM9	0.516
ECM10	0.507
ECM11	0.551
ECM12	0.701
ECM13	0.684
ECM14	0.681
ECM15	0.631
ECM16	0.393
ECM17	0.575
ECM18	0.488

Results in Table 4.13 shows factor loadings for 11 factors for competency management that were retained for subsequent analysis. The resultant Cronbach's Alpha for retained attributes was 0.829 which was excellent. Retained factors were

ECM1, ECM2, ECM5, ECM9, ECM10, ECM11, ECM12, ECM13, ECM14, ECM15 and ECM17.

Table 4.13: Exploratory Factor Analysis on Competency management After Deletion

Component	Factor loading
ECM1	0.625
ECM2	0.518
ECM5	0.517
ECM9	0.516
ECM10	0.507
ECM11	0.551
ECM12	0.701
ECM13	0.684
ECM14	0.681
ECM15	0.631
ECM17	0.575
Cronbach's Alpha	0.829

4.5.2 Exploratory Factor Analysis on Communities of Practice

As shown in Table 4.14 highest factor loading was 0.7 was excellent. Retained factors were such as helps me build relationships with others, benefit my daily work from the relationships established, its mainly driven by the willingness to participate, motivate employees to share work related knowledge and employees are encouraged to be active in external professional networks and associations amongst others. Other factors retained were those that represent an area of common interest for a number of staff/customers/clients/partners, currently has clear focus in its theme, gives a sense of belonging, helps me find relationships with others, builds up an agreed set of communal resources over time and employees are assisted to access important information through journal, research reports amongst others.

Table 4.14: Exploratory Factor Analysis on Communities of Practices

	Factor loading
COP1	0.625
COP2	0.515
COP3	0.685
COP4	0.638
COP5	0.713
COP6	0.644
COP7	0.508
COP8	0.523
COP9	0.567
COP10	0.687
COP11	0.65
COP12	0.574
COP13	0.633
COP14	0.637
COP15	0.598
COP16	0.655
Cronbach's Alpha	0.889

4.5.3 Exploratory Factor Analysis on Knowledge Mapping

AS shown in Table 4.15 most of the attributes of knowledge mapping had good factors loadings since they were greater than or equal to 0.5. The highest was 0.745 which was KMAP9 and the least was KMAP2 with factor loading of 0.456.

Table 4.15: Exploratory Factor Analysis on Knowledge Mapping

	Factor Loading
KMAP1	0.558
KMAP2	0.456
KMAP3	0.58
KMAP4	0.539
KMAP5	0.543
KMAP6	0.593
KMAP7	0.719
KMAP8	0.736
KMAP9	0.745
KMAP10	0.695
KMAP11	0.566
KMAP12	0.506
KMAP13	0.559
KMAP14	0.742
KMAP15	0.667
KMAP16	0.646

After deleting the factor with least weight of 0.456, retained attributes had Cronbach's Alpha of 0.887. Retained factors were Public universities in Kenya has a structured way of collecting data, facilitates communication and knowledge sharing between individuals and groups, updates handbooks and work guidelines which are frequently used to inform employees of new development, has designated people who offer advice to me on work-related issues when required and has a directory of skills, knowledge, individual relationships and resources

Table 4.16: Exploratory Factor Analysis on Knowledge Mapping After Deletion

	Factor Loading
KMAP1	0.558
KMAP3	0.58
KMAP4	0.539
KMAP5	0.543
KMAP6	0.593
KMAP7	0.719
KMAP8	0.736
KMAP9	0.745
KMAP10	0.695
KMAP11	0.566
KMAP12	0.506
KMAP13	0.559
KMAP14	0.742
KMAP15	0.667
KMAP16	0.646
Cronbach's Alpha	0.887

4.5.4 Exploratory Factor Analysis on Knowledge Culture

As shown in Table 4.17 attributes of knowledge culture had good factor loadings since most of them were greater than or equal than 0.5. The highest factor loading was 0.724 and the least was 0.097. The resultant number of factors retained in the study was eight.

Table 4.17: Exploratory Factor Analysis on Knowledge Culture

	Factor Loading
KC1	0.643
KC2	0.701
KC3	0.673
KC4	0.621
KC5	0.622
KC6	0.627
KC7	0.658
KC8	0.724
KC9	0.097
KC10	0.2
KC11	0.282
KC12	0.355
KC13	0.25
KC14	0.218
KC15	0.167
KC16	0.093
KC17	0.091
KC18	0.265
KC19	0.125
KC20	0.107

Results in Table 4.18 indicates that knowledge culture factors retained in the number were eight and they include KC1, KC2, KC3, KC4, KC5, KC6, KC7 and KC8. The Cronbach's Alpha for retained factors was 0.838.

Table 4.18: Exploratory Factor Analysis on Knowledge Culture after Deletion

	Factor Loading
KC1	0.643
KC2	0.701
KC3	0.673
KC4	0.621
KC5	0.622
KC6	0.627
KC7	0.658
KC8	0.724
Cronbach's Alpha	0.838

4.5.5 Exploratory Factor Analysis on Organizational Learning

As shown in Table 4.19 organization learning attributes had good factor loadings since they were either greater than or equal to 0.5. Retained factors were such as given time to study such as study leave, employees scanning external environment such as external suppliers, customers so as to assess opportunities and future risks, sharing of failures with others, they have opportunities to share knowledge, they are motivated by generation of new ideas and brainstorming and discussions are encouraged as means of getting solutions amongst others etc.

Table 4.19: Exploratory Factor Analysis on Organizational Learning

	Factor Loading
OLER1	0.424
OLER2	0.445
OLER3	0.493
OLER4	0.529
OLER5	0.445
OLER6	0.598
OLER7	0.536
OLER8	0.393
OLER9	0.525
OLER10	0.519
OLER11	0.533
OLER12	0.633
OLER13	0.63
OLER14	0.481
OLER15	0.664
OLER16	0.634
OLER17	0.655
OLER18	0.327
OLER19	0.396
OLER20	0.367

Results in Table 4.20 indicates that the factors that were retained had Cronbach's Alpha coefficient of 0.831.

Table 4.20: Exploratory Factor Analysis on Organizational Learning after Deletion

	Factor loading
OLER4	0.529
OLER6	0.598
OLER7	0.536
OLER9	0.525
OLER10	0.519
OLER11	0.533
OLER12	0.633
OLER13	0.63
OLER15	0.664
OLER16	0.634
OLER17	0.655
Cronbach's Alpha	0.831

4.5.6 Exploratory Factor Analysis on Organizational Structure

As shown in Table 4.21, attributes of organization structure have good factor loadings since they were greater than or equal to 0.5. The modal factor loading was 0.5 as accounted by attributes such as having organizational structure characterized by high degree of trust, individuals understating how their work contributes to their organization performance, teamwork is an essential part of organizational activity, organizational structure encourage employee participation in decision making, coordination of information facilitate the transfer of new knowledge across functional boundaries and process which are designed to facilitate knowledge exchange between functional boundaries.

Table 4.21: Exploratory Factor Analysis on Organizational Structure

	Factor Loading
OST1	0.463
OST2	0.543
OST3	0.544
OST4	0.731
OST5	0.694
OST6	0.739
OST7	0.562
OST8	0.457
OST9	0.421
OST10	0.482
OST11	0.605
OST12	0.541
OST13	0.439

Results in Table 4.22 indicates that eight factors of organizational structure were retained since they had good factor loading. There resultant Cronbach's Alpha coefficient was 0.804.

Table 4.22: Exploratory Factor Analysis on Organization Structure after Deletion

	Factor loading
OST2	0.543
OST3	0.544
OST4	0.731
OST5	0.694
OST6	0.739
OST7	0.562
OST11	0.605
OST12	0.541
Cronbach's Alpha	0.804

4.5.7 Exploratory Factor Analysis on Employee Performance

As shown in Table 4.23, rating on employee's performance had factor loadings which were good since they were either greater than or equal to 0.5. The highest factor loading was 0.65 as accounted by REMP3.

Table 4.23: Exploratory Factor Analysis on Rate on Quality Employee Performance

	Factor Loading
REMP1	0.461
REMP2	0.516
REMP3	0.654
REMP4	0.594
REMP5	0.56
REMP6	0.597
REMP7	0.648
REMP8	0.546
REMP9	0.576
REMP10	0.48

Results in Table 4.24 indicates that only eight of 10 quality of employee performance factors were retained since they had good factor loadings. Their resultant Cronbach's Alpha was 0.712.

