

**KNOWLEDGE MANAGEMENT PRACTICES AND TEACHER
PERFORMANCE IN PUBLIC SECONDARY SCHOOLS IN MURANG'A
COUNTY, KENYA**

BY

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UNIVERSITY.**

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DECLARATION

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DEDICATION

This thesis is dedicated to my husband Bernard, as well as our children Juliet, Shyleen, and Collins, for their love, understanding, and support during the many long hours when I had to juggle work, family, and study. You will have a special place in my heart forever.

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OPERATIONAL DEFINITION OF TERMS

Explicit Knowledge:	This is the skills, abilities as well as competencies that are in the public domain and can easily be accessed.
Human Capital Development:	Refers to the ability to impart skills, competency and capability in human resource through training and experience.
Knowledge Acquisition:	Refers to getting skills and abilities through knowledge audit, social networking, benchmarking and discussion forums.
Knowledge Application:	Refers to usage or utilisation of skills and abilities in institutions in E-learning, human resource management systems and in problem solving.
Knowledge Conversion:	Refers to manipulation of individual skills and abilities to suit organizational needs through socialization, externalization, combination and internalization.
Knowledge Management practices:	Refers to activities that are carried out in acquisition, conversion and application of skills, expertise and abilities in an institution.
School Culture:	Refers to policies, norms, values, beliefs and traditions in an institution that includes openness, teamwork and teacher engagement and they are passed from one generation to another.
Tacit Knowledge:	Refers to the specific ability that a teacher possesses that is not easily copied.
Teacher performance:	Refers to the ability of teachers to perform the assigned

task at the right time, in the right manner and achieving pre-set targets indicated by job satisfaction, effectiveness, efficiency, and student results.

LIST OF ABBREVIATIONS AND ACRONYMS

EFA:	Education For All
HR :	Human resource
HRM:	Human resource management
HRP:	Human Resource Practices
EDC:	Education Data Corporation
ICT:	Information Communication Technology
KMP	Knowledge Management Practices
KMC	Knowledge management Centres
KMS	Knowledge management systems
KBV:	Knowledge based view
SECI:	Socialization, Externalization, Combination and Internalization
SPSS:	Statistical package for social sciences
TPAD:	Teacher Performance Appraisal Development
TSC:	Teachers Service Commission
UK:	United Kingdom
UN:	United Nations
UNESCO	United Nations Education Scientific and Cultural Organization
NACOSTI:	National commission for science, technology, and innovation

ABSTRACT

Knowledge management practices enable teachers to acquire, convert and apply skills that enhance their performance. However, empirical research shows that public secondary schools experience high rate of knowledge loss due to poor knowledge management practices. This knowledge loss is through teacher turnover which leads to low performance where the pre-set targets are not achieved. The following specific goals serve as the foundation for this study: to ascertain the impact of knowledge acquisition on teacher performance in public secondary schools located in Murang'a County, Kenya; to ascertain the impact of knowledge conversion on teacher performance in public secondary schools located in Murang'a County, Kenya; to ascertain the impact of knowledge application on teacher performance in public secondary schools located in Murang'a County, Kenya; to ascertain the mediating role of human capital development on the relationship between knowledge management practices and teacher performance in public secondary schools located in Murang'a County, Kenya; and to ascertain the moderating role of school culture on the relationship between knowledge management practices and teacher performance in public secondary schools located in Murang'a County, Kenya. The study was informed by knowledge-based view theory supported by institution theory and human capital theory. The study was inclined to positivism research philosophy. A descriptive research design was used in the study. The target population consisted of 4692 teachers from 309 public secondary schools in Murang'a County, Kenya. A sample size of 368 respondents was obtained using a proportionate stratified random sampling design. A semi-structured questionnaire was used to collect primary data. Data was collected in both quantitative and qualitative forms, and data was analyzed using both descriptive and inferential statistics. The study found that knowledge management practices had a positive and significant effect on teacher performance in public secondary schools in Murang'a County, Kenya. The findings also revealed that human capital development mediated the relationship between KMP and teacher performance in part. In addition, school culture significantly moderated the relationship between KMP and teacher performance. The study concluded that KMP are critical in enhancing teacher performance in public secondary schools. The study recommended that stakeholders in public schools which include school management, TSC and ministry of education should adopt strategies to improve the extent of knowledge management practices like acquisition of knowledge, knowledge conversion and application of knowledge among public secondary schools in Kenya.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Teachers' performance is a concern of all educational institutions in both developed and developing countries (Abdullah & Yaakub, 2014). This is because, educational institutions operate in an environment characterised by uncertainty, instability and changes that challenge teacher performance (Education Data Corporation's (EDC) survey 2010). As a result, educational institutions are concerned about resources, strategies and practices to use in order to promote and maintain high performance of teachers regardless of the environment they are operating in (Ohia & Obasi, 2018). According to Azlinda (2017), teachers are an important resource of educational institutions that promote competitiveness and sustainability of these institutions. Therefore these institutions should properly manage this resource in order to cope with the emerging issues in the education sector (Kumar, 2014).

Due to the current changes in global networks, organizations have become innovative and competitive by using knowledge resource (Shanab, Haddad & Knight, 2014). According to Ismael and Yosuf (2010) effective knowledge management practices contributes to success of all organizations no matter what business they operate or what services they offer. Knowledge management practices enhance the quality of service delivery and improve quality of goods produced in all organizations (Goel, Sharma & Rastogi, 2010). However, managing knowledge resource requires use of different practices as different practices generate different outcomes and it is not clear which specific practice enhances performance (Pauwe, 2009, 2011 & Singh, 2013). This makes management of knowledge more difficult than managing other physical resources like land and capital (Cheng, 2015).

Schools like other organizations should learn to gain new knowledge and manage the existing knowledge so as to enhance teacher competency and ultimately improve student outcome (Cheng, 2015). The school that practice knowledge management enlarges its capacities to achieve the desired results (Akhavan, 2012). In addition, schools that practice knowledge management are able to cope with dynamic environment in the education sector (Shahriza, 2012). Therefore, schools as multifunctional places where knowledge is produced, used and developed should practice knowledge management to be able to survive and to accomplish the desired goals and objectives (Luneta, 2012).

Globally, educational institutions that manage knowledge are able to cope with the rapid economic, cultural, social, political and technological changes in the world (Abubakar *et al.*, 2015). As a result, educational institutions have successfully implemented knowledge management practices in secondary schools in number of countries like, South Africa (Mutula & Jacobs, 2010), UK (Cranfield & Taylor, 2008),Thailand (Songsangyos, 2012), Malaysia (Taiwan (Mary &Yeh, 2011; Ismail & Yang, 2007), Mongolia (Demchig, 2014), Greece (Lamprini & Nasiopoulos, 2014). According to UNESCO (EFA global monitoring report, 2015) quality education is ensured through training and instructions given to the teachers to improve their expertise. Quality education is a necessity in the achievement of millennium sustainability goals and can only be realised when teachers are empowered intellectually through knowledge management practices (Cheng, 2015).

According to Wang and Noe (2010), developed countries have successfully implemented knowledge management practices in public secondary schools. However, developing countries are still pursuing the activity. In Kenya, and in particular, Murang'a County, knowledge management practices are in the infant stages despite knowledge being

recognized globally as a strategic resource that guarantee sustainable teacher performance (Kumar, 2014).

Empirical studies on knowledge management practices hold that, effective knowledge management practices represent a durable source of sustainable performance and competitiveness (Darwish, 1994, Schuler & Jackson, 1999; Khandekar & Sharma, 2005; Darwish, 2013). However, other empirical studies show otherwise findings among them, Tohidinia and Mosakhani (2010); Kumar (2012) and Amayah (2013).

1.1.1 Teacher performance

With the rapidly changing global competitive environment, institutions have become proactive in measuring performance of employees. Employees in all sectors are sustained by their outstanding performance (Guest, 2011). Performance measurement is crucial in both public and private sector as without measurement, organizations are unable to talk about their progress (Chen, 2010). Measuring the concept of performance is difficult since it has different meanings and different indicators Mizra and Jared, (2013) and lacks universally accepted meaning and indicators (Abbasi & Malik, 2015).

To demonstrate that KMP has created value and benefits to an organization, its contribution must be measured. Empirical research measures performance in financial and non-financial terms. Studies related to knowledge management practices measure performance based on processes, human capital and technology or innovation (Tingwei *et al.*, 2018). The study adopts capacity of capital aspect of measuring knowledge management practices since the study is dealing with teachers who are employees of Teacher Service Commission.

With the current reforms in the education sector, schools that embrace knowledge management practices gain competitive advantage due to improved teacher performance

(Northouse, 2013). Despite high level of spending on education and its increasing share in national economies, it is not well understood how productive the sector is. Financial measurement of output and productivity in education sector presents a challenge due to lack of market pricing in the education sector's output and productivity (Schreyer, 2010). It is difficult to measure the performance of teachers since it involves multiple expectations and teaching job entail diverse tasks and roles (Spain *et al.*, 2010). However, based on knowledge management practices, there are different dimensions of measuring performance of teachers which includes job satisfaction, professional development, learners' outcome, teacher engagement, absenteeism, efficiency, effectiveness and commitment (Koma & Farahbod, 2013).

According to Waiganjo *et al.* (2012), teacher Performance is evaluated in terms of effectiveness, efficiency, quality education, and school image. According to Muli (2014), non- financial measures are best suited to measure human capital since they are applied at all organizational levels. On this basis, the research embraced non- financial measures of teacher performance that include effectiveness, efficiency, job satisfaction, and student outcome

1.1.2 Knowledge Management Practices

Knowledge is required for any institution to gain competitiveness and sustainable performance (Salleh *et al.*, 2011). Schools diffuse new knowledge into the society since they are drivers of innovation that contribute to national development (Absamad, 2014). Therefore, knowledge management practices (KMP) should be embraced in schools, at all levels of academic institutions to promote teacher competency (Haddadn & Knight, 2014).

To succeed in a globally changing education environment, schools depend on trained professional teachers to proactively act on these changes (Wright & Gardner, 2013) Therefore, teachers need to acquire and apply new skills to improve service delivery and

outcome (Chu *et al.*, 2011). On the other hand, schools should embrace knowledge management practices and should put measures in place to create, convert and apply knowledge in a bid to gain competitive advantage and to sustain improved teacher performance (Koma & Farahbod, 2013).

Empirical studies have addressed knowledge management practices in different dimensions. The key dimensions include acquisition, conversion, application, innovation, protection, integration, and dissemination (Lee, 2010); acquisition, conversion, application, and protection (Omari, 2012); development, utilization, conversion and capitalization (McInerney & Koenig, 2011). The current study adopts Becerra *at el.*, (2014) framework of KMP which are acquisition, conversion and application since these practices are common in all the studies reviewed and they have received a consensus attention in KMP literature and hence accepted in the knowledge management practices research (Daud & Hamid, 2006; Liao & Wu, 2009; Becerra *et al.*, 2014).

Once the needed knowledge is identified, it is acquired for utilization in the organization; otherwise the identification is not of any benefit (Kuo, 2011). Empirical studies note that, knowledge acquisition is a valuable strategy that is adopted to promote performance (Palacios & Garrigós, 2006; Chen & Huang, 2009; Hsiao, 2011; Lópe & Meroño-Cerdán, 2011; Rašula, & Indihar, 2012). This is because; knowledge acquisition builds skills that translate to sustainable high performance and increase in responsiveness to stakeholder's needs (Maponya, 2014). According to Chilton (2013), schools that acquire and share knowledge are able to respond to global and local environmental changes promptly. Therefore, schools should be proactive in creating and acquiring new knowledge for performance sustainability and for competitive advantage (Yli- Renko, 2011).

Schools acquire knowledge from various sources to be used by all teachers (Dekoulou & Trivellas, 2015). Furthermore, knowledge conversion concept supports that knowledge becomes an institution's resource when knowledge held by individuals (tacit knowledge) becomes institutional knowledge (explicit knowledge) via combination, internalization, externalization and socialization (Evans *et al.*, 2014). According to Zaid (2012), information in raw form should be converted into accessible form for it to benefit teachers in all levels in an institution and therefore, academic institutions must speedily convert individual teacher knowledge into institutional knowledge to maximize benefits from the conversion process (Bhatt, 2017).

The organization's existing knowledge enables it to produce advanced understanding forming the basis for achieving improved performance (Zaid, 2012). Furthermore, Alavi and Leidner, 2001; Gasik, 2011 supported that schools benefit from application of knowledge. Moreover, academic institutions use knowledge to improve the quality of education, innovation and improving academic performance of learners (Kharabshen, 2016). Academic performance improves when knowledge resource is applied in schools since all stakeholders are able to access relevant knowledge (Lee & Lee, 2010). Ability to use knowledge and skills by teachers serve the needs of the academic community (Evans *et al.*, 2014).

1.1.3 Human Capital Development

According to Othman (2012), organizations need knowledgeable human capital so as to overcome environmental challenges. As noted by Bimpitsos and Petriden, (2012), organizations with knowledgeable human capital out do others in the market. The performance capital's human is reached from the skills, abilities as well as expatriate they

hold (Venkitachalam, 2013). According to Adawo (2011), organisation should give priority to human capital development since it is crucial for improved and sustainable performance.

Human capital developments build abilities and competencies of workers that enable them to carry out their responsibilities efficiently and effectively (Obisi & Anyim, 2012). In addition, human capital development builds a balanced human resource base that give organizations competitive advantage. Moreover, human capital development fills competency gap in the organization by providing employees with training in order to reduce redundancy (Riemann & Hertz, 2014). It increases talents, skills and competencies that promote achievement of organizational goals (Erhurua, 2007; Enyekit, 2011).

The Teacher Service Commission is in the frontline in capacity building in the teaching profession. With the new system of education, Competence Based Curriculum (CBC), the T.S.C, is ensuring that every teacher is trained for effective implementation of the same though many teachers do not know what is expected of them in the CBC (T.S.C, 2020). Therefore, organisations should provide resources required for capacity building to ensure employees are well prepared to perform the assigned tasks effectively and efficiently.

1.1.4 School Culture

Organizational culture is established by setting rules and regulations that govern and control behaviour (McLean, 2010 & Shao, 2015). An effective culture should be comprehensive and all inclusive. It should outline what is expected and the implications both ways. In addition, organizational culture differentiates one organization from another since different organizations have different cultures regardless of the business they carry out (Hofstede, Hofstede & Minkov, 2010; Cavaliere & Lombardi, 2015).

According to Diana (2013), a good culture should be compatible with the environment the organization is operating in since cultural dynamism determines performance levels of institutions. This avoids confusion and time wastage since every stakeholder is aware of what is expected of them. Schools with established culture are able to cope with changes in the education sector thus sustaining performance (Diana, 2013). Public secondary schools are able to achieve the set targets if available knowledge is shared freely by all teachers (Jelavic, 2011; Parjanen, 2012; Abdul-Jalal, 2013). Therefore, school principals should embrace a culture of knowledge acquisition, conversion and application in order to achieve sustainable improved performance (Daft, 2010).

1.1.5 Public Secondary Schools in Murang'a County

Murang'a County has 309 public secondary schools that are distributed in all sub- counties namely; Murang'a South, Murang'a East, Kangema, Kahuro, Kandara, Kigumo, Gatanga and Mathioya (TSC Murang'a County, 2019) and these schools have a total of 4692 teachers. The Ministry of Education, in collaboration with the Teachers Service Commission, oversees these schools. The Ministry of Education manages all aspects of education and physical resources while the TSC, is responsible for management of teachers in public schools (Njuguna, 2010). The county's target mean standard score has been at 4.5 for the last five years which has not been achieved (TSC Murang'a County, 2019). As a result, the County government initiated programs aimed at reviving education standards in the County (MURANG'A CHILD CAN, 2015). However; performance in the KCSE has not yet improved for the last three years. This justifies the choice of the county for the study.

Globally, institutions have embraced knowledge resource though the resource is poorly managed in educational institutions (Rono, 2011). The generated knowledge should be well managed for all stakeholders to access though in schools it is not the case (Chu, 2011). In Kenya, and in particular Murang'a County, public secondary schools have not embraced knowledge management practices despite its contribution in improving performance in the developed countries (Arora, 2011). In addition, there is no clear indicator (s) of implementation of KMP in secondary schools in Murang'a County. As noted by Stevens (2010), knowledge management practices are indispensable in public secondary schools since schools are knowledge hubs where knowledge is created and disseminated.

1.2 Statement of the Problem

Regardless of the implementation of teacher performance appraisal development (TPAD), clocking-in and- out system and delocalization of school administrators by the T.S.C, teachers' performance has remained poor. The performance in the K.C.S.E for the last three years has been below the set target of 4.5 in Murang'a County. For instance, the County shown a mean standard score of 3.991, 3.375, 4.041 in the year 2016, 2017 and 2018 respectively (TSC Murang'a County, 2019). In addition, public secondary schools suffer high turn-over of teachers who do not leave tacit knowledge behind in the institutional memory for use by the incoming teachers (Zurina, 2010).

According to Daft, (2010), the current rate of teacher turnover is 20% which portrays a worrying situation. Empirical research shows that, due to poor knowledge management practices, efficiency and effectiveness of teachers is challenged. In addition, teachers are unwilling to gain new knowledge while others do not know how to manage their own knowledge (Jingyuan, 2010). AbSamad, (2014) observed that generated knowledge in the academic institutes is poorly utilised due to poor knowledge management practices.

According to Pradan (2015), knowledge management practices equip teachers with skills, abilities and expertise required for efficiency and effectiveness in duty performance. Furthermore, KMP enable schools to tap tacit knowledge that becomes institutional knowledge for use by all stakeholders. This justifies the need for knowledge management practices in public secondary schools.

According to Akhavan (2012), human and financial resources will be squandered if an organization's procedures and resources are not suitable for putting knowledge management practices into practice. Empirical research on the relationship between knowledge management techniques and teacher performance in public secondary schools, however, is limited by the study's black box, which is human capital development mediated and school culture regulated.

1.3 Objectives of the Study

1.3.1 General Objective

The primary objective of this research was to explore the effect of knowledge management practices on teacher performance in public secondary schools in Murang'a County in Kenya,

1.3.2 Specific objectives

- i To determine the effect of knowledge acquisition on teacher performance in public secondary schools in Murang'a County, Kenya.
- ii To establish the effect of knowledge conversion on teacher performance in public secondary schools in Murang'a County, Kenya.
- iii. To establish the effect of knowledge application on teacher performance in public secondary schools in Murang'a County, Kenya.

- iv. To ascertain how human capital development influences the relationship between teacher performance and knowledge management techniques in Kenya's public secondary schools in Murang'a County.
- v To establish the moderating effect of school culture on the relationship between knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya.

1.4 Research Hypotheses

- H₀₁:** There is no significant effect of knowledge acquisition on teacher performance in public secondary schools in Murang'a County, Kenya.
- H₀₂:** There is no significant effect of knowledge conversion on teacher performance in public secondary schools in Murang'a County, Kenya.
- H₀₃:** There is no significant effect of knowledge application on teacher performance in public secondary schools in Murang'a County, Kenya.
- H₀₄:** There is no significant mediating effect of human capital development on the relationship between knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya.
- H₀₅:** There is no significant moderating effect of school culture on the relationship between knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya.

1.5 Significance of the Study

The purpose of this study was to look into the effect of knowledge management practices on teacher performance in public secondary schools in Murang'a County, Kenya. The study provided useful information on how to improve teacher performance through knowledge management practices. The findings of the study would be useful in developing education

policies for the ministry of education, T.S.C, and the county government of Murang'a. Furthermore, knowledge is a resource that, when properly managed, provides a competitive advantage to all sectors. It would encourage knowledge management practices in educational institutions, meet the needs of all stakeholders, and promote long-term teacher performance.

1.6 Scope of the Study

This study was conducted in 309 public secondary schools in the County of Murang'a, Kenya, with a total of 4692 teachers. The observation unit consisted of 368 T.S.C teachers from all sub-counties. The research only looked at knowledge management practices and teacher performance. The independent variables under investigation were limited to knowledge acquisition, knowledge conversion, and knowledge application, all of which were mediated by human capital development and moderated by school culture. Furthermore, this study was informed by knowledge-based view theory, as well as institutional theory and human capital theory.

1.7 Limitation of the Study

First, knowledge management practices in secondary schools are under researched and therefore literature was obtained from studies in other countries. It was also difficult to access schools without permission from the school administrators, to address this issue, the researcher obtained permission from the appropriate authorities. The investigation was limited to public secondary schools and the respondents were T.S.C teachers since they follow the same guidelines nationally.

1.8 Organisation of the research

This thesis includes the preliminary pages as well as the remaining five chapters. Title page, declaration, dedication, acknowledgement, table of contents, list of tables, list of figures, list of abbreviations and acronyms, operation definition of terms, and abstract are all part of the

preliminary pages. The first chapter discusses the study's background, problem statement, research objectives, research hypotheses, significance of the study, scope, and limitations. The second chapter includes a literature review, an introduction, a theoretical review, an empirical literature review, an empirical literature summary, and a conceptual framework.

The third chapter is about research methodology, which covers the following topics: introduction, research design, research philosophy, target population, empirical model, sampling design and procedure, data collection procedures, data collection instruments, data analysis and presentation, diagnostic tests, and ethical considerations. The fourth chapter includes the introduction, background information, descriptive statistics, inferential statistics, and qualitative data analysis. The fifth chapter contains a summary, the study's contribution to knowledge, conclusion, and policy and practice recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains a theoretical review as well as empirical literature that is relevant to the study. The chapter also presents conceptual framework.

2.2 Theoretical Review

2.2.1 Knowledge based view theory

Knowledge-based view (KBV) theory of the firm explains performance in the present economic context (Grant, 1996a; Roos, 1998). The theory considers knowledge as an important resource and intangible asset that give organizations competitive advantage and sustainable performance since it does not depreciate like capital resource (Bontis, 1999 and Petrick, 1999). The KBV assumes that organizations become competitive when they govern the available resources (Barney, 1991).

According to the KBV of the firm, organizations are resources and knowledge hubs that differentiate one organization from another (Hoskisson, 1999). Knowledge resource ensures sustainability of competitive advantage and ensures sustainable differentiation as this resource is difficult to imitate (Wiklund & Shepherd, 2003). Globally, competition is based on differentiated skills in the human capital (Barney, Ketchen & Wright, 2011).

The theory was borrowed from a study by Kinyua, Muathe and Kilika (2015) to explain how knowledge is acquired, converted, shared, utilised and retained in organizations since the resource-based view is silent on resource management practices (Kogut & Zander, 1992).

2.2.2 Human Capital Theory

Human capital theory was expounded by Gary, Becker, Jacob mincer as cited by Chinwe (2020). The theory argues that organizations should be proactive in protecting competencies, abilities and skills for sustainable performance (Ulrich & Lake, (1991). Production depends on human capability the organization holds but not on the physical resources. According to human capital theory, individuals should invest in acquisition of new skills and competencies in order to achieve sustainable improved performance. Schooling raises performance by providing skills, abilities, competencies and a way of analysing problems (Maseko, 2017). According to Rumberger and Levine (1991), employees are valuable only when they possess unique competencies.

Training exposes employees to better methods of production and enhances efficiency (Ulrich & Lake, 1991). Therefore, organisations are also able to cope with the environmental dynamism that gives them competitive advantage (Lepak & Snell, 1998). According to Youndt, Snell, Dean and Lepak (1996), training reduces redundancy in employees that enables them to accomplish the assigned task effectively and efficiently. In addition, Hill and Rothaermel (2003) found that, organisations are able to limit losses since resources are economically used without wastage.

Knowledge resource is valuable to all sectors regardless of the type of production and rare to find in organizations since it is embodied in people (Hill & Rothaermel, 2003). Organizations should therefore invest in capacity building in order to improve performance (Choudhury & Mishra, 2010). Knowledgeable workers are on high demand and are well paid since they are able to perform their duties well (Souleh, 2014). A study by Yusoff and Daudi (2010), concluded that employee's capability enhances the relationship between KM and

performance. The theory was adopted by Kinyua *et al.*, (2015) and Wanyoike *et al.*, (2016) in support of employee performance. Public secondary schools cannot perform with adequate physical facilities without knowledgeable and competent teachers.

2.2.3 Institutional Theory

Institutional theory emphasizes that institutions do not function in isolation from external environments that have an impact on the formation of formal organizational structures (Ogbonna& Harris, 2013). The theory acknowledges that institutions are governed by rules, standards, norms, policies and regulations that are both internal and external. External regulations are formulated by the governing authority which all firms within the industry must abide by in order to fight competition, offer quality service and satisfy employees. Institutional authorities put checks and balances in a bid to control and monitor operations of institutions. According to Barney (2001), institutional environment influences behaviour and conduct of employee that determine efficiency and effectiveness.

The underlying hypothesis of institution theory is that organizational rules and regulations become institutionalized over time and have an impact on worker behavior and performance. Meyer and Rowan (1991), as well as DiMaggio and Powel (1983), argue that the institutional system should be viewed as a collection of elements (Scott, 2004). In this research, we adopt an outward-view which focuses on Teachers Service Commission regulations that form the context in which decisions are made and implemented in schools as the institution ensures teachers' discipline and performance.

The theory was used by Wanyoike, Muathe and Bula (2016) in the study on quality management to support performance of institutions. Since public secondary schools are institutions, the theory is relevant in supporting the moderating variable, school culture.