Table 4.24: Exploratory Factor Analysis on Rate on Quality Employee Performance After Deletion

	Factor loading
REMP2	0.516
REMP3	0.654
REMP4	0.594
REMP5	0.56
REMP6	0.597
REMP7	0.648
REMP8	0.546
REMP9	0.576
Cronbach's Alpha	0.721

As shown in Table 4.25 state of employee performance had good factor loadings since they were greater than or equal to 0.5. Those with good factor loadings were ability to fulfill their responsibilities, communication with others to yield desired results or comes up with creative ideas.

Table 4.25: Exploratory Factor Analysis on Agreement on State of Employee Performance

	Factor Loading
AEMP1	0.052
AEMP2	0.246
AEMP3	0.169
AEMP4	0.392
AEMP5	0.606
AEMP6	0.772
AEMP7	0.412
AEMP8	0.775
AEMP9	0.572
AEMP10	-0.003
AEMP11	0.259
AEMP12	0.74
AEMP13	0.502
AEMP14	0.687
AEMP15	0.751
AEMP16	0.351
AEMP17	0.71
AEMP18	0.097
AEMP19	0.424

Results in Table 4.26 indicates that the nine factors were retained since they had good factor loadings and their new Cronbach's Alpha was 0.864.

Table 4.26: Exploratory Factor Analysis on Agreement on State of Employee Performance after Deletion

	Factor Loading
AEMP5	0.606
AEMP6	0.772
AEMP8	0.775
AEMP9	0.572
AEMP12	0.74
AEMP13	0.502
AEMP14	0.687
AEMP15	0.751
AEMP17	0.71
Cronbach's Alpha	0.864

4.6 Diagnostic Tests

Regression analysis is based on five classical assumptions which include linearity between independent and dependent variables, normality, heteroskedasticity, serial correlation and multicollinearity. Scatter plots were adopted to test for linearity, normality was tested using histograms, heteroskedasticity was tested using Breusch Pagan tests and Durbin Watson tested serial correlation.

4.6.1 Linearity Test

As shown in Figure 4.8 there was positive influence of competency management on employees' performance in Public universities in Kenya. Secondly, there was positive influence of communities of practices on employee performance. Thirdly, there was positive influence of knowledge mapping on employee performance in Public universities in Kenya. Further, there was positive influence of knowledge culture on employee performance in Public universities in Kenya. Finally, there was positive influence of organization learning on employee performance in Public universities in Kenya.

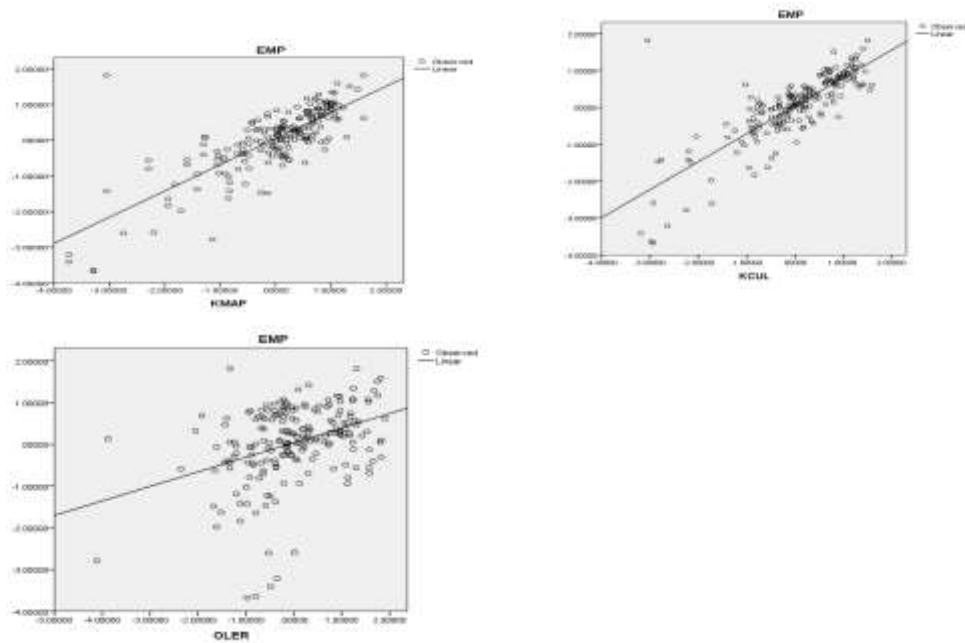


Figure 4.8: Linearity Test

4.6.2 Normality Test

There are several alternative normality tests such as Kolmogorov Smirnov test which test null hypothesis of normally distributed data against alternative hypothesis of non-normality of data distribution (Sekaran & Bougie, 2013). In these tests null hypothesis is rejected at 5 percent level of significance and in case when p value is greater than 0.05, then null hypothesis is accepted and data is concluded to be normally distributed. Moreover, pictorial presentation such as histograms, box plots and stem and leaf are adopted to test for normality. As shown in figure 4.9 the data was normally distributed since the mean was zero and standard deviation 1.

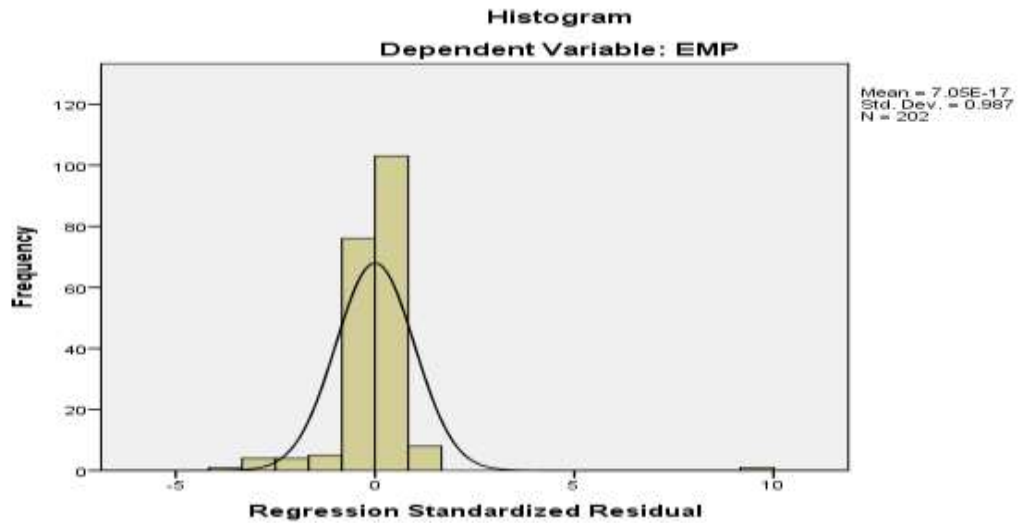


Figure 4.9: Normality Test

4.6.3 Multicollinearity Test

It is always assumed that all independent variables are non-related, in situations when there is high correlation amongst independent variables then these variables are collinear and not fit for multiple linear regressions, (Cooper & Schindler, 2013). According to Baltagi (2005), collinearity is tested using tolerance limits or variance inflation factors. Independent variables are said to be collinear whenever tolerance limits are less than 0.1 and VIFs greater than 10. As shown in Table there was no collinearity amongst ECM, COP, KMAP, KCUL and OLER since none of them had tolerance less than 0.1 and VIFs greater than 10.

Table 4.27: Multicollinearity Test

	Collinearity Statistics	
	Tolerance	VIF
ECM	0.5	2.2
COP	0.5	2.2
KMAP	0.4	2.4
KCUL	0.4	2.8
OLER	0.9	1.1

4.6.4 Heteroskedasticity Test

Heteroskedasticity is regression assumption that the error term has uniform variance. In this study, Breusch-pagan/Cook-Weisberg test was applied with null hypothesis that there was uniform variance across the error term against an alternative that there was no uniform variance across the error term, (Baltagi, 2005). As shown in Table in Table 4.28, since the p value was 0.0478, which was less than 0.05, there was enough evidence to warrant rejection of the null hypothesis and acceptance of alternative hypothesis that there was no uniform variance across the error term. Hence regression models with robust standard errors were fitted, (Baltagi, 2005).

Table 4.28: Heteroscedasticity Test

Test Statistics	Value	P value
F statistics	3.97	0.0478

4.6.5 Serial Correlation

Regression analysis assumes that there is no serial correlation of the error term. As shown in Table 4.29 Durbin Watson test statistics was used to test for serial correlation. There was no serial correlation amongst the variables since none of the models had Durbin Watson coefficient exceeding the recommended ranges of 1.5 to 2.5. According to Baltagi (2005) there is no first order serial correlation if Durbin Watson is greater than 1.5 and less than 2.5.