However, Suddbay (2010) contends that instead of focusing on the effects of institutionalization, institutional theory should concentrate on the processes by which organizations become institutionalized.

2.3 Empirical Literature Review

2.3.1 Knowledge Acquisition and Teacher Performance

A study was done by Markus (2019), on knowledge acquisition, training and firm's performance. Non-probability sampling technique (purposive convenience sampling) that was biased and subjective was used. In addition, the study was informed by resource-based theory that does not explain how resources are acquired.

Papa (2018) did a study on knowledge acquisition, human resource management of human resources as well as performance of innovation in a wide array of sectors. The study was exploratory. A non-probability (purposive sampling) sampling technique was used to choose research participants. The research therefore identified conceptual and methodological gap.

Xie (2018) conducted a similar study on the impact of knowledge absorption capacity and innovation performance in high-tech companies; multi-mediating analysis. The study showed that ideas, expertise, experience are shared during discussions and open forums in an organisation. However, the study was on Hightech companies and the findings may not apply in the education sector. The informing theory of the study was resource-based theory that does not explain the how resources are acquired and stored in the repository.

Young (2018) did a study that indicated that, benchmarking, and brainstorming and on-the-job training are mostly the mode of acquiring knowledge by firms. However the study was of Korean firms and the findings may not work in Kenyan schools. Performance was measured using financial measures that may not adequately measure human resource performance. In

addition, the moderating variable was knowledge exploitation capacity. The study identified methodological, contextual and conceptual gap.

2.3.2 Knowledge conversion and Teacher performance

Muhammad, Usman, and Tehreem (2018) conducted research on the relationship between knowledge conversion, employee creativity, and firm performance moderating knowledge intensive culture. The survey was conducted in eight service sector organizations in Southern Punjab, Pakistan. The study found that knowledge conversion and protection had no positive impact on firm performance or employee creativity, but they were supportive processes. The dependent variable, on the other hand, was firm performance, and the moderating variable was employee creativity. The study identified a contextual gap because the findings may not be applicable in the Kenyan context.

Xihyu (2018) conducted research on the impact of knowledge conversion between explicit and tacit knowledge on software engineering and software process improvement in a small school software company. The respondents were undergraduate students. A survey measurement instrument was applied and may not be used in the education sector due to the large number of schools and teachers. The result showed that internalisation, externalisation, combination and socialisation of knowledge promote knowledge acquisition by all and translate to improved performance. However, the research was carried out in the small school software company whose findings may not apply in public schools. In addition, the dependent variable was software engineering and software process improvement and the study used descriptive-correlation approach. The study identified conceptual, contextual and methodological gaps

A study was conducted by Rai (2012), to explore the influence of the knowledge conversion processes on the success of a learning organization strategy implementation. The study employed a quantitative approach and a survey questionnaire. The research found that socialization, internalization and combination had positive impacts on the success of a learning strategy. On the other hand, externalization was found to have no statistical influence on learning organization. However, the dependent variable was success of a learning organization strategy implementation.

Shahriza (2012), attempted to investigate the management readiness of knowledge by use of knowledge management SECI processes in telecommunication industry of Sri Lanka. Externalization, socialization, combination, and internalization are all KM SECI processes. The study findings revealed that the four variables of intention in KM SECI processes were significant and reliable measures of KM readiness. However, the study focused on knowledge management readiness in the telecommunications industry.

2.3.3 Knowledge Application and Teacher performance

Mohammed and Noufou (2018) studied organizations in Canada. According to the findings of the study, knowledge sharing and knowledge utilization have a positive effect on organizational commitment and trust at Canadian organizations. The study was quantitative in nature. However, the moderating variable was business ethics but not school culture. The dependent variable was organizational commitment and trust but not teacher performance.

Kombo (2015) conducted a study that found implementation of knowledge influencing manufacturing companies' performance. However, the study focused on the performance of Kenyan manufacturing firms. Javed (2013) found that utilizing knowledge management improves organizational performance. Qualitative design was used in this research study and interviews were used as a method of data collection.

Gómez and Manzanares (2011) discovered a significant difference between firm performance and knowledge management systems in their study. However, the study focused on firm performance as measured by financial metrics.

2.3.4 Human Capital Development, Knowledge Management Practices and Teacher Performance.

Achugbue and Ochonogor (2013) did a study on education and human capital development in Ethiopia. The study found that government support in human capital development is inadequate which leads to poor performance. However, the study was in Ethiopia and the informing theory was human capital theory. Similarly, Simon (2016) did a study on human capital and education in the University of Bistol. The study was both a survey and a case study. The study discovered that human capital has a positive impact on university education. Kustoro (2015) did a survey study on lecturers in state university of Medan. However the study was on performance of lecturers in higher education institution and it was survey in nature.

Miyanda and Venkatesh (2017) investigated the role of human capital development in Zambian economic growth. For data analysis, the study employed Johansen's Co integration test as well as the error correction model. The study used annual data from 1970 to 2013. The findings revealed the existence of a persistent relationship between human capital development and economic growth. However, the method of data analysis used was unreliable to make inference. The study was in Zambia and the dependent variable was economic growth.

2.3.5 School Culture, Knowledge Management Practices and Teacher Performance

Djamaluddin (2018) did a case study on indigenous educational institutions in Indonesia. The study used quantitative approach with the correlation model. The research discovered a link between organizational culture and teacher performance. However, the study was conducted in educational institutions and only used a quantitative approach.

Orindah (2014) conducted a study with a target population of 224 teachers, from which a sample of 196 teachers was chosen at random. In that case the random sampling technique was used. The organizational culture was indicated by teacher independence, creation of ad hoc teams, team teaching, and also innovation, little formalization of activities, clearly stated goals, participation in making of decisions, and having good relations with the rest of teachers in and also outside their various schools. The study reveals that school culture influenced job commitment positively. In this case however, the study used simple random sampling technique and such indicators.

Maharuddin (2015) conducted research on organizational culture and local governance performance in Regency, South Sulawesi Province. The clusters proportionate random sampling technique was used in the study. The study discovered that organizational cultures influenced local governance performance. An exploratory research design was used in the study. Furthermore, the study collected data through interviews and focused on the performance of local government.

2.4 Summary of Literature and Research Gaps

Table 2.1 summarizes the reviewed empirical literature and identifies empirical gaps.

Table 2.1: Summary of Research Gaps and Literature

Author	Topic	Findings	Research Gaps	Focus of the current study
Markus (2019)	Knowledge acquisition and training and firm performance in Malaysia	Knowledge acquisition positively affects firm performance	The non-probability sampling technique was used in the study. (purposive convenience sampling).	Probability sampling technique (proportionate stratified random sampling.
Djamaluddin (2018)	Organizational and culture and teacher performance in Pesantren.	Organizational culture affected teacher performance.	The study used quantitative approach only with the correlation model.	Qualitative and quantitative approach with Multiple regression model
Mohammed and Noufou (2018)	Knowledge utilization on organizational commitment and trust at Canadian organizations.	Knowledge utilization impacts positively on organizational commitment and trust.	Business ethics was the moderating variable, and the dependent variable was organizational commitment and trust	The moderating variable was school culture, and the dependent variable was teacher performance
Papa (2018)	Knowledge acquisition and innovation.	Knowledge acquisition positively affect innovation and that human resource management moderates	The study used purposive sampling which is subjective.	Proportionate stratified random sampling

		the relationship.		
Xie (2018)	Knowledge absorption in High-tech companies' capacity and innovation performance; multi-mediating analysis	The study showed that ideas, expertise, experience are shared during discussions	The resource-based theory informed the research that is not comprehensive on resource acquisition.	Knowledge Based View theory informed the study
Xihyu (2018)	Knowledge conversion and software engineering and software process in small school software company.	Internalisation, externalisation, combination and socialisation of knowledge promote knowledge acquisition by all and translate to improved performance.	The dependent variable was software engineering and software process improvement. The study used descriptive-correlation approach	Teacher performance was the dependent variable. The descriptive approach was used.
Young (2018)	Knowledge acquisition and alliance performance of Korean firms.	Benchmarking, brainstorming and on-the job training are mostly the mode of acquiring knowledge by firms.	The study used financial measures of performance that may not apply in human resource management studies.	The focus was non-financial measures of teacher performance.
Miyanda and Venkatesh (2017)	Development of human capital on growth of economy in Zambia.	The findings revealed a long-run relationship between economic growth and human capital.	The study used the longitudinal data that is time consuming. In addition, the study was exploratory that lack empirical inquiry.	The study was cross-sectional. Empirical inquiry was done
Simon (2016)	The human capital and education in the	Human capital influenced education in the university of Bistol	The study used structural Equation	Focused on multiple regression

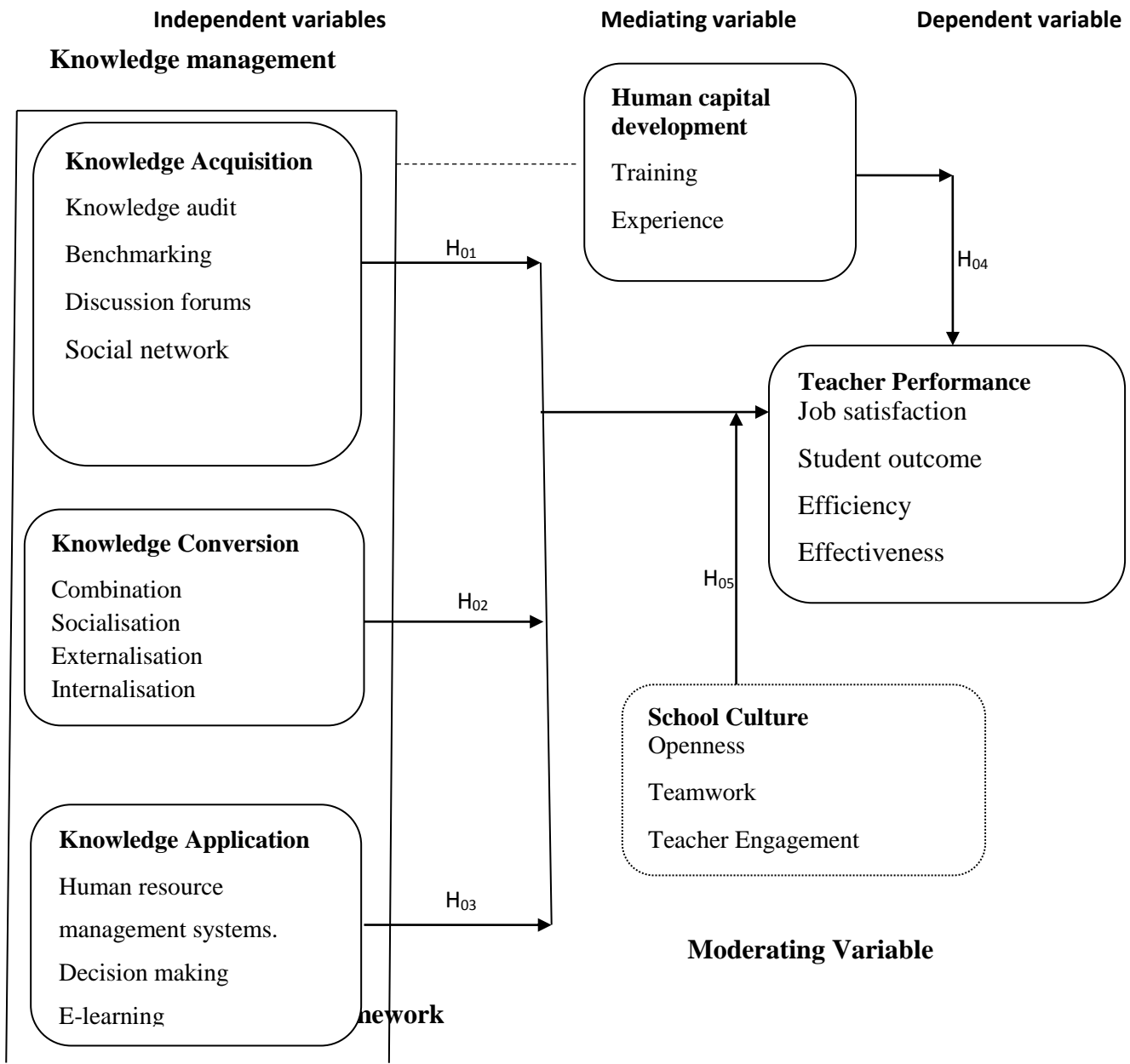
	university of Bistol.		Modelling .	model.
Maharuddin (2015).	Organizational culture and local governance performance in Pinrang Regency, South Sulawesi Province	Organizational culture impacts on performance.	A survey design was used which is appropriate when the target population is small.	The focus was descriptive design.
Achugbue and Ochonogor (2013)	Government support and human capital in service industry in Ethiopia.	Government support in human capital development is inadequate which leads to poor performance.	Exploratory design lacks empirical inquiry	Empirical inquiry was done
Raid (2012)	Processes of Kknowledge conversion on the success of a strategy for organising learning implementation.	Socialization, internalization and combination influences success of a learning strategy. On the other hand, externalization was found to have no statistical influence on learning organization.	The dependent variable was success of a learning organization strategy implementation that is difficult to measure.	Focused on teacher performance.
Shahriza (2012)	Knowledge management readiness by use of knowledge management, process of SECI in the area of Sri Lankan sector of telecommunication industry.	KM SECI processes has significant effect on KM readiness.	The study was in telecommunication industry and the finding may not be inferred in the education sector	The focus was teacher performance in the education sector.