Table 4.29: Serial Correlation Test

Mode l	Independent variable(s)	Durbin Watson	Conclusion	
1	ECM	1.716	No correlation	serial
2	COP	1.57	No correlation	serial
3	KMAP	1.603	No correlation	serial
4	KCUL	1.983	No correlation	serial
5	OLER	1.722	No correlation	serial
6	ECM, COP, KMAP, KCUL, OLER ECM, COP, KMAP, KCUL, OLER, ECM*OST, COP*OST, KMAP*OST,	2.082	No correlation	serial
7	KCUL*OST, OLER*OST	2.086	No correlation	serial

4.7 Correlation Analysis

Strength of influence of independent and dependent variables was examined using Pearson correlation analysis (Sekaran & Bougie, 2013). According to Kothari (2011) there are two types of correlation analysis which are Spearman rank correlation or Pearson correlation coefficient. The latter is used whenever variables are categorical while Pearson correlation is used on those variables which are in ratio scale. Correlation coefficient is said to be significant whenever its p value is less than 0.05.

As shown in Table 4.30, there was positive and significant influence of competency management on employee performance in Public universities in Kenya ($\rho = 0.770$, $p < 0.05$). These findings concurred with Prusak (2013) who reported positive and significant influence of competency management and employee performance. Similarly, it supported Murtaza (2015) who reported positive and significant influence of employee skills development and their performance. These findings contrasted with those of Yusuf and Wanjau (2014) who reported inverse influence of competency management and performance in State Corporations in Kenya.

Secondly, there was positive and significant influence of communities of practice on employee performance in Public universities in Kenya ($\rho = 0.826$, p value <0.05). Thirdly, there was positive and significant influence of knowledge mapping practices on employee performance in Public universities in Kenya ($\rho = 0.791$, p value <0.05). Further, there was positive and significant influence of knowledge culture on employee performance in Public universities in Kenya ($\rho = 0.816$, p value <0.05). Moreover, there was positive and significant influence of organization learning on employee performance in Public universities in Kenya ($\rho = 0.376$, p value <0.05). Also, there was positive and significant influence of organization structure on employee performance in Public universities in Kenya ($\rho = 0.397$, p value <0.05).

Table 4.30: Correlation Analysis

		EMP	ECM	COP	KMA P	KCU L	OLE R	OS T
EMP	Pearson	1						
	Correlation	.770*						
ECM	Pearson	*	1					
	Correlation	0.00						
COP	Sig. (2-tailed)	202	202					
	N	.826*	.675*	1				
KMA P	Pearson	*	*		1			
	Correlation	0.00	0.00	0.00				
KCU L	Sig. (2-tailed)	202	202	202	202			
	N	.791*	.591*	.600*				
OLE R	Pearson	*	*	*	.732**	1		
	Correlation	0.00	0.00	0.00	0.00			
OST	Sig. (2-tailed)	202	202	202	202	202		
	N	.376*	.216*	.179*	0.094	.250**	1	
EMP	Pearson	*	*	*	0.106	.304**	.680**	1
	Correlation	0.0	0.0	0.0	0.1	0.0	0.0	
ECM	Sig. (2-tailed)	202	202	202	202	202	202	202
	N	.397*	.207*	.199*				

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

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

4.8 Hypothesis Testing

4.8.1 Competency Management and Employees Performance in Public Universities in Kenya

The first hypothesis stated that competency management had no significant influence on employee performance in public universities in Kenya. Simple linear regression analysis was adopted and the study findings in Table 4.31 R squared of 0.592 revealed that 59.2 percent of changes in employee performance in public universities in Kenya were explained by competency management while the 40.8percent can be explained by other factors unaccounted for in the model. Analysis of variance on influence of employees' competencies management on employee performance in public universities in Kenya was done. There was significant influence of employees' competencies management on employee performance in public universities in Kenya ($F = 290.716$, p value <0.05).

There was positive and significant influence of competency management on employees' performance in public universities in Kenya ($\beta = 0.802$ p value <0.05). Since p value was less than 0.05 at 5 percent level of significance, we reject the null hypothesis and accept an alternative that there was positive and significant influence between competency management and performance in public universities in Kenya. Hence an increase in employees' competencies increases employee performance by 0.802 units. These findings agreed with Stockley (2007) who reported positive and significant relationship between critical competencies and employee performance. Also, Eicker et al., (2014) reported positive and significant influence of employee competencies on employee satisfaction. Similarly, Zaim et al., (2013) reported positive influence of employee competencies on organization output.

$$EMP = -0.027 + 0.802 ECM \dots\dots\dots 4.1$$

Table 4.31: Competency Management and Employee Performance in Public Universities in Kenya

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
0.77	0.592	0.59	0.594		
ANOVA					
	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	102.532	1	102.532	290.716	.000
Residual	70.537	200	0.353		
Total	173.069	201			
Regression Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-0.027	0.042		-0.649	0.517
ECM	0.802	0.047	0.77	17.05	0.00

4.8.2 Communities of Practice and Employee Performance in Public Universities in Kenya

The second hypothesis stated that communities of practices had no significant influence on employee performance in public universities in Kenya. Simple linear regression analysis was adopted to analyze the data. As shown in Table 4.32 an R squared of 0.683, 68.3 percent of changes in employee performance in public universities in Kenya can be accounted for by communities of practice. The remaining 31.7 percent can be accounted for by other factors which are excluded in the model. Analysis of variance shown indicates that communities of practice had significant influence on employee performance in Public universities in Kenya ($F = 430.591$, p value <0.05).

As shown in Table 4.32, there was positive and significant influence of communities of practice on employee performance in public universities in Kenya ($\beta=0.81$, p value <0.05). This shows that an increase in communities of practice increases employee performance by 0.81 units. These findings agreed with Chong et al.,

(2014) who found positive and significant influence between knowledge sharing and employee performance. Similar sentiments were echoed by Bagaja and Guyo (2015) who found significant influence of knowledge management practices and optimal resources utilization. Consequently, there is need to support institutional needs as argued by Lopez-Saez et al., (2010) who found significant positive contribution of institutional support on employee performance.

$$\text{EMP} = 0.004 + 0.81 \text{ COP} \dots\dots\dots 4.2$$

Table 4.32: Communities of Practice and Employee Performance in Public Universities in Kenya

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
0.826	0.683	0.681	0.524		

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	118.178	1	118.178	430.591	0.00
Residual	54.891	200	0.274		
Total	173.069	201			

Regression Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.004	0.037		0.097	0.923
COP	0.81	0.04	0.83	20.75	0.00

4.8.3 Knowledge Mapping and Employee Performance in Public Universities in Kenya

The third hypothesis of the study stated that there was no significant influence of knowledge mapping on employee performance in public universities in Kenya. As shown in Table 4.33 regression model summary shows an R squared on 0.63, which depicts that 63 percent of changes in employee performance is significantly

influenced by knowledge mapping in public universities in Kenya. The remain 37 percent is affected by factors outside the model. Analysis of variance on test for significant influence of knowledge mapping on employee performance in public universities in Kenya revealed that it was significantly influenced ($F = 333.374$, p value <0.05).

There is a positive significant influence between knowledge mapping and employee performance in public universities in Kenya ($\beta = 0.73$, p value <0.05). These findings concurred with Hellstrom & Husted, (2004) who reported positive significant influence of knowledge mapping on employee performance. Similarly, Driessen et al., (2007) argued that there is need to consolidate information so as to support quality of decision making. Similar findings were echoed by Ho (2009) who found positive and significant influence of knowledge mapping on employee commitment.

$$EMP = 0.04 + 0.73 \text{ KMAP} \dots\dots\dots 4.3$$

Table 4.33: Influence of Knowledge Mapping on Employees Performance in Public Universities in Kenya

Model Summary						
R	R Square	Adjusted R Square	Std. Error of the Estimate			
0.791	0.63	0.62	0.57			
ANOVA						
	Sum of Squares	Df	Mean Square	F	Sig.	
Regression	108.173	1	108.173	333.374	0.000	
Residual	64.896	200	0.324			
Total	173.069	201				
Regression Coefficient						
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
(Constant)	0.04	0.04		1.05	0.300	
KMAP	0.73	0.04	0.79	18.26	0.000	

4.8.4 Knowledge Culture and Employee Performance in Public Universities in Kenya

The fourth hypothesis of the study stated that knowledge culture had no significant influence on employee performance in public universities in Kenya. As shown in Table 4.34 an R squared of 0.67, indicated that 67 percent of variation in employee performance can be accounted for by knowledge culture while the remaining 33 percent can be explained by other factors excluded in the model. As shown in Table 4.34, an analysis of variance on test of significant influence of knowledge culture on employee performance revealed that it significantly influenced employee performance in public universities in Kenya ($F= 397.446$, p value <0.05).

Regression analysis indicates positive and significant influence between knowledge culture and employee performance in public universities in Kenya ($\beta = 0.76$, p value <0.05). This implies that an increase in knowledge culture increases employee performance in public universities in Kenya. The findings agreed with Chang and Lin (2015) who reported positive and significant influence of knowledge culture on employee job satisfaction. Similarly, they supported Mohaydin (2007) who reported positive and significant influence of knowledge culture and employee performance. Locally, Bagaja and Guyo (2015) found positive influence of knowledge culture on employee performance.

$$EMP = 0.04 + 0.76 KCUL \dots\dots\dots 4.4$$

Table 4.34: Knowledge Culture and Employee Performance in Public Universities in Kenya

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
0.816	0.67	0.66	0.54		
ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	115.133	1	115.133	397.446	.000
Residual	57.936	200	0.29		
Total	173.069	201			
Regression Coefficient					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.04	0.04		1.117	0.270
KCUL	0.76	0.04	0.82	19.94	0.000

4.8.5 Organization Learning and Employees Performance in Public Universities in Kenya

The fifth hypothesis stated that organization learning had no significant influence on employee performance in public universities in Kenya. As shown in Table 4.35, an R squared of 0.141 revealed that 14.1 percent of changes in employee performance in public universities in Kenya is accounted for by organization learning while the remaining 86 percent can be accounted for by other factors excluded in the model. Analysis of variance revealed that organization learning has significant influence on employee performance in public universities in Kenya ($F = 32.919$, p value < 0.05).

There is a positive and significant influence of organization learning on employee performance in public universities in Kenya ($\beta = 0.349$, p value < 0.05). This implies that an increase in organization learning increases employee performance in public universities in Kenya. These findings supported Nafei (2014) who reported positive and significant relationship between organization learning and employee

performance. Similarly, the study supported and Moreno (2015) who reported positive influence of organization learning and employee performance. This study contrasted Ambula (2015) who reported inverse influence of organization learning on financial performance of an organization.

$$\text{EMP} = 0.042 + 0.349 \cdot \text{OLER} \dots \dots \dots 4.5$$

Table 4.35: Organization Learning and Employee Performance in Public Universities in Kenya

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
0.376	0.141	0.137	0.862		
ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	24.46	1	24.46	32.919	0.000
Residual	148.609	200	0.743		
Total	173.069	201			
Regression Coefficient					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.042	0.061		0.694	0.489
OLER	0.349	0.061	0.376	5.738	0.000

4.8.6 Knowledge Management Practices and Employee Performance in Public Universities in Kenya

As shown in Table 4.36 knowledge management practices had joint significant influence on employee performance in public universities in Kenya (F = 403.228, p value <0.05). As shown in Table 4.36 an R squared of 0.91, indicated that knowledge management practices; competency management, communities of practice, knowledge mapping, knowledge culture and organization learning, jointly influenced 91 percent of employee performance in public universities in Kenya. The remaining 9 percent were accounted for by other factors which were excluded from the model.

Regression results in Table 4.36 revealed that there was positive and significant influence of ECM on EMP in public universities in Kenya ($\beta = 0.18$, p value <0.05). This implies that a unit change in ECM increases EMP by 0.18 while holding constant COP, KMAP, KCUL and OLER. Secondly, there was positive and significant influence of COP on EMP ($\beta = 0.36$, p value <0.05). This implies that unit increase in COP increases employee performance by 0.36 units while holding ECM, KMAP, KCUL and OLER constant. Thirdly, there was positive and significant influence between KMAP and EMP ($\beta = 0.29$, p value <0.05). This implies that unit increase in KMAP increases EMP by 0.29 units while holding ECM, COP, KMAP, KCUL and OLER constant. Further, there was positive and significant influence between KCUL and EMP ($\beta = 0.18$, p value <0.05). This implies that unit increase in KCUL increases employee performance by 0.18 units while holding ECM, COP, KMAP and OLER constant. Finally, there was positive and significant influence between OLER and EMP ($\beta = 0.18$, p value <0.05). This implies that a unit increase in OLER increases employee performance by 0.18 units while holding ECM, COP, KMAP and KCUL constant.

$$EMP = 0.01 + 0.18 * ECM + 0.36 * COP + 0.29 * KMAP + 0.18 * KCUL + 0.18 * OLER$$

.....4.6.

Table 4.36: Knowledge Management Practices and Employee Performance in Public Universities in Kenya

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
0.955	0.91	0.91	0.28		
ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	157.735	5	31.547	403.228	.000
Residual	15.334	196	0.078		
Total	173.069	201			
Regression Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.01	0.02		0.48	0.6400
ECM	0.18	0.03	0.18	5.56	0.0000
COP	0.36	0.03	0.36	11.55	0.0000
KMAP	0.29	0.03	0.31	9.31	0.0000
KCUL	0.18	0.03	0.2	5.6	0.0000
OLER	0.18	0.02	0.2	8.75	0.0000

4.8.7 Organization Structure has no Significant Moderating effect on Knowledge Management Practices and Employee Performance in Public Universities in Kenya

The fifth hypothesis of the study stated that organization structure had no significant moderating effect on knowledge management practices and employee performance in public universities in Kenya. An R squared on 0.92, revealed that 92 percent of variations in employee performance in public universities in Kenya was explained by knowledge management practices and organization structure moderating effect. Also, upon moderation there was joint significant influence between knowledge management practices, organization structure and employee performance in public

universities in Kenya (F= 220.244, p value <0.005). This indicates that in both situations at least one of the independent variables is non-zero.

The results on the influence of knowledge management practices on employee performance in public universities in Kenya after organization structure was introduced as a moderator show that the coefficient of ECM*OST was 0.003 hence ECM had a positive and significant influence on EMP since p value was greater than 0.05 after OST was introduced. COP*OST coefficient was 0.004 hence COP had positive and significant influence on EMP after OST was introduced since p value was greater than 0.05. The coefficient for KMAP *OST was 0.02 and p value >0.05, hence CoP had positive and significant effect after the introduction of organization structure as moderator. The coefficients for KCUL*OST and OLER*OST were both 0.01 and p value > 0.05 respectively. This implies that KCUL and OLER had positive and significant influence on employee performance in public universities in Kenya when OST was introduced. When the above coefficients are compared with those of model without moderation, they are different which implies that organization structure had a significant moderating influence on employee performance in public universities in Kenya.

$$\begin{aligned} \text{Employee Performance} &= -0.001 + 0.19 * \text{ECM} + 0.35 * \text{COP} \\ &+ 0.3 * \text{KMAP} + 0.15 * \text{KCUL} + 0.11 * \text{OLER} + 0.13 * \text{OST} + 0.003 * \text{ECM} * \text{OST} + 0.004 * \text{COP} \\ &* \text{OST} + 0.02 * \text{KMAP} * \text{OST} + 0.01 * \text{KCUL} * \text{OST} + 0.01 * \text{OLER} * \text{OST} \dots \dots \dots 4.7 \end{aligned}$$

Table 4.37: Moderating Effect of Organization Structure Knowledge Management Practices and Employee Performance in Public Universities in Kenya

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
0.959	0.92	0.92	0.27		
ANOVA					
	Sum Squares	of Df	Mean Square	F	Sig
Regression	159.258	10	15.926	220.244	.000
Residual	13.811	191	0.072		
Total	173.069	201			
Regression Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta		
(Constant)	-0.001	0.02		-0.05	0.96
ECM	0.19	0.04	0.18	4.76	0.000
COP	0.35	0.03	0.36	11.52	0.000
KMAP	0.3	0.03	0.33	9.1	0.000
KCUL	0.15	0.04	0.17	4.24	0.000
OLER	0.11	0.03	0.11	3.66	0.000
OST	0.13	0.03	0.14	4.45	0.000
ECM*OST	0.003	0.05	0.002	0.06	0.94
COP*OST	0.004	0.04	0.003	0.11	0.92
KMAP*OST	0.02	0.03	0.02	0.66	0.51
KCUL*OST	0.01	0.03	0.01	0.34	0.73
OLER*OST	0.01	0.02	0.02	0.93	0.35

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the major findings from the study as per the research objectives, from where a summary, conclusions and recommendations would be drawn. The main purpose of the study was to establish the influence of knowledge management practices on employee performance in public universities in Kenya. Specifically, the study examined the influence of competency management, communities of practice, knowledge mapping, and knowledge culture and organizational learning on employee performance in public universities in Kenya. In addition, the moderating effect of organization structure on knowledge management practices and employee performance in Public universities in Kenya was evaluated.