Source: Researcher, (2019).

2.5 Conceptual Framework

Knowledge management practices (knowledge conversion, knowledge acquisition, and knowledge application) were the independent variable, teacher performance was the

dependent variable, human capital development was the mediating variable, and school culture was the moderating variable.



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses research philosophy, research design, empirical model, target population, sampling design and procedures, data collection instruments demonstrating reliability and validity, data collection procedures and data analysis, presentation, diagnostic tests, and finally ethical consideration. The chapter also contains variable operationalization.

3.2 Research Philosophy

This study was based on the philosophy of positivism, which is concerned with how research findings can be communicated in an understandable manner (Flower, 2009). Positivism epistemology is concerned with finding out reality, describing it and applying it in real life situations as well as comparing claims from the respondents and ascertains the truth (Polit and Beck, 2013).

A positivist research paradigm verifies empirical findings and allows for hypothesis and theory testing (Easterby-Smith, 2016). Researchers who adopt positivism approach make claims based on a cause and effect rationale, focusing on variables (Bakar, 2013). In addition, positivism uses a highly structured methodology in order to facilitate replication and statistical analysis (Creswell, 2012). This is consistent with the descriptive design, which necessitates the use of highly structured methodology, and the data collected was statistically analyzed.

3.3 Research Design

According to Sekaran and Bougie (2012), there are various research designs, but no one design is perfect. This study used a descriptive research design and a cross-sectional survey, as recommended by Bryman and Bell (2013), because it provides accurate descriptions of

people, events, or situations in an orderly and simple manner that is easy to understand and report on. Furthermore, the researcher has no control over the variables that ensure the validity and reliability of the results (Saundar, 2011). Other related studies by Gachuhi (2014) and Munene (2015) that justify the use of this research design were used to create the design.

3.4 Empirical Model

Because the dependent variable was continuous, multiple regression models were preferred, as recommended by Field (2009). Furthermore, the study included several dependent variables and one independent variable (Creswell, 2012). According to the conceptual framework, multiple regression models were estimated and used for inferential analysis.

Model 3.1 was used to address objectives one through three.

$$Y = \beta_1 KQ + \beta_2 KC + \beta_3 KA + e \quad \text{del 3.1}$$

Where,

Y = Teacher performance

β = coefficient

β_1 to β_3 = The Beta coefficient

KQ = Knowledge acquisition

KC= Knowledge conversion

KA = Knowledge application

e= Error term

The beta coefficients path β_1 , β_2 , β_3 , and ϵ measure the effect of KQ, KC and KA on Y respectively. The significance of β 's was used to test the corresponding hypotheses specified in chapter one.

3.4.1. Test for mediation

The four-step approach recommended by Field (2009) was used to determine whether human capital development mediates the independent variables and the dependent variable (2009).

The first model 3.1 calculated the relationship between the dependent and independent variables.

Model 3.2, on the other hand, estimated the relationship between the mediator (human capital development) and the independent variables:

$$HCD_{it} = \alpha_0 + \alpha_1 KMP_{it} + e_{it} \quad \text{del 3.2}$$

Where,

HCD = Human capital development

The relationship between the dependent variable, the independent variable, and the mediating variable was estimated using Model 3.3.

$$Y_{it} = \alpha_0 + \alpha_1 KMP_{it} + \alpha_2 HCD_{it} + e_{it} \quad \text{del 3.3}$$

Table 3.3 summarizes the decision criteria used to address the hypothesis.

Table 3.1 Decision-making for Mediation

OUTCOMES		CONCLUSION
1	$\beta_1, -\beta_3$ are significant in model 3.1	Complete mediation
	$\beta_1, -\beta_4$ are significant in model 3.2	
	$\beta_1, -\beta_5$ are not significant and β_6 is significant in model 3.3	
2	$\beta_1, -\beta_3$ are significant in model 3.1	Partial mediation
	$\beta_1, -\beta_3$ are significant in model 3.1	
	$\beta_1, -\beta_3$ in 3.1 are significant but more than $\beta_1, -\beta_3$ in model 3.5 significant or not significant and β_6 is significant in model 3.5	
3	$\beta_1, -\beta_3$ are not significant in model 3.1	No Mediation
	$\beta_1, -\beta_3$ are not significant in model 3.4	
	$\beta_1, -\beta_3$ in 3.1 are significant and equal to $\beta_1, -\beta_3$ in 3.3 and β_6 is not significant in model 3.3.	

Source: Baron and Kenny, (1986).

3.4.2 Test for moderation

The effect of school culture was estimated to establish whether it had a moderating or an explanatory effect. Moderation is estimated in two steps (Keppel & Zeddeck, 2000).

First, model 3.4 included school culture (SC) as an explanatory variable was estimated as follows.

$$Y = \beta_0 + \beta_7 KMP + \beta_8 SC + \varepsilon \dots \dots \dots \text{Model 3.4}$$

Second, model 3.5 estimated the total effect of the moderator on the relationship between independent variables and the dependent variable as:

$$Y = \beta_0 + \beta_9 KMP + \beta_{10} KMP * SC + \varepsilon \dots \dots \dots \text{Model 3.5}$$

The coefficients of the interactive terms between the SC and KMP variables are captured in β_9 and β_{10} . The decision criteria are as follows, according to MacKinnon (2002): If variables β_9 and β_{10} in model 3.5 are not significant but variable β_8 in model 3.4 is, then school

culture is just an explanatory variable. However, if the values β_9 to β_{10} in model 3.5 are significant, school culture is a moderator whose effect and direction are provided by the β 's'.

Where,

β = Beta Coefficient.

e =Error term

SC = School Culture

Table 3.2 Moderation Decision Making Criteria

Model 3.4	Model 3.5	Total Effect	Conclusion
$\beta > 0.05$	-	-	No overall effect to moderate
$\beta < 0.05$	$\beta < 0.05$	-	Moderating variable is an explanatory variable
$\beta < 0.05$	$\beta < 0.05$	$\beta < 0.05$	Moderating variable has a moderating effect

Source: Whisman and McClelland (2005)

3. 5 Operationalization and measurement of variables

Teacher performance was the dependent variable, and knowledge management practices were the independent variable. The mediating variable was human capital development, and the moderating variable was school culture. The summary is contained in Table 3.3.

Table 3.3 Operationalization and measurement of variables

Category	Variable	Indicator	Operationalization	Measurement
Dependent	Teacher performance	Job satisfaction	Ability of a teacher to achieve the pre-set targets.	Aggregated index of 1-5 point scale
		Student results.	Ability of learners to achieve the desired	

		Effectiveness	Ability of accomplishing the assigned task in time	
		Efficiency	Refers to doing the right thing, the right way.	
Independent	Knowledge acquisition	Knowledge audit	An analysis of the skills and abilities required in school in comparison with the skills available.	Aggregated index of 1-5 point scale
		Benchmarking	An organization learning best practices from other organizations.	
		Discussion Forums	Getting information through brainstorming.	
		Social networking	In formal connection of teachers where they share work and social issues.	
Independent	Knowledge conversion	Combination	Explicit of Conversion and knowledge Explicating knowledge.	Aggregated index of 1-5 point scale
		Socialisation	Conversion of tacit knowledge to tacit knowledge.	

		Internalisation	Explicit knowledge being converted to tacit knowledge.	
		Externalisation	Conversion of tacit knowledge to explicit knowledge.	
Independent	Knowledge application	E-learning	Integration of Information, Communication and Technology in teaching and learning.	Aggregated index of 1-5 point scale
		Human resource management systems	Use of technology to manage teachers.	
		Problem solving.	Ability to make the right judgement and conclusions.	
Mediating	Human capital development	Training	Acquisition of skills in a formal set-up.	5 Aggregated index
		Experience	Acquisition of skills by practicing	of 1-5 point scale
Moderating	School culture	Openness	Ability of a school to interact with others for acquisition, conversion	5 Aggregated index

			and application of skills, abilities and expatriate by teachers.	of 1-5 point scale
		Teamwork	This is working together of all teachers	
		Teacher Engagement	This is involving teachers in decision making	

Source: Author and Literature Review (2019).

3.6 Target Population

The target population consisted of 309 public secondary schools in Murang'a County, Kenya, with a total population of 4692 teachers under TSC (Teachers Service Commission Murang'a County, 2019). The study was done on T.S.C teachers in public schools since they are all qualified and are registered to teach according to the T.S.C guidelines. Moreover, teachers are knowledge carriers and they trade on (knowledge) services but not on goods (Elliott, 2015).

Table 3.4 Target Population Distribution

Sub-County	Sample frequency	Sample size for schools	Percentage %
Gatanga	49	15	16
Kahuro	39	12	13
Kandara	55	16	17
Kangema	27	7	8
Kigumo	37	11	12
Mathioya	32	10	11
Murang'a east	30	9	10
Murang'a south	40	12	13

Total	309	92	100
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Source: (TSC Murang'a County 2019).

Table 3.4 shows that 15% of the target population are schools from Gatanga, 13% from Kahuro, 18% from Kandara 9% from Kangema, 12% of respondents are from Kigumo, 10% from Mathioya, 10% from Murang'a East and 13% are from Murang'a South sub county (TSC Murang'a County 2019).

3.7 Sampling Design and Procedure

As recommended by Bryman and Bell (2013), the proportionate stratified random sampling technique was used to select the required sample size from the target population of 4692 teachers under T.S.C in 309 secondary schools. The secondary schools served as the unit of analysis, while the County's public secondary schools served as the unit of observation. The sample size was determined using the Yamane (1967) method to be 368 TSC teachers at a 5% level of significance.

$$\text{formula } n = \frac{N}{1 + N(e)^2}$$

Where n = sample size, N = population size e = error term

$$N = 4692, \varepsilon = .05 \text{ hence,}$$

$$n = \frac{4692}{1 + 4692 (.05)^2}$$

$$= 368$$

The stratified sampling formula $i = n(N/P)$ was used to determine the sample size for each stratum, where i is the number of respondents in the stratum to be sampled, n is the sample size, N is the population of the specific stratum, and P is the target population (Kothari, 2009).

Table 3.5 Distribution of Sample size

Sub-County	Number of teachers	Sample frequency	Percentage %
Gatanga	717	56	15
Kahuro	521	41	11
Kandara	717	56	15
Kangema	369	29	8
Kigumo	901	71	19
Mathioya	482	38	10
Murang'a east	386	30	9
Murang'a south	599	47	13
Total	4 692	368	100

Source: (TSC Murang'a County 2019).

Table 3.5 shows that 15% of respondents will be from Gatanga, 11% from Kahuro, 15% from Kandara 8% from Kangema, 19% of respondents from Kigumo, 10% from Mathioya, 9% from Murang'a East and 13% are from Murang'a South sub county (TSC Murang'a County 2019).

3.8 Data Collection Instrument

This study relied on primary data, as recommended by Hair (2010). A semi-structured questionnaire was used to collect data (Appendix ii). With a few modifications, the instrument was adapted from HRM studies. The instrument included open-ended and closed-ended questions. Closed-ended questions were graded on a 5-point scale. The open –ended questions helped in getting additional data from the respondents. The questionnaire had seven sections. Part A gathered teacher background information, part B gathered information on knowledge acquisition, Part C Knowledge conversion, part D Knowledge application part E,

Mediating variable, human capital development and part F assessed the moderating variable school culture while part G assessed teacher performance with regard to the effect of knowledge management practices.

3.8.1 Data Collection Procedures

The researcher began by obtaining a National Commission of Science and Technology (NACOSTI) research permit, a letter from Kenyatta University, and an introduction letter. Prior to collecting actual data, a reconnaissance study was conducted to test the reliability of the research instrument. During pilot testing, ten questionnaires were distributed to ten randomly selected teachers from ten public secondary schools in Murang'a County who were not among the final respondents. The questionnaires were dropped and picked by the researcher with the help of research assistants. After two weeks, the completed questionnaires were selected from the respondents for further analysis.

3.8.2 Validity of the instruments

The accuracy of the data to represent a construct in the study is estimated by validity (Mugenda & Mugenda, 2009). Experts, particularly supervisors and lecturers, ensured face validity. The instrument's content validity was ensured through a double check. As recommended by Khoi(2007), this study used loadings of 0.40 and higher as the threshold for validity interpretations. The findings of the study revealed that all of the constructs were significant in measuring the variables.