5.2 Summary of Findings

The study was founded on theoretical, empirical, timely, geographical and methodological gaps. Theoretically, several theories support or contradict the contribution of knowledge management practices on organizations and employee performance. Intellectual capital theory perceives knowledge as a valuable asset which can be relied on by an organization for competitive advantage.

Resource based theory advocates for the need to own strategic resources which are unique and difficult to imitate so that the organization can develop competitive advantages over competitors. Knowledge based view supports the need for organization to evaluate various knowledge types, either from internal or external sources or both to determine their relevance to strategic needs of an organization and thus contribute to performance difference from rivals. The human capital theory argues for the need to protect core competencies of employees by investing in continuous learning and development programs.

Empirical evidence was not consistent since there are some studies which supported the influence of knowledge management practices on employee performance while

others argued that other factors also contribute to employee performance. The business landscape has changed considerably in the last decade with more attention being focused on the role of knowledge in achieving competitive advantage. The emergence of the knowledge-based economies, globalization, and new technology has put on the spotlight the need to effectively manage human capital which is the resource that considered to be a knowledge asset. In the modern complex world, which is characterized by scarcity resources, these available resources must be used in the most efficient way.

Geographical gaps would not allow generalization of findings emanating from different continents to be generalized into Kenyan perspective. Alternative studies have adopted heterogeneous data analysis techniques which have led to different findings. Although, there are some studies which had adopted regression analysis to analyze their data they failed to report information on classical regression assumptions tests. This may have led to drawing of biased findings. Hence, the current study was conceptualized and descriptive research design adopted, primary data was gathered using questionnaires and analyzed through descriptive, correlation, regression and exploratory factor analysis.

5.2.1 Competency management and Employee Performance in Public Universities in Kenya

The first objective of the study examined the influence of competency management on employee performance in public universities in Kenya. Descriptive statistics revealed majority agreed that competency management had influence on employee performance in public universities in Kenya. Research findings indicated that majority of employees were conversant with their universities mission and vision statements, universities perceived knowledge as an asset base, team work and coherent communication guidelines were laid down by respective universities. Also, public universities continuously discussed and evaluated individual employees' performance, universities employees shared information through inter and intranet mechanisms. Universities created sense of belongingness, had knowledge inventory management systems which eased skills gaps identification and internal promotions

were availed to employees periodically. As Boxall and Purcell (2011) state, it is essential for firms to be aware of their employees' capabilities in order to be able to manage them and in turn align them with the firm's overall strategy.

Pearson correlation coefficient revealed strong positive and significant influence of competency management on employee performance in public universities in Kenya ($\rho = 0.707$, p value <0.05). Regression analysis revealed positive and significant influence of competency management on employee performance in Public universities in Kenya ($\beta = 0.802$, p value <0.05). These findings agreed with (Zaim et al., 2013; Sparl & Znidarsic, 2009; Prusak, 2013; Murtaza, 2015; Ngesa et al., 2014) who reported positive and significant effect of competency management on employee performance. They contrasted Ramirez, et al., (2007) who reported inverse and non-significant effect of competency management on employee performance.

According to Sugumari and Rupa, (2014) competency mapping is an economical way of ensuring the best candidates are selected for positions and employees are also able to grow and develop by identifying specific competencies that can be better utilized by the organization. These findings are in line with knowledge economy theory which perceives knowledge creation as an asset base which leads to competitive advantage in an organization and the human capital theory that advocates for protection of core competencies.

5.2.2 Communities of Practice and Employee Performance in Public Universities in Kenya

The second objective of the study assessed the influence of communities of practice on employee performance in public universities in Kenya. Descriptive statistics revealed that majority agreed that communities of practice has influence on employee performance mean = 3.8. Further, the study found that majority agreed that their CoP represent areas of common interest for customers, staffs and partners, employees enjoyed sense of belonging and had clear focus in all their undertakings. Further, public universities enhanced employees inter and intra relationships, employees were motivated to share their skills and communication barriers were mitigated. At respective universities most respondents agreed that there were assisted

to access relevant research information, knowledge sharing platforms were created in their respective universities; employees were encouraged to join professional bodies and participate in external networking opportunities.

Pearson correlation analysis revealed strong positive and significant influence of communities of practices on employee performance ($\rho = 0.826$, p value <0.05). Regression analysis reported positive and significant influence of communities of practices on employee performance ($\beta = 0.81$, p value <0.05). This implies that unit increase in communities of practices increases employee performance. These findings mirrored (Lopez –Saez & Riveria, 2010; Israilidis et al., 2015; Mohaydin, 2007; Schenkel & Teigland, 2008; Mugalavai & Muleke, 2016) who reported positive and significant influence of CoP on employee performance. In contrast, the study refuted (Chong, et al. 2014; Bagaja & Guyo, 2015) who reported inverse and non-significant influence on communities of practices on employee performance.

5.2.3 Knowledge Mapping and Employee Performance in Public Universities in Kenya

The third objective determined the relationship between knowledge mapping on employee performance in public universities in Kenya. Descriptive statistics revealed that majority agreed that employee performance in public universities in Kenya is influenced by knowledge mapping. Also, majority agreed that their universities had structured way of gathering information and storing documents. Further, majority agreed that they have working guidelines handbook which is continuously updated and this ultimately minimize conflicts due to clarity on expected versus actual employee performance. Majority agreed that public universities have designated departments mandated to advice and counsel of work-related issues and they hold regular meetings for discussing issues which ought to be improved to enhance their quality of work life. The appointment of knowledge mapping champions allowed specific individuals to lead the process of knowledge mapping in the institutions.

Correlation analysis revealed strong positive significant influence of knowledge mapping on employee performance in public universities in Kenya ($\rho = 0.791$, p

value <0.05). Regression analysis revealed positive significant influence of knowledge mapping and employee performance ($\beta = 0.73$, p value <0.05). These findings agreed with knowledge based economy theory which places significant component of value in organizations on intangible assets such as the value of its workers' knowledge or intellectual property. This finding also concurred with studies by (Hellstrom & Husted, 2004; Lee & Fink, 2013; Driessen et al., 2007; Ho, 2009).

5.2.4 Knowledge Culture and Employee Performance in Public Universities in Kenya

The fourth objective of the study assessed the influence of knowledge culture on employee performance in public universities in Kenya. Descriptive statistics revealed that majority agreed that knowledge culture has influence on employee performance in public universities in Kenya. This was evidenced by majority of the respondents agreeing that there are creations of information sharing platforms in their respective universities, participatory decision making has been embraced in public universities in Kenya, employees are encouraged to participate in seminars and conferences; and due recognition is given to those who share information and promotion of creativity and innovation is widely practiced.

Pearson correlation analysis revealed strong positive significant effect of knowledge culture on employee performance public universities in Kenya ($\rho = 0.8166$, p value <0.05). Regression analysis revealed positive significant influence of knowledge culture on employee performance in public universities in Kenya ($\beta = 0.76$, p value <0.05). These findings concurred with (Chang & Lin, 2015; Bagaja & Guyo, 2015; Mohaydin et al., 2007; Yusuf & Wanjau, 2014; Oliver & Kondal, 2006) and they contradicted Mohamad, et al. (2013) who reported negative and non-significant effect of knowledge culture on employee performance which they attributed to be a function of several other factors including motivation and reward.

Further, Mathis and Jackson (2011) and Armstrong (2012) argue that firm related factors from its internal and external environments such as management support and training culture are related to job related factors such as communication, autonomy

and environment employee-related factors such as intrinsic motivation, proactivity and skill levels which all have an impact on employee performance.

5.2.5 Organizational Learning and Employee Performance in Public Universities in Kenya

The fifth objective of the study examined the effect of organizational learning on employee performance in public universities in Kenya. Descriptive statistics showed that majority agreed that organizational learning has influence on employee performance in public universities in Kenya. Also, majority agreed that public universities in Kenya appreciate their employees for positive and negative feedback regarding their work; individuals are recognized as the primary learning entity in public universities in Kenya; it is individuals who create organizational forms that enables learning in ways which facilitate organizational transformation; university culture has adopted employees' job rotations as a way of empowering their exposure and understanding of institutional operations and they have clearly defined policies on employee training and promotions.

Correlation analysis revealed positive and significant influence of organization learning on employee performance in public universities in Kenya ($\rho = 0.376$, p value <0.05). Regression analysis revealed positive and significant influence of organization learning and employee performance in public universities in Kenya ($\beta = 0.349$, p value <0.05). These findings agreed with (Jain & Moreno, 2015; Nafei, 2014; Liao & Hu, 2009; Ambula, 2015; Turyasingura, 2011; Ongwae et al, 2018).

5.2.6 Moderating Effect of Organization Structure on Knowledge Management Practices and Employee Performance in Public Universities in Kenya

The fifth objective of the study examined the moderating effect of organization structure on the influence of knowledge management practices and employee performance in public universities in Kenya. Descriptive statistics revealed that majority agreed that organization structure has influence on employee performance in public universities in Kenya and that centralized structure produces very little delegation of decision-making authority, creating a non-participatory environment

that reduces communication, motivation, social interaction, and involvement with tasks and projects among participants. Majority further concurred that the integrative structure encourages the participation of employees, who acquire a fundamental relevance, it consequently increases interpersonal exchange and social interactions and fourth, and it provides opportunities for employees to learn from their colleagues. Finally, it widens the employee's vision of the company.

Correlation analysis revealed positive and significant effect of organization structure on employee performance in public universities in Kenya ($\rho = 0.397$, p value < 0.05). Regression analysis revealed that organization structure had positive influence on employee performance in Public universities in Kenya ($\beta = 0.13$, p value < 0.05). Further, it had significant moderating effect on knowledge management practices since R squared changes from 91 percent to 92 percent which indicated that organization structure had significant contribution on model explanatory power. These findings were in support of studies by (Shabbir, 2017; Kessler, 2007; Chuang & Huang, 2007; Madueyi, et al., 2015; Thomas, 2015; Fullwood et al., 2013). As Thomas, (2015) opines, the way authority flows also goes a long way to influence the behavior of workers and hence how they perform their work. These makes organization structure a big determinant of job satisfaction.

5.3 Conclusion

Based on study findings the following conclusions can be drawn. It was found that employees' competencies management had positive significant influence on employee performance in Public universities in Kenya. It can be concluded that an increase in employee competencies increased employee performance in Public universities in Kenya. This calls for clarification of organization vision and mission statements amongst employees, creation of harmonious team groups in respective university departments and creation of information sharing platforms through intra and internet facilities. Further, employees ought to be encouraged to be open to new approaches and ideas of doing things; adoption of alternative mentoring methods and creation of employees' skills inventory and robust inventory skills management to be adopted to ease filling of employees' gaps.

If the practice is adopted will yield many benefits like effective candidate appraisal for purposes of recruitment; potential appraisal for promotion and functional shifts; appropriate employee training needs; employee performance indicators; employee self- development initiatives and effective retention strategies. Competency management, therefore, was found to be the pulse of performance improvement both at the individual and organizational levels.

Secondly, Communities of practice which are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly was found to have positive and significant influence on employee performance in Public universities in Kenya. This implies that improved communities of practice enhance employee performance in Public universities in Kenya. Thus, there is need for more clarity on organization themes, mission and vision statements, development of inter and intra relationships among employees and employees being encouraged to share their knowledge freely by creating environments that promote kind of culture. Also, measures ought to be adopted to harmonize communication structures within departments in public universities.

Further, universities should enhance employee information access in relevant journals and missing information ought to be acquired in the shortest lead time. Employee participation in professional networks and bodies ought to be facilitated to enhance knowledge sharing and employee performance. Communities of practice were therefore seen as important in so far as they support the creation of knowledge and development of skills, provide access to new thinking and innovation, support the change management process, and promote effective sharing of knowledge.

Thirdly, the research findings revealed that knowledge mapping had positive and significant influence on employee performance in Public universities in Kenya. This implies that improved knowledge mapping enhanced employee performance in Public universities in Kenya. Hence, it can be concluded that there is need for public universities to enhance their data collection strategies, structure the methods they have for information storage and develop clear and easier guidelines for information submission from relevant stakeholders. Further, they ought to sensitize employees on

measures adopted for information access and retrieval and create directory for skills identification and its gaps management. More importantly, it was found to be beneficial to have champions for the initiative so as to drive its agenda on institutional-wise basis.

The fourth hypothesis found that knowledge culture had positive and significant influence on employee performance in Public universities in Kenya. This shows that an increase in knowledge culture improves employee performance in these institutions. This calls for clarity on organizational goals amongst all stakeholders so as to have a common focus and purpose, identification of employee strengths and weakness and develop techniques to exploit employee strengths and potential and creation of harmonious inter and intra relationships which promotes improved performance. Further, employees in public universities should be frequently granted permission to attend knowledge management conferences, creation of platforms for sharing knowledge which may include disseminating knowledge content, teamwork, deployment of communication systems, and managing access to and participation in information sharing platforms.

The fifth hypothesis found positive and significant influence of organization learning on employee performance in public universities in Kenya. This shows that an increase in organization learning increase employee performance in public universities in Kenya. Consequently, there is need for employees: to be provided with platforms on which they can learn from each other, to be granted opportunities to consolidate and gather new information; to have clearly stated policies on employee training and to have active mentorship programs within their institutions. Additionally, learning should be undertaking on a continuous basis at individual, group and organizational levels; a culture of feedback and experimentation needs to be developed, team learning should be more of a normal practice to encourage double-loop learning; employee empowerment needs to be encouraged; developing a system of capturing and sharing new learning should be adopted, and strategic leadership provided to create change and provide direction to the institutions.

The sixth hypothesis of the study revealed that organization structure had significant moderating effect on the influence of knowledge management practices on employee performance in public universities in Kenya. Hence, there is need for organization structure to be in tandem with employee expectations so as to enhance their support and sense of belonging to it. The dispersion of control and responsibility within an organization are determined by its organizational structure, as are the grouping, coordination, and division of tasks amongst departments and employees in an organization. In all circumstances, organization structure ought to enhance innovation, create effective communication channels, have standardized reward systems; support guidance from supervisors in terms of clear communication channels and top management should continuously review the structure's weak points and work towards continuous improvements. If the centralized or integrative forms of structures were to be adopted, what came out clearly was their impact on employee performance in terms of conformance, facilitation of employee commitment and cooperation in job roles, conflict resolution mechanisms, effective knowledge sharing environments and general creativity and innovation intentions towards their jobs.

5.4 Recommendations

From the study findings the following recommendation are made. Since there was positive and significant influence of competency management on employee performance in public universities in Kenya by adopting employee involvement programs to enhance their performance, growth and competitiveness; there is need for public universities in Kenya to enhance their competencies mapping and competencies monitoring and evaluation management strategies. This can be achieved through creation of growth opportunities for employees and adoption of participatory decision-making strategies amongst employees. Further, effective and automated competency management creates a real-time and predictive inventory of the capability of any workforce.

A central element to managing employee competencies is learning and development that yields a highly capable and agile workforce that can adjust with changing

business goals. To achieve this, it is important to align individual goals to organizational business goals; drive experience-building opportunities; be open to new ideas and innovations; link employee development to other talent processes; align career development with mission-critical competencies needed to drive achievement of business goals. Competency management, therefore, is the pulse of performance improvement-at the individual and organizational levels.

Further, in order to implement competency management to drive employee development and performance excellence three important drivers shown by the study should be put in place: Competencies which are abilities, behaviors, knowledge, and skills that impact the success of employees and organizations must be identified; a competency model which is a set of key competencies, must be carefully selected in alignment with an organization's business goals; and a set of management practices that identify and optimize the skills and competencies required to deliver on an organization's business strategy need to be developed.

Public universities in Kenya are facing ever greater challenges to retain highly skilled employees in a competitive market while improving performance and developing leadership talent from within. Competency management can identify which skills a person needs to perform well in order to succeed in their specific role. This ability to identify which skills are necessary for a job means that Human Resources can better identify the candidates that will succeed in the role. Competency management provides the foundation to manage strategic talent management practices such as workforce planning, acquiring top talent, and developing employees to optimize their strengths.

Secondly, communities of practices had positive and significant influence on employee performance in public universities in Kenya. This calls for creation of collaborative mechanisms geared towards information sharing in respective universities. This can be achieved through creation of inter and intra employee relationships, adoption of participatory decision-making approaches, motivate and reward employee upon sharing of information and building of communal knowledge repositories in respective public universities.

Further, employees need to be empowered and facilitated with knowledge skills relevant for research and innovation. Budget allocation must be made on priority basis to ensure requisite knowledge needed on a need to need basis is purchased in a timely fashion to ensure the knowledge base remains updated. For the practice to be beneficial to the institutions, there must be a set of guidelines to ensure Communities of Practice support interactions between members based on knowledge sharing and mutual learning is critical, the structure and size of the Communities of Practice should also be defined by the Communities of Practice leaders, meetings and events in the Communities of Practice should always be guided by shared learning objectives and there should be open forums or platforms that allow Communities of Practice members to interact or collaborate with each other between meetings.