Table 3.6: Summary of Factor Loadings for all Variables

Variables	Number of Items	Range of Factor Loadings	Comment
Knowledge Acquisition	8	0.571-0.909	All items were accepted
Knowledge Conversion	8	0.456-0.865	All items were accepted
Knowledge Application	7	0.574-0.828	All items were accepted
Human Capital Development	5	0.460-0.822	All items were accepted
School Culture	6	0.498-0.881	All items were accepted
Teacher Performance	10	0.562-0.782	All items were accepted

3.8.3 Reliability of the instrument

The Cronbach's alpha for each scale was used to determine reliability, as recommended by Zikmund (2009). As shown in the reliability summary, knowledge acquisition, knowledge conversion, knowledge application, school culture, and teacher performance all had greater than 0.7, confirming that the scale used to measure those variables was as reliable as Field (2013) recommended. Only human capital development items required slight modification to improve reliability. This modification was done by rephrasing the first item used in human capital development to make it easier for respondents to understand. However, the overall reliability of 0.969 indicates that the research instrument used was adequate for final data collection.

Table 3.7 Results of Reliability Statistics

Reliability Statistics			
Variables	Cronbach's Alpha	N of Items	Conclusion
Knowledge Acquisition	0.802	8	Reliable
Knowledge Conversion	0.885	8	Reliable
Knowledge Application	0.878	7	Reliable
Human Capital Development	0.693	5	Reliable
School Culture	0.758	6	Reliable
Teacher Performance	0.838	10	Reliable
Overall Reliability	0.969	44	Instrument Reliability

Source: Pilot data (2020)

3.9 Data Analysis and presentation

The questionnaires were collected and coded by the researcher from the respondents. Quantitative data was analyzed using both descriptive and inferential statistics (Hair, 2010). The Statistical Package for Social Sciences (SPSS) Version 20.0 software was used to analyze the data. Percentages, mean, and standard deviation were examples of descriptive statistics. Pearson's Product Moment Correlation (r) was used to show the relationship and strength of the variables.

The coefficient of determination (R²) quantified the effects of independent variables on the dependent variable. The F-ratio calculated from the ANOVA table measured deviation from the best fit line with a p-value less than 0.05 at the 5% level of significance (Hair, 2010). The harmonic mean formula was used to calculate the composite index (Gupta, 2009).

$$C_i = \frac{\sum f_i w_i}{\sum f_i} \dots \dots \dots \text{Model 3.7}$$

Where;

C_i = composite index for variable i

f = Total number of respondents

W_i = aggregate of the weighted schools

i = Total number of schools.

3.10 Diagnostic tests

Diagnostics tests were conducted to ensure that multiple regression assumptions were not violated. This was done to ensure that estimates of relationships of variables were reliable and suitable for making inferences and for drawing conclusions (Field, 2013).

3.10.1 Normality test

The Shapiro-Wilk test can detect deviations from normality caused by skewness, kurtosis, or both (Field, 2009). The threshold ranges from -0.1 to $+1.0$, with figures greater than 0.05 indicating normal data (Razali & Wah, 2011). A study by Kinyua (2015) inspired the Shapiro-Wilk test.

3.10.2 Linearity test

The study used Pearson's correlation coefficient to test the linearity of the relationship between various variables as suggested by Williams *et al.*, (2012) with -1 to 1 coefficients (Bryam & Bell, 2013). A negative coefficient indicates an inverse relationship whereas a positive correlation indicates a direct relationship (Field, 2009).

3.10.3 Test for Homogeneity

The presence of heteroscedasticity was checked using the Levene test (1960). Equality of variances was calculated procedure of a one-way ANOVA with a threshold of $\alpha = 5\%$

3.10.4 Multicollinearity test

The VIF (variance inflation factor) tests for multicollinearity. The average VIF for all independent and dependent variables should be ten (Hair, 2010). As the standard error of the coefficients increases, so does collinearity, making them less trustworthy.

Hypotheses were also tested to see if the influence of the independent variable was significant. If p is less than 0.05, the null hypotheses are rejected, and vice versa (Williams, 2012). SPSS Version 22.0 software was used to aid in data analysis. Tables were used to organize, summarize, and present the data that had been collected and analyzed.

Table 3.8. Test of Hypothesis table

Objectives	Hypothesis	Statistical approach	Research question	Interpretation
To establish the effect of knowledge acquisition on teacher performance in public secondary schools in Murang'a County, Kenya.	There is no significant effect of knowledge acquisition on teacher performance in public secondary schools in Murang'a County, Kenya.	$Y = \beta_0 + \beta_1 KQ + e$	Part B	R^2 Adjusted R^2 F-Value t-Value Level of significant 0.05 $P < 0.05$ reject null hypotheses
To determine the effect of knowledge conversion on teacher performance in public secondary schools in Murang'a County, Kenya.	There is no significant effect of knowledge conversion on teacher performance in public secondary schools of Murang'a County, Kenya.	$Y = \beta_0 + \beta_2 KC + e$	Part C	R^2 Adjusted R^2 F-Value t-Value Level of significant 0.05 $P < 0.05$ reject null hypotheses
To determine the effect of knowledge application on teacher performance in public secondary schools in	There is no significant effect of knowledge application on teacher performance in public secondary schools in	$Y = \beta_0 + \beta_3 KA + e$	PART D	R^2 Adjusted R^2 F-Value t-Value Level of significant 0.05 $P < 0.05$ reject

Murang'a County, Kenya.	Murang'a County, Kenya.			null hypotheses
To establish the mediating effect of human capital development on the relationship between knowledge management and teacher performance in public secondary schools in Murang'a County, Kenya.	Human capital development has no mediating significant effect on the relationship between knowledge management and teacher performance in public secondary schools in Murang'a County, Kenya.	$Y = \beta_0 + \beta_1 KQ + \beta_2 KC + \beta_3 KA + \beta_5 HCD + e$	PART E	R^2 Adjusted R^2 F-Value t-Value Level of significant 0.05 $P < 0.05$ reject null hypotheses
To assess the moderating effect of school culture on the relationship between knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya.	School culture has no significant moderating effect on the relationship between knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya.	$Y = \beta_0 + \beta_1 KQ + \beta_2 KC + \beta_3 KA + \beta_8 SC + e$	PART F	R^2 Adjusted R^2 F-Value t-Value Level of significant 0.05 $P < 0.05$ reject null hypotheses

(Source: Researcher, 2019)

3.11 Ethical Considerations

To ensure that the study adhered to research ethical standards, the data collected from the chosen respondents was treated with strict confidentiality. Furthermore, the respondents' names were coded to conceal their identity. As a result, they were able to maintain their privacy. Personal integrity was also observed during research, which was accomplished by avoiding misrepresentation of results and remaining objective. At the same time, the selected

respondents were made to understand reasons as to why conducting the research was being done, hence informed consent was sought.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents data analysis, research findings, and discussion. The chapter includes sections on preliminary results such as response rate and pilot study results, as well as results on demographic characteristics of respondents. The chapter also includes a descriptive analysis of study variables such as percentages, means, and standard deviation. The chapter concludes with regression analysis, which includes diagnostic tests and tests for hypotheses.

4.2 Analysis of Response Rate

The total number of respondents in this study was 368, but 313 (85.05%) completed and returned the questionnaires. The remaining 55 (14.95% of the total) were not returned. As a result, the response rate in this study was 85.05%, which was deemed appropriate based on the 50% threshold suggested by Mugenda and Mugenda (2009) for similar studies. The results in Figure 4.1 indicates that the returned questionnaires came from all the sub counties in Murang'a County with Kigumo having the highest returned questionnaires followed by Kandara while Kangema had the least. The findings therefore implied that data collected was a representative of the entire Murang'a County.

Table 4.1 Response Rate

Response Rate	Frequency	Percentage
Returned questionnaires	313	85.05%

unreturned questionnaires	55	14.95%
Total	368	100

Source: Survey Data (2020)

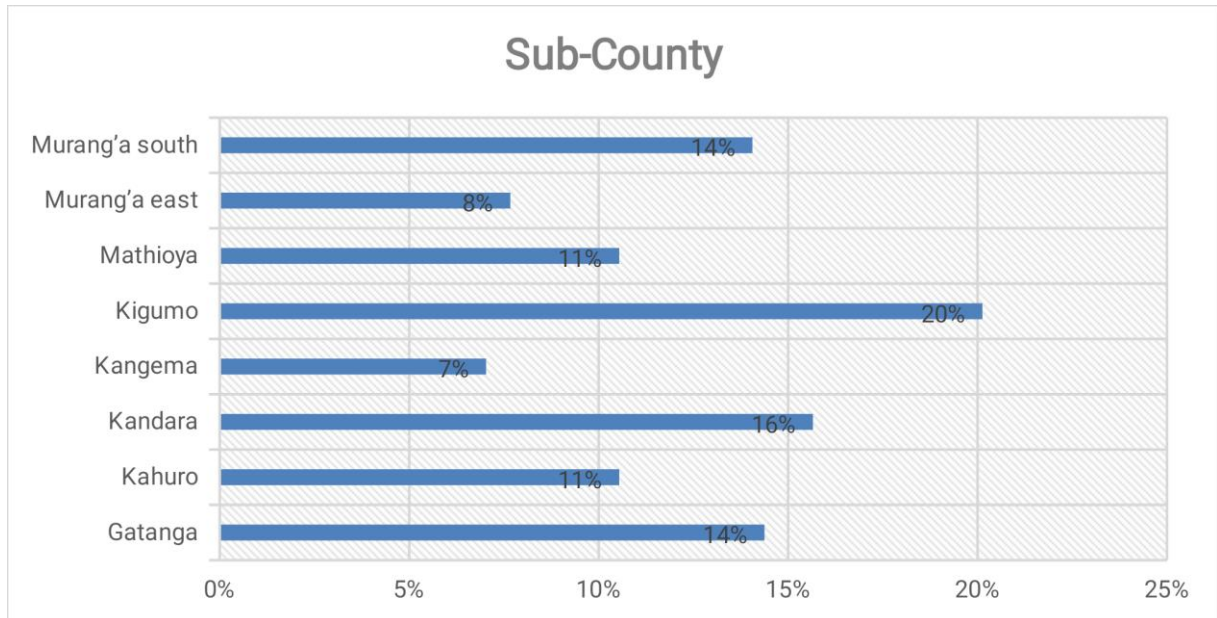


Figure 4.1 Distribution of the Responses as per the Sub counties

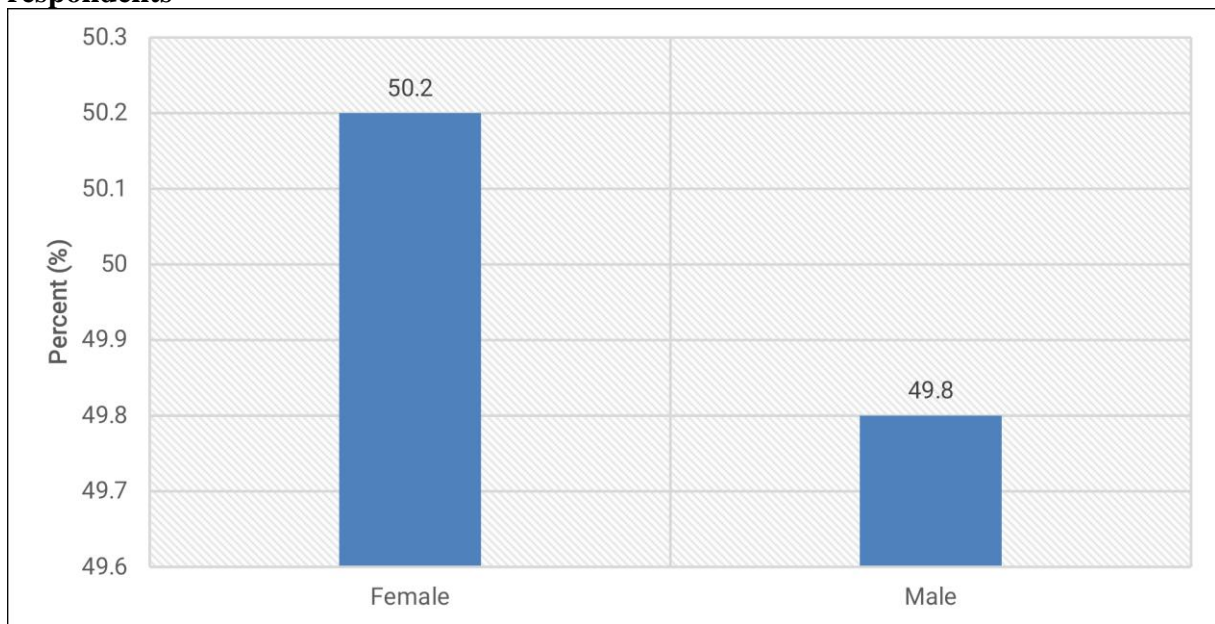
4.3 Demographic Characteristics of the Respondents.

The demographic information of the respondents is presented in this section. The demographic characteristics examined were the respondents' age, gender, bracket, level of education, working experience, and position.

4.3.1 Gender of the Respondents

Figure 4.2 shows that 50.2% of the respondents were female, while 49.8% were male. The finding implied gender equity among teachers indicating that TSC had surpassed the constitution 2010 recommendation that advocate that one gender is not supposed to be more than two thirds in order to enhance gender representation. T.S.C is therefore an equal opportunity employer.

Figure 4.2 Gender of the respondents



4.3.2 Age Bracket of the Respondents

In addition, the study examined the respondents' age range, and the results are shown in Figure 4.3. According to the findings, 39.6% of respondents were between the ages of 41 and 50, 30% were over the age of 50, and 10.2% were under the age of 21. 10.2% of respondents were between the ages of 21 and 30, and 9.9% were between the ages of 31 and 40. According to the study's findings, the majority of secondary school teachers in Murang'a County were over the age of 40.

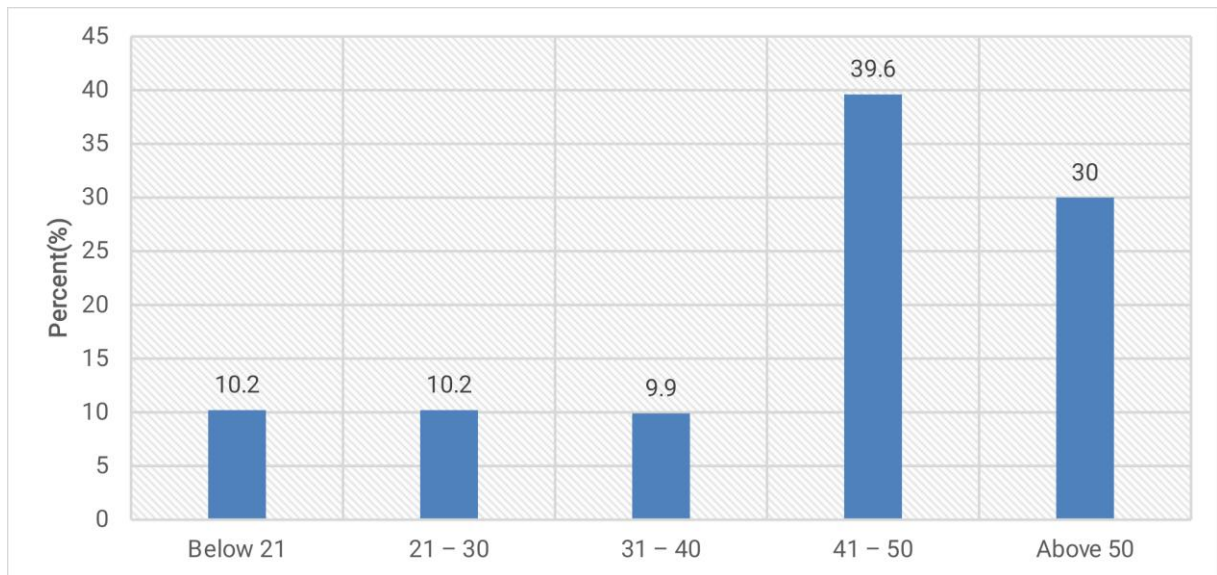


Figure 4.3 Age of the respondents

4.3.3 Working Experience of the Respondents

In terms of working experience, the results in Figure 4.3 show that 39.9% had worked for 16 years or more, 29.7% had worked for 11 to 15 years, 20.1% had worked for 6 to 10 years, and 10.2% had less than 5 years. These finding coincides with age bracket of the teachers which further implied that majority of the teachers had been working in education sector for many years. These findings were advantageous to the current study since the respondents were well placed to understand the concept of knowledge management practices and the way they affect teacher’s performance in secondary schools.

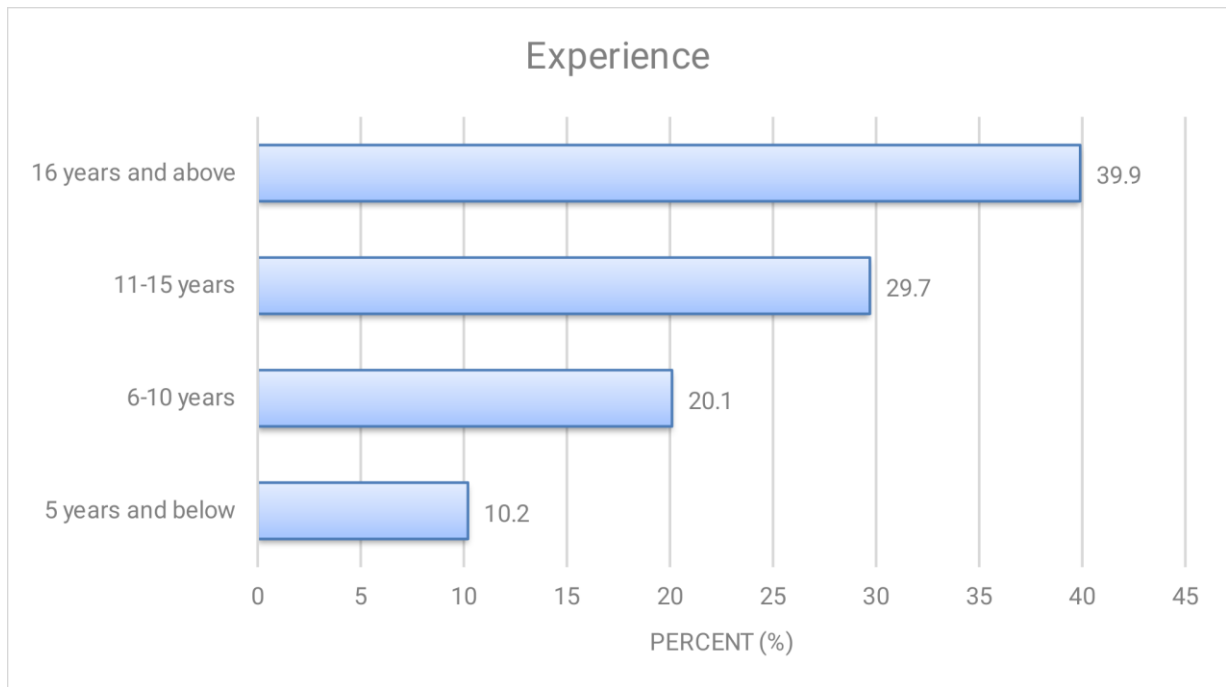


Figure 4.4 Working Experience of the respondents

4.3.4 Position of the Respondents

Figure 4.5 shows that slightly less than half of the respondents (49.5%) were assistant teachers, 30% were head of departments while deputy teacher and principal were 10.2% each. The findings implied that the study included all the cadres available and it represented all categories of teachers.

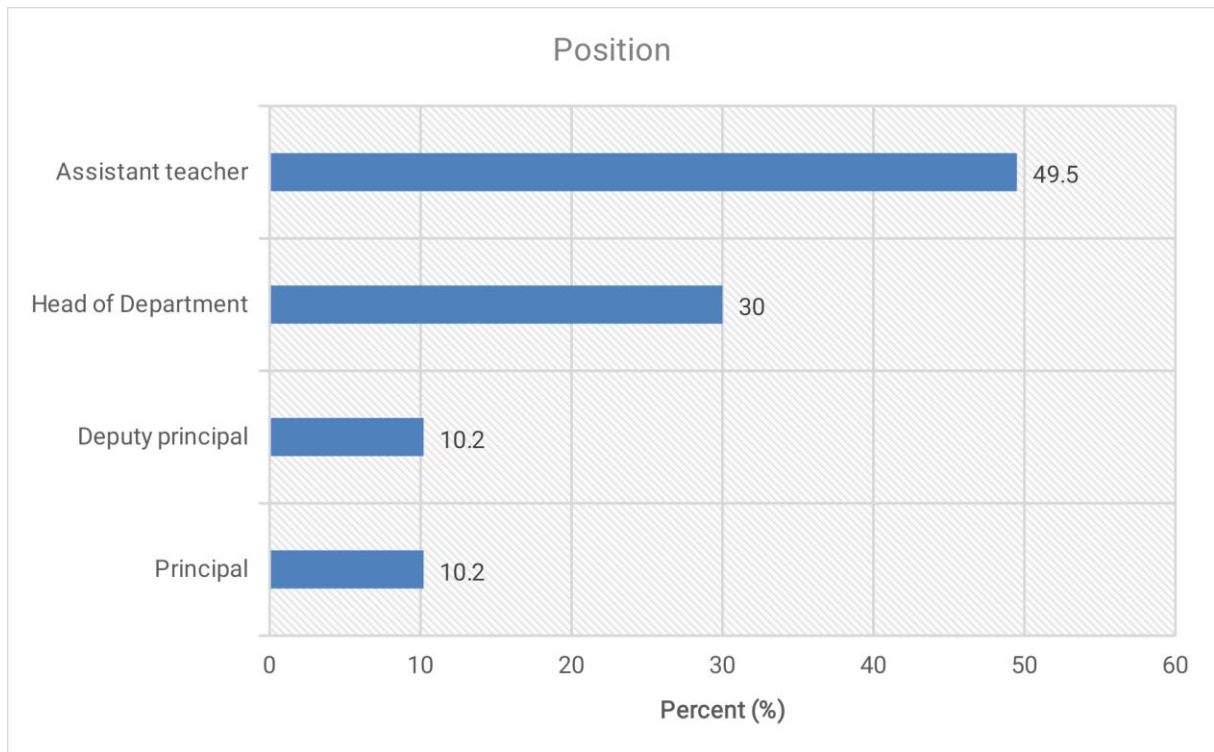


Figure 4.5 Position of the respondents

4.3.5 Level of Education of the Respondents

On the education level, the study results show that 85% of the respondents were degree holders, 8% had diplomas while 7% had postgraduate degree. According to TSC charter, one must have at least a diploma certificate to qualify for a position of a secondary school teacher.

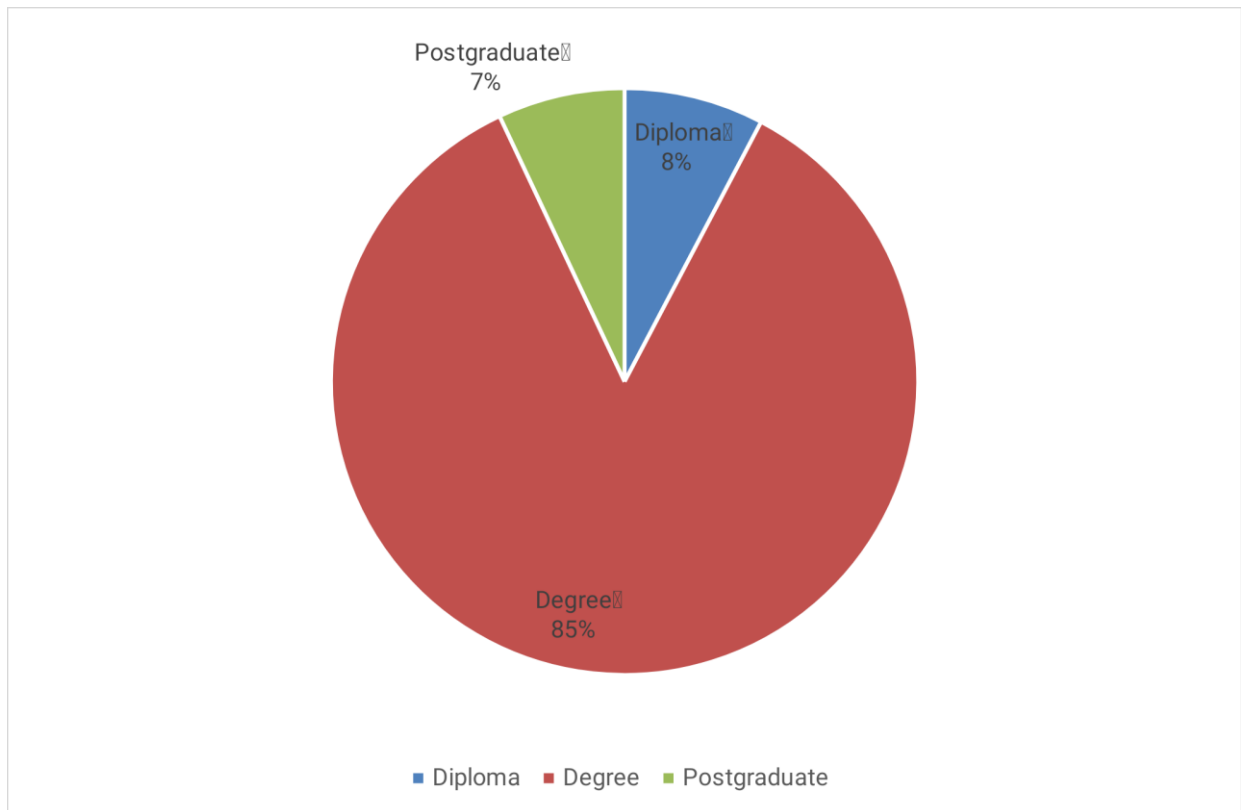


Figure 4.6 Level of Education of the Respondents

4.4 Descriptive Analysis for Study Variables

The descriptive analysis for the study variables is included in this section. In the descriptive analysis, the study used percentages, mean, and standard deviation. The goal of this analysis was to show how the respondents responded to statement used to measure various study variables in the scale 1-5, in terms of mean response and how they deviated from the mean measured by standard deviation. The results were showed based on the specific objective of the research.

4.4.1 Knowledge Acquisition in public secondary schools of Murang’a County.

Knowledge Acquisition was an important variable because learning new things reduces redundancy in the education sector (Cheng, 2015). Furthermore, schools gain a competitive

advantage, allowing them to deal with environmental dynamism and maintain performance (Ojo, 2016).

The overall mean knowledge acquisition score was 1.88, with a standard deviation of 1.22. This suggested that secondary school teachers in Murang'a County had low levels of knowledge acquisition, which could explain poor teacher performance. According to Markus (2019), knowledge acquisition has a positive effect on firm performance. Similarly, Papa (2018) argued that organizations with a poor knowledge acquisition strategy perform poorly.

To assess the extent of knowledge acquisition, respondents were asked whether they observed lessons on a termly basis. The results showed that 35.1% strongly disagreed and 36.7% disagreed, with a mean response of 1.85 and a standard deviation of 1.22, implying that the majority of respondents disagreed. This means that the majority of teachers in Murang'a's secondary schools did not conduct lesson observation on a termly basis.

To find out whether secondary school teachers' strengths and weaknesses in teaching were identified, discussed and rewarded, the results showed that 36.1% and 38.0% of the respondents strongly disagreed and disagreed respectively. The mean of 1.83 and a standard deviation of 1.32 confirmed that majority disagreed with the statement. The statement on whether there were set benchmarking days in the school programme every year had a mean response of 1.95 and a standard deviation of 1.24. This showed that there were no set benchmarking days in the school programme every year. Similarly, the mean response of 1.86 disagreed that all teachers were involved in bench marking.

The study further sought to establish whether teachers attended open discussion forums in school to express their views. The results show that 37.1% and 40.6% strongly disagreed and

disagreed respectively. Those who agreed and strongly agreed were 8.0% and 6.7%. The mean of 1.76 and a deviation of 1.24 further confirmed that majority of the teachers disagreed on their attendance of open discussion forums in school. This meant that teachers are not given a forum to express their views which lead to burnout. To find out whether teachers were members of social networks in their subject, response of 1.86 and a deviation of 1.21 which confirmed that there was no networking among teachers. Finally, to find out whether social network was beneficial to teachers, The statement had a mean of 1.93, a deviation of 1.12 indicating that only a few teachers benefit from social network groups.

Table 4.2 Descriptive Analysis for Knowledge Acquisition

Knowledge Acquisition indicators	SD	D	N	A	SA	Mean	StdDev
Knowledge audit							
I conduct lesson observation on termly basis	35.1%	36.7%	11.5%	7.3%	9.3%	1.85	1.22
My strengths and weaknesses in teaching are discussed and marks awarded.							
Benchmarking	36.1%	38.0%	8.3%	11.2%	6.4%	1.83	1.31
There are set benchmarking days in the school programme every year	36.1%	41.5%	6.7%	8.6%	7.0%	1.95	1.24
All teachers are involved in bench marking.							
Discussion forums	37.1%	37.4%	7.7%	7.7%	10.2%	1.86	1.24
I attend open discussion forums in school	37.1%	40.6%	7.7%	8.0%	6.7%	1.96	1.21
Open discussion forums are regularly held in school.							
Social network	40.6%	32.6%	7.7%	10.2%	8.9%	1.76	1.28
I am a member of social network in my subject	34.5%	39.9%	7.7%	7.3%	10.5%	1.89	1.25
I benefit from social network in my school	37.7%	38.7%	7.3%	6.1%	10.2%	1.93	1.19
Overall mean						1.88	

SD-Strongly Disagree, D- Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Source. Survey data (2020)

4.2.4 Knowledge Conversion in public secondary schools in Murang'a County

The study asked respondents whether they attend all meetings held in school because knowledge is disseminated through briefs in school, and the results show that 37.4% and 38.7% strongly disagreed and disagreed, respectively. In addition, respondents were asked if they had minutes of all school meetings. With a mean of 1.86 and a standard deviation of 1.21, the statement indicated that the majority of respondents strongly disagreed and disagreed. Furthermore, the majority of secondary school teachers ignored school meetings and the keeping of minutes.

To determine whether the respondent's school presented expert knowledge in a simple manner, 36.7% disagreed and 38.7% strongly disagreed, respectively. The results further showed that free interaction of teachers and learners was very low as indicated by 41.2% and 34.8% of the respondents who strongly disagreed and disagreed respectively. As a result, teachers are unable to identify individual learners' strengths and weaknesses because they do not provide individualized attention to them. To establish whether teachers actualized concepts and methods learnt through the actual doing, the mean score of 1.96 as well as SD of 1.20 showed that teachers continued to use the same methodology they have always used.

The study also sought to determine whether a teacher mimicked the teaching methods used by other teachers in their department. The majority disagreed, as evidenced by a mean score of 1.98 and a standard deviation of 1.17. Similarly, the level of investment in updating teaching manuals was low, as evidenced by 36.4% and 39.6% who disagreed with this statement. Finally, the study sought to determine whether teachers read all school publications in search of knowledge. Teachers do not seek new knowledge, according to a mean score of 1.81 and a standard deviation of 1.25.

The overall mean score for knowledge conversion was 1.90, with a standard deviation of 1.12, indicating that knowledge conversion was low among Murang'a secondary schools. Similarly, lack of knowledge conversion may be the reason behind poor teacher performance since according to Xihyu (2018), internalisation, externalisation, combination and socialisation of knowledge promote knowledge acquisition by all and translate to improved performance. In addition, knowledge in raw form cannot translate into improved performance since it may not suit the organization's needs (Guest, 2018).

Table 4.3 Descriptive Analysis for Knowledge Conversion

Knowledge Conversion indicators	SD	D	N	A	SA	Mean	StdDev
Combination							
. I attend all school meetings because knowledge is disseminated in my school through briefs.	37.4%	38.7%	8.0%	8.3%	7.7%	1.90	1.23
.I have minutes of all meetings held in school							
Socialisation							
.My school presents expert knowledge in a simple way.	40.3%	35.1%	7.7%	7.3%	9.6%	1.86	1.21
.My school allows free interaction of teachers with the students.	38.7%	36.7%	9.6%	8.6%	6.4%	1.88	1.22
	41.2%	34.8%	8.3%	7.7%	8.0%	1.88	1.20
Externalisation							
I put concepts and methods I have learned into practice.	35.8%	41.2%	8.0%	6.7%	8.3%	1.96	1.20
.I copy the teaching methodology used by other teachers in my department	36.1%	40.6%	10.9%	7.0%	5.4%	1.98	1.17
Internalisation							
.My school invest in teaching manuals to get updates	36.4%	39.6%	8.6%	8.6%	6.7%	1.92	1.23
.I read all the publications in my school in search of knowledge	40.6%	34.2%	7.0%	9.3%	8.9%	1.81	1.25
Overall mean score						1.90	

SD-Strongly Disagree, D- Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Source. Survey data (2020)

4.2.5 Knowledge Application in public secondary schools in Murang'a County

The research sought to determine whether respondents' schools had implemented teacher management systems; the results show that 37.4% and 39.3% of respondents strongly agreed and agreed, respectively. The mean score of 3.95 and the standard deviation of 1.14 confirmed that the vast majority of respondents agreed. This implied that the majority of schools had teacher tracking records. The TPAD and a system for tracking attendance and punctuality were among them. The majority of respondents disagreed on whether problems in schools are solved without bias, as indicated by a mean score of 1.01 and a standard deviation of 1.14. This meant that the vast majority of respondents were dissatisfied with how issues were handled.

The respondents were then asked if they were involved whenever a problem needed to be solved; the results show that 39.0% strongly disagreed and 34.8% disagreed, respectively. The mean of 1.8 and standard deviation of 1.25 indicated that the majority of respondents were negative about the extent of ICT integration in teaching. Similarly, the majority of respondents disagreed, as evidenced by a mean score of 1.97 and a standard deviation of 1.25 on whether their school had adequate IT resources to support teaching and learning. This implied that the majority of schools lacked adequate IT resources, and as a result, teachers rarely used them in teaching or research.

The study also sought to determine whether software was available in all subjects and whether IT assists teachers in becoming creative in their subject areas. The findings revealed that the majority of respondents disagreed with both of these statements, implying that the majority of secondary schools in Murang'a lacked software and did not incorporate IT into their subject teaching. The overall mean score for knowledge application was 1.91, with a

standard deviation of 1.19, implying that knowledge application was very low in Murang'a's secondary schools.

Lack of knowledge application limits innovation in education sectors hence teacher only rely on traditional methods of teaching which diminishes the performance of both teacher and students with time. The poor performance of student in Murang'a could be attributed to low knowledge application among the secondary schools. According to Mohammed and Noufou (2018), knowledge sharing and utilization have a positive effect on organizational commitment. Similarly, Kombo (2015) found that knowledge strategy had a positive and significant effect on firms' innovation activities. As a result, higher knowledge level strategy implementation is concluded to contribute to higher organizational innovation.

Table 4.4 Descriptive Analysis for Knowledge Application

Knowledge Application							
Indicators	SD	D	N	A	SA	Mean	StdDev
Human resource management system							
.My school has adopted systems of managing teachers	7.4%	9.3%	10.2%	37.3%	35.8%	3.95	1.14
Decision making							
.I solve problems in my school without biasness	40.6%	38.3%	8.6%	6.4%	6.1%	1.01	1.14
.I am involved whenever there is a problem to be solved in my school.							
E-Learning	39.0%	34.8%	8.9%	9.3%	8.0%	1.88	1.25
.I integrate ICT in teaching	34.2%	39.3%	9.3%	7.0%	10.2%	1.80	1.27
.There are enough IT resources in my school to support teaching and learning	43.5%	34.2%	6.1%	8.3%	8.0%	1.97	1.25
.Soft wares are available in all subjects	36.7%	39.0%	9.6%	7.3%	7.3%	1.9	1.19
IT helps me to become creative in my subject areas	35.5%	40.9%	9.3%	4.8%	9.6%	1.88	1.22
Overall mean score						1.91	

SD-Strongly Disagree, D- Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Source. Survey data (2020)

4.2.6 Human Capital Development in public secondary schools in Murang'a County

The study investigated whether the employer of teachers conducts regular training need assessments under human capital development. According to the study findings, 38.3% of respondents strongly disagreed and 36.7% disagreed, with a mean of 1.89 and a standard deviation of 1.23. This implied that the knowledge gap in education would never be filled. With a mean of 1.84 and a standard deviation of 1.18, the majority of respondents disagreed on whether their schools conducted induction trainings to orient new teachers to the system. This meant that new teachers were left to figure out how systems work on their own.

According to the study findings, 34.2% and 40.3% of those polled strongly disagreed and disagreed on whether the training forums they attend add new knowledge, respectively, with a mean of 1.81 and a standard deviation of 1.25. The findings also revealed that 32.6% and 41.9% of those who took part in the study strongly agreed and agreed, respectively, that teaching experience had improved their performance and helped them meet their goals. The overall mean score of 2.84 with a standard deviation of 1.19 indicated that human capital development in secondary schools was very low.

The teacher hardly attended in-service trainings to enhance their productivity. Lack of adequate human capital development is a recipe to poor performance. The finding support those of Achugbue and Ochonogor (2013) who found that government support in human capital development is inadequate which leads to poor performance. Kustoro (2015) also reported that knowledge management, innovative strategy and human capital directly influenced the performance of the university.

Table 4.5 Descriptive Analysis for Human Capital Development

Human Capital Development indicators	SD	D	N	A	SA	Mean	StdDev
Training							
.My employer conduct training need assessment regularly	38.3%	36.7%	8.3%	8.6%	8.0%	1.89	1.23
.My school conduct induction training to orient new teachers to the system	32.6%	42.2%	8.6%	9.9%	6.7%	1.84	1.18
.The training forums I attend adds new knowledge	34.2%	40.3%	6.7%	10.2%	8.6%	1.81	1.25
Experience							
.My teaching experience has enhanced my performance	8.0%	7.7%	9.9%	41.9%	32.6%	2.83	1.19
.Experience helps me to meet targets	9.6%	9.6%	6.7%	34.5%	39.6%	2.85	1.30
Overall mean score						2.24	

SD-Strongly Disagree, D- Disagree, N-Neutral, A-Agree, SA-Strongly Agree

Source. Survey data (2020)

4.2.7 School Culture in public secondary schools in Murang'a County

The study also sought to establish whether all teachers in their school had access to communication channels. According to the study findings, 36.4% and 38.3% of respondents agreed and strongly agreed. The statement received a mean response of 3.86 and a standard deviation of 1.27, indicating that the majority of respondents agreed that communication was open to all teachers in their schools.

The statement on whether students can express their opinions without fear of reprimand received a mean response of 3.83 and a standard deviation of 1.24, implying that the majority of respondents agreed. The results showed that the majority of teachers agreed, as indicated by a mean of 3.81 and a standard deviation of 1.26. The study also wanted to know if schools used team teaching and if teachers were involved in school decision making. The statement received mean scores of 3.96 with a standard deviation of 1.16 and 3.85 with a standard deviation of 1.31, indicating that the majority of respondents agreed. Finally, when asked whether teachers were recognized and highly valued in their schools, 33.9% agreed and 42.5% strongly agreed.

The school culture's overall mean response was 3.88, with a standard deviation of 1.24. The majority of schools had a positive culture that promoted teacher well-being. According to Orindah (2014), organizational culture promotes organizational performance. School culture influences job commitment positively.

Table 4.6 Descriptive Analysis for School Culture

School Culture Indicators	SD	D	N	A	SA	Mean	StdDev
Openness							
.Communication channels are open to all teachers in my school	9.6%	7.7%	8.0%	36.4%	38.3%	3.86	1.27
.Students air their views without fear of being reprimanded.							
Teamwork							
.Teachers work as a team	10.9%	6.1%	6.4%	44.1%	32.6%	3.81	1.26
.Teachers conducts team teaching in the school.							
Teacher Engagement							
Teachers are engaged in decision making in my school.	11.2%	7.0%	6.4%	36.7%	38.7%	3.85	1.31
.Teachers are recognised and highly valued in my school.	7.3%	9.3%	7.0%	33.9%	42.5%	3.95	1.24
Overall mean score						3.88	

SD-Strongly Disagree, D- Disagree, N-Neutral, A-Agree, SA-Strongly Agree

4.2.8 Teacher Performance in public secondary schools in Murang'a County

This section presents analysis of teacher performance amongst secondary schools in the County. The respondents were asked if they were happy with their pay. Teachers were dissatisfied with their salaries, as evidenced by a mean score of 1.89 and a standard deviation of 1.21. Similarly, respondents agreed, as evidenced by a mean score of 3.79 and a standard deviation of 1.27, that teacher absenteeism was low in their school as a result of the implementation of a clocking-in and clocking-out system. The findings also revealed a high level of turnover among teachers, with 34.8% and 37.7% agreeing and strongly agreeing with the statement, respectively, with a mean of 3.87 and a standard deviation of 1.26.

The study also wanted to know if respondents were concerned about the academic performance of all students. The results show that the majority agreed and strongly agreed with the statement, as indicated by a mean score of 3.90 and a standard deviation of 1.23. This is because advancement in the teaching profession is based on performance. Similarly, the majority of respondents agreed that they completed their tasks on time, as evidenced by a mean score of 3.92 and a standard deviation of 1.14. This corresponds to the TPAD indicators.

The survey asked respondents whether their schools had a channel for receiving student feedback on service delivery. According to the study findings, 36.7% and 39.3% of respondents agreed and strongly agreed, respectively. The results show that the majority disagreed with the working conditions in their school, as indicated by a mean score of 1.76 and a standard deviation of 1.3. The findings indicated that the majority of teachers in Murang'a's secondary schools did not have favorable working conditions. The results show that the majority of respondents agreed that teachers followed the laid programs in their performance of duties.

The statements on whether teacher's mastery of content leads to improved academic performance of learners and whether teacher's knowledge in co- curriculum activities leads to improved co-curriculum performance, had mean scores of 3.82 and a standard deviation of 1.27 and 3.99 and a standard deviation of 1.10 respectively which implied that majority of the respondents agreed with the statements.

The findings in this section revealed that the majority of teachers were dissatisfied with their jobs due to low pay and unfavorable working conditions. The finding concurs with Zurina

(2010) who found that public secondary schools suffer high turn-over of teachers who do not leave tacit knowledge behind in the institutional memory for use by the incoming teachers.

Table 4.7 Descriptive Analysis for Teacher Performance

Teacher Performance Indicators	SD	D	N	A	SA	Mean	StdD
	36.7	37.4	10.5				
.I am satisfied with my salary	%	%	%	7.3%	8.0%	1.89	1.21
.The rate of teacher absenteeism is low in my school	9.0%	8.6%	8.0%	%	%	1.79	1.27
.My school experiences high rate of teacher turnover							
.I am comfortable with the working conditions in my school box	6.7%	9.6%	%	11.2	34.8	37.7	
				%	%	3.87	1.21
Student outcome							
I am concerned about the academic performance of all students				39.6	37.4		
Efficiency	8.6%	7.3%	7.0%	%	%	3.9	1.23
				41.9	35.1		
.I perform my duties on time	6.7%	6.4%	9.9%	%	%	3.92	1.14
.There is a channel for receiving student response about services delivery in my school	7.0%	7.3%	9.6%	%	%	3.94	1.19
.I follow the laid down school program in performance of duties				37.1	37.7		
Efficiency	8.6%	9.3%	7.3%	%	%	3.86	1.26
				37.7	36.1		
.Teacher's mastery of content in my school leads to improved	9.3%	9.3%	7.7%	%	%	3.82	1.27

academic performance of learners

.Teacher's knowledge in co-curriculum activities in my school leads to improved co-curriculum performance	5.8%	5.8%	9.6%	41.9%	37.1%	3.99	1.1
Overall mean score						3.274	

SD-Strongly Disagree, D- Disagree, N-Neutral, A-Agree, SA-Strongly Agree

4.5 Inferential statistics

This section contains the results of the multiple regression model, the test of hypotheses, and the diagnostic tests. These tests were carried out to ensure that the results obtained were reliable in predicting the effect of knowledge management practices on secondary school teacher performance.

4.5.1 Diagnostic Tests

The tests conducted by the study included normality test, linearity test, multicollinearity test and homogeneity test.

4.5.1.1 Normality test

The Shapiro-Wilk test was used in the study to determine whether the data was normally distributed, as recommended by Field (2013). All variables had p-values greater than 0.05, according to the results shown in Table 4.9. As a result, the data conformed to the regression assumption of normal distribution.

Table 4.8 Tests of Normality

Tests of Normality	Shapiro-Wilk Statistic	df	Sig.
Knowledge Acquisition Score	0.905	313	0.120
Knowledge Conversion Score	0.973	313	0.098
Knowledge Application Score	0.949	313	0.067
Human Capital Development Score	0.957	313	0.077
School Culture Score	0.734	313	0.109
Teacher Performance Score	0.963	313	0.193

a Lilliefors Significance Correction

4.5.1.2 Linearity test

Pearson's correlation coefficient was used to test for linearity. The correlation between knowledge acquisition and teacher performance was $r= 0.705$, $p=0.000$, implying that a linear relationship existed. The correlation between knowledge conversion and teacher performance was $r= 0.730$, $p=0.000$, and the correlation between knowledge application and teacher performance was $r= 0.730$, $p=0.000$. The finding implied that knowledge management practices had a linear relationship with teacher performance.

The study findings supported Markus's (2019) findings that knowledge acquisition improves firm performance. The findings also agreed with Gómez and Manzanares (2011), who discovered significant differences in KMS implementation and conception, as well as significant relationships between some firms' performance and their efficiency in knowledge transmission and application.

Table 4.9 Correlation matrix for Linearity testing

		KA	KC	KAPP	HCD	SC	TP
Knowledge Acquisition (KA)	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	313					
Knowledge Conversion (KC)	Pearson Correlation	.561**	1				
	Sig. (2-tailed)	0.000					
	N	313	313				
Knowledge Application (KAPP)	Pearson Correlation	.569**	.578**	1			
	Sig. (2-tailed)	0.000	0.000				
	N	313	313	313			
Human Capital Development (HCD)	Pearson Correlation	.527**	.581**	.563**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
	N	313	313	313	313		
School Culture (SC)	Pearson Correlation	.553**	.572**	.534**	.552**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
	N	313	313	313	313	313	
Teacher Performance (TP)	Pearson Correlation	.705**	.730**	.730**	.660**	.724**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	313	313	313	313	313	313

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

4.5.1.3 Test for Homogeneity

Levene test was used in this study to check for homoscedasticity as recommended by Field (2013). The results showed that all variables had a p-value greater than 0.05, implying that the study accepted the null hypothesis that data was homoscedastic, and thus this assumption was met. Vynck (2017) supports these findings by claiming that ignoring the presence of heteroscedasticity by fitting ordinary least squares regression models (a method that assumes homoscedasticity) results in inefficient regression parameter estimators as well as a biased and inconsistent covariance matrix estimator.

Table 4.10: Test of Homogeneity of Variances

Test of Homogeneity of Variances	Levene Statistic	Sig.
Knowledge Acquisition Score	1.751	0.099
Knowledge Conversion Score	0.002	0.961
Knowledge Application Score	0.105	0.746
Human Capital Development Score	1.051	0.154
School Culture Score	1.911	0.090

Source: Researcher (2020)

4.5.1.4 Multicollinearity test

Variance inflation factor (VIF) was used in the study to test for multicollinearity. VIF 10 is the threshold. Table 4.12 shows that there was no risk of multicollinearity because all of the variables had VIFs less than 10. According to Poole and O'Farrell (1971), if the multicollinearity assumption is not met, the individual regression model fails. The coefficients for each variable are not known.

Table 4.11 Collinearity Statistics

	Collinearity Statistics	
	Tolerance	VIF
Knowledge Acquisition Score	0.543	1.841
Knowledge Conversion Score	0.504	1.985
Knowledge Application Score	0.526	1.901
Human Capital Development Score	0.537	1.863
School Culture Score	0.544	1.839

a Dependent Variable: Teacher Performance Score

4.5.2 Test of Hypotheses

The study used multivariate regression analysis to test the hypotheses as suggested by Field (2013). The model fitted in table 4.13 had a R Square =0.731, indicating that knowledge management practices explained 73.1% of the variation in teacher performance.

Table 4.12: Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.855a	0.731	0.728		0.42122

a Predictors: (Constant), Knowledge Application Score, Knowledge Acquisition Score, Knowledge Conversion Score

The ANOVA results in Table 4.14 of the model fit to test the effect of knowledge management practices on teacher performance show f-statistics =279.895, p-value =0.000. These findings demonstrated that knowledge management practices accounted for teacher performance.

Table 4.13: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148.981	3	49.66	279.895	.000b
	Residual	54.824	309	0.177		
	Total	203.805	312			

a Dependent Variable: Teacher Performance Score

b Predictors: (Constant), Knowledge Application Score, Knowledge Acquisition Score, Knowledge Conversion Score

Table 4.14: Regression Coefficients

	Unstandardized Coefficients	Standardized Coefficients		95.0% Confidence Interval for B	
β	Std.	Beta	t	Sig.	
				Lower	Upper

	Error					Bound	Bound
(Constant)	0.3430	0.125		2.742	0.006	0.097	0.588
Knowledge Acquisition							
Score	0.2550	0.032	0.306	7.993	0.000	0.192	0.318
Knowledge Conversion							
Score	0.3330	0.036	0.357	9.254	0.000	0.262	0.404
Knowledge Application							
Score	0.3300	0.037	0.349	9.001	0.000	0.258	0.402

a Dependent Variable: TeacherPerformanceScore

The optimal model therefore became;

$$Y = \beta_0 + \beta_1 KQ + \beta_2 KC + \beta_3 KA + e$$

Where,

Y = Teacher performance

β_0 = coefficient

KQ = Knowledge Acquisition

KC= Knowledge Conversion

KA = Knowledge Application

e= Error term

4.5.2.1 Hypothesis One: Knowledge Acquisition and Teacher Performance

The coefficient for knowledge acquisition was =0.2550, p=0.0000.05, according to the results in Table 4.15. The results show that knowledge acquisition significantly predicted teacher performance, with an increase in knowledge acquisition resulting in a 0.2550unit increase in teacher performance in public secondary schools. The study rejected hypothesis one based on

these findings. This support Markus (2019) and Papa (2018) that knowledge acquisition positively affects firm performance.

4.5.2.2 Hypothesis Two: Knowledge Conversion and Teacher Performance

The coefficient for knowledge conversion was $\beta=0.3330$, $