Thirdly, there was positive significant influence of knowledge mapping on employee performance in public universities. This calls for adoption of heterogeneous measures for knowledge identification, location and grouping. The appointment of knowledge management champions, with clear mandates to identify key knowledge areas, drafting of knowledge maps, evaluation of risks and opportunities associated with specific types of knowledge and acting on implementation of the map can enhance employee performance. Most importantly is to have the practice be a centrally management driven activity with knowledge mapping champions who drive the agenda of the practice with the support of top management and other employees.

Knowledge identification can be achieved if public universities incorporate technology to structure information gathering and storage. All employees ought to be continuously informed on new university developments on knowledge identification mechanisms and groups should be formed as per their knowledge needs, this will mitigate on knowledge sharing costs. Having knowledge repositories that contain databases of codified knowledge assets that are systematically organized to facilitate searching, browsing, and retrieval is also essential. Knowledge repositories may contain lessons learned, best practices, planning documents, project proposals, marketing presentations, and so on. The implementation of mentoring programs is would also important. The use of coaching and mentoring in organizations can facilitate informal sharing of knowledge.

The fourth, hypothesis reported positive and significant influence of knowledge culture on employee performance in public universities in Kenya. To enhance knowledge culture within an organization there is need public universities to develop mechanisms for communicating clearly their vision and mission statements especially after evaluation and alignment of their strategic plans. Knowledge sharing platforms ought to mimic specific employees' strengths and aid in exploitation of opportunities associated with accessing such information on timely basis. Universities should continuously hold seminars and conference geared towards supporting the value addition of knowledge-based decision making. Further, employee knowledge management skills should be continuously updated and challenging exercise shared amongst staffs to help in identification of knowledge gaps.

The study recommends that knowledge culture within public universities in Kenya can improve when factors considered as prerequisites for the success of knowledge sharing are given the necessary support and emphasize. These factors include trust, communication, information systems, reward system and organization structure by: Reinforcing trust between coworkers through arranging social events and outdoor discussions occasionally. Such events could play an important role in helping staff overcome work stress through building informal friendships; Improving office design to allow for higher interaction and

communication between staff; Practicing job rotation to facilitate knowledge transfer and movement throughout the organization and increase motivation; Building a strong relationship between top management and employees along with expressing the importance of knowledge sharing for the success of the organization as a whole; Providing sufficient information systems to share knowledge in order to facilitate knowledge diffusion among departments; Providing effective rewards to reinforce knowledge sharing behaviors bearing in mind the variations in employees' needs and objectives; Increasing the level of participation in decision making and reducing the boundaries between organizational levels to enable easier information flow vertically.

Managers must however not limit their attention to the above factors only. It is highly recommended that managers bear in mind the existence of factors outside the scope of this study such as ethics and loyalty, which may impact knowledge sharing. Also, it is important to recognize the uniqueness of every organization's culture in removing

obstacles to knowledge sharing. Hence, the best option for a given organization would be to investigate potential problems that may exist in its own culture and accordingly suggest the relevant solutions.

The fifth hypothesis of the study found positive and significant influence of organization learning on employee performance in public universities in Kenya. Organizational learning can be enhanced in the Universities by ensuring that the vision and mission of the institutions are clear to all employees because this would be transformed into institutional objectives. Employees should therefore be given more authority to achieve mutually agreed goals. In addition, the management needs to foster innovative thinking so as to improve on working styles and enhance individual and group productivity. The institutions should also allocate more resources on the importance of organizational learning through creating an image of being a learning organization through continuous individual and institutional continuous learning initiatives.

To amplify benefits associated with organization learning there is need for public universities to develop mentorship programs in their respective departments, continuously search for learning opportunities and develop measures geared towards accessing training opportunities. Further, employees ought to be assisted to access customized training for individual developments and job rotation should be incorporated as human resources practice within public universities in Kenya. This will not only enhance learning but also reduce employee monotony and skills redundancy.

The sixth hypothesis found that organization structure had positive moderating effect on influence of knowledge management practices in public universities in Kenya. To optimize benefits associated with organization structure there is need for public

universities to adopt organization structures that allows for active employee involvement. There is need for coherent communication cycles amongst employees since it will create an avenue for teamwork and cooperation. Organization culture on employee rewards and recognition ought to be clear and transparent amongst all employees so as to motivate them to share knowledge which may optimize their performance. Employee roles and duties should be clearly defined to minimize hurdles associated with ambiguity.

5.5 Suggestions for Further Studies

The current study examined influence of knowledge management practices on employee performance in public universities in Kenya; there is need for a similar study to be carried out in private universities. This study adopted quantitative data approach there is need for a follow up study and incorporate qualitative data and gather data through focus group discussions and interview guides. This study drew respondents from top management there is need for similar study to be carried out in public universities and draw respondents from middle or low level of management. The study limited its enquiry to public universities which has been in existent for more than 10 years, there is need for a similar study to be carried amongst universities which were recently chartered including private universities. Also, the study limited its modelling on regression analysis; there is need for subsequent study to incorporate structural equation modelling and explore the influence of knowledge management practices on employee performance.

Further, influence of knowledge management practices on employee commitment in the public sector ought to be investigated. Although environmental cultural factors support employee performance, employee related factors connect with environmental cultural factors and employee performance and further research is needed for a better understanding of these relationships.

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APPENDICES

Appendix I: Questionnaire

My name is Billiah Maende pursuing Doctor of Philosophy degree in Human Resource Management at Jomo Kenyatta University of Agriculture and Technology. I am undertaking a research on the “Influence of Knowledge management practices on employee performance in Public Universities in Kenya”. You have been randomly selected for the study and your participation in this research will provide insight required on the relationship between knowledge management practices and employee performance in Public Universities in Kenya.

This questionnaire has six sections and in line with the objectives of the study. Kindly complete every part of the questionnaire. Please fill the questionnaire as honestly as possible since this information will not be used for any other purpose apart from academic research. There are no risks involved in participating in this exercise as the details of the participants will be confidential and stored in a secure place.

Instruction: Tick where appropriate

Part A: General Information

1. Gender

Male Female

2. Date of Birth.....

3. Highest education level attained

Secondary level College level University level Post graduate

4. Indicate your department of operation.

Faculty Library Human Resource Other

5. Which year did you start working at this university.....

PART B: KNOWLEDGE MANAGEMENT PRACTICES

Section I: Competency management

Please indicate on a five-point Likert scale of 1-5 the level of agreement in relation to management of employee competencies in your university

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
My University	1	2	3	4	5
Has mission and vision statements that are clear and easily understood by employees					
Recognizes my knowledge as part of their asset base					
Encourages teamwork, discussions and collaboration is encouraged to improve communication between colleagues					
Assesses my individual work performance regularly and discuss improvement areas					
Provides opportunities for continuous growth and development of employees					
Encourages active employee participation in the process of decision making					
Employees improve task efficiency by sharing knowledge through intranets and electronic bulletins'					
At my university	1	2	3	4	5
Am open to new ideas and approaches					
I keep abreast of new developments in my discipline area					
I effectively develop networks and build alliances with key individuals and groups					
Employees are encouraged to help and respect each other					
There is a common mission and feeling of belonging to a team					
Individual team members are helped to reach their potential through personal development					
Different methods are used for encouraging employees to share knowledge like training, mentoring, coaching etc.					
There are processes to determine gaps in individual skills					
There are processes to track on employees progress in skills acquisition					
Employee skills, inventory and skill gap analysis are regularly updated					

Internal employees are given priority when a vacancy occurs					
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Adopted from studies by Mentaz (2006) and Dragandis (2006).

Section II: Communities of Practice (CoP)

Please rate on a five-point Likert scale the level of agreement in relation to the practice of external networking/communities of Practice in your university

	strongly Disagree	Disagree	Not Sure	Agree strongly	Agree
My CoP	1	2	3	4	5
Represent an area of common interest for a number of staff/customers/clients/partners					
Currently has a clear focus in its theme					
Gives me a sense of belonging					
Helps me build relationships with others					
Helps me network with others					
Benefit my daily work from the relationships established					
Is mainly driven by the willingness to participate					
Motivate me to share work-related knowledge					
Breaks down communication barriers among members					
Builds up an agreed set of communal resources over time					
At my University	1	2	3	4	5
Employees are assisted to access important information through journals, research reports etc.					
If important information is not available, the institution buys it					
Employees are encouraged to share knowledge among common interest groups e.g. research groups					
Supports activities of common interest groups e.g room for meetings					
Employees are encouraged to be join external professional networks and associations					
Employees are encouraged to be active in external professional networks and associations					

Adopted from Serrat (2011).

*Is an informal, self-organizing group of people in the organization, brought together by common interest, who share expertise and who solve problems together?

Section III: Knowledge Mapping

On a five-point Likert scale, indicate the level of practice for Knowledge mapping within your university where 1 – No Extent 2 - Very little extent, 3-Unsure, 4-Little extent, and 5 – Large extent

	No extent very little extent	2	3	4	5
My university	1	2	3	4	5
Has a structured way of collecting data					
Has a structured way of collecting and keeping documents					
Facilitates communication and knowledge sharing between individuals and groups					
Updates handbooks and work guidelines which are frequently used to inform employees of new development					
Provides access to information resources required to perform my work					
Has clear guidelines as to whom to submit information					
Has clear guideline as to where to submit information					
Has designated people who offer advice to me on work-related issues when required					
Groups have emerged that share what they know as effectively as they should					
Groups hold regular meetings to review emerging or new developments					
Employees regularly use intranets to share information on processes within the institution					
Has structured processes of knowing what information is required					
The channels of accessing and retrieving of information (e.g. through people and technology) are available					
Information sources at my university are well labeled and easily accessible					
Has processes to identify gaps between required skills and current skills					
Has a directory of skills, knowledge, individual relationships and resources					

Adopted from Jafari et al. (2009) and Liao & Wu (2009)

*Knowledge mapping is the process through which an organization identifies, locates and categorizes its knowledge assets.

Section IV: Knowledge Culture

The following section shows the knowledge culture that exists in an organization. You are required to indicate the level of knowledge sharing in the organization you are currently working. On a five point Likert scale indicate your level of evaluation where 1 –No extent 2 -Very little extent, 2- , 3- Little extent, 4 - Unsure and 5 = Large extent

To what extent do employees	No extent	2	3	4	Large extent
Have clearly defined goals that relate to the goals of the university					
Value one another's unique strengths and abilities					
Make use of one another's unique strengths and abilities					
Participate in sharing of information					
Support and trust each other					
Share information and experiences					
How often do you have an opportunity to:	Never	2	3	4	Most of the times
attend knowledge management related seminars and workshops					
share knowledge management skills with fellow employees					
participate in informal knowledge sharing platforms					
My university	Strongly disagree	2	3	4	Strongly agree
Provides a conducive atmosphere to share information with others					
Encourages employee participation in decision making					
Encourages team spirit					
Has a working environment that is open, conducive and harmonious					
At our University	Strongly disagree	2	3	4	Strongly agree
Trust exists among staff					
We have opportunities to share knowledge					
We are encouraged to generate new ideas and innovations					
People who come up with new ideas and innovations are highly respected					
The employees sharing knowledge are perceived as experts					
Brainstorming and discussion is encouraged as means for getting solutions					
Knowledge sharing impacts positively towards employee performance					

Teams/groups are given new and challenging projects to address emerging issues					
--	--	--	--	--	--

Adapted from Tseng (2010) and Al-Alawi (2007)

Section V: Organizational Learning

The questionnaire adopted item measures from studies of and Liao & Wu (2009). Please rate on a five-point Likert scale the level of agreement in relation to the practice of Organizational learning in your university

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
At my university	1	2	3	4	5
Employees help each other to learn					
Time is given to learn (eg. Study leave)					
Employees are rewarded for learning					
Employees are encouraged to rotate to different work teams to broaden their knowledge and experience					
Individual responsibility for learning is encouraged					
Access to training is provided					
There are stated policies on the amount and types of training that the employee can expect to receive					
Participation in training programmes help my personal development					
Participating in training programs helps to update me on the new policies, procedure and products related to my work					
I have a mentor who advises me on promotion opportunities					
I have mentor who helps me coordinate professional goals					
I respect my mentor's knowledge in his/her area of expertise					
My seniors at work give me special coaching					
We have experience, skilled and motivated coaches					
Coaching as a mode of learning is receptive to me					
Coaching helps in retaining employees					
Continuous searches for opportunities for continuous learning for employees are undertaken					
Lessons learnt from various sources are made available to all staff					
There are systems of evaluating feedback/outcomes of training					
Employees collaborate with external community to enrich learning experiences					

Adopted from Miller, Siegel & Reinstein (2011) and Liao & Wu (2009)

*Organizational Learning is the way in which individuals in an organization learn from the approach they take to addressing a task-related challenges to their understanding how they should learn.

Section VI: Organizational Structure

The questionnaire adopted item measures of organizational structure from the study of Shabbir (2017) and Nguyen (2010). On a five point Likert Scale rate the following statements in relation to the organizational structure existing in your university.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
At my university					
Structure of departments encourages interactions and sharing of knowledge					
Structure promotes collective rather than individual behaviour among employees					
Structure promotes and recognizes creativity and innovation among employees					
Structure recognizes team accomplishments					
Structure promotes teamwork and cooperation among co-workers					
Employees participation in decision making is encouraged					
Independence and freedom to influence work content and methods exists					
Structure has a standardized reward system for sharing knowledge					
Structure supports work environment e.g. provision of advanced work tools to facilitate knowledge sharing across functional					
Structure offers possibility to achieve promotion based on e.g. performance, experience					
Support and guidance from supervisors and other superiors is available					
Structure has opportunities for career growth and other professional development for employees					
Structure allows employees participation in decision-making					

How would you rate your current overall satisfaction with the organizational structure in your university?

Very Satisfied Neither Satisfied nor Dissatisfied Not Satisfied

*organizational structure is defined as the rules, policies, procedures, processes, hierarchy of reporting relationships that organize tasks in an organization.

Section VII: Employee Performance

The questionnaire adopted item measures from studies by Kulkami, Ravindran and Freeze (2007) with a cronbach alpha of 0.947 on their perceived usefulness and Collins, Smith & Stevens (2001).

1. How do you rate your job attendance in the previous three months?

() 1 – 20% () 21 - 40% () 41 – 60 % () 61 – 80%

2. How do you rate your meetings attendance in the previous three months?

() 1 – 20% () 21 - 40% () 41 – 60 % () 61 – 80% () All meetings.

3. Please rate the following statements: 1=Never 2=Rarely 3=Sometimes

4=Often 5=All the times.

I believe the knowledge sharing capabilities existing within my university:	1	2	3	4	5
Improves my job performance					
Enhances my job productivity					
Enhances my effectiveness on the job					
Makes it easier to do my job					
Are useful in my job					
I find it easy to get the knowledge or information I need to do my job					
I am satisfied with knowledge I am able to access to do my job					
I find that the knowledge available to me meets my needs adequately					

Please rate your level of agreement with the following statement on a scale of 1-5 in relation to your current place of work:

	1	2	3	4	5
My immediate supervisor					
Encourages me to share solutions to work-related problems					
Organizes regular meeting to share knowledge					
Encourages by actions and words sharing of knowledge					
My colleagues/team members					
Encourage open communication even if it means disagreement					
Encourage by action and words sharing of knowledge					
Encourage each other to share solutions to work-related problems					
Senior Management					
Considers employees opinions on work-related issues					
Demonstrates commitment and action with respect to knowledge management policy, guidelines and activities					
Visibly reward individuals for teamwork efforts					
Provides incentives and mechanisms to encourage knowledge sharing					
Periodically reviews the effectiveness of knowledge management practices to university's mission and vision					

Please give any general comment in relation to job satisfaction and job performance

.....

.....*Thank for your responses*.....

Appendix II: Public Universities In Kenya

N o	University	Year of Establishment
1	University of Nairobi (UoN)	1970
2	Kenyatta University (KU)	1985
3	Moi University	1984
4	Egerton University	1987
5	Jomo Kenyatta University of Agriculture & Technology	1994
6	Maseno University	2001
7	Masinde Muliro University of Science & Technology (MMUST)	2007
8	Dedan Kimathi University	2007
9	Chuka University	2007
10	Technical University	2007
11	Technical University of Mombasa	2007
12	Pwani University	2007
13	Kisii University	2010
14	University of Eldoret	2008
15	Masai Mara University	2009
16	Jaramogi Odinga University of Science & Technology	2009
17	Laikipia University	2008
18	South Eastern Kenya University (SEKU)	2008
19	Meru University of Science & Technology	2008
20	Multi Media University of Kenya	
21	University of Kabianga	2007
22	Karatina University	2010
23	The Cooperative University of Kenya	2011
24	Taita Taveta University	2011
25	Rongo University	2011
26	Muranga University of Technology	2011
27	Embu University	2011
28	Kirinyaga University	2011
29	Machakos University	2011
30	Kibabii University	2011
31	Garissa University	2011

Source: Commission for University Education website (2020)

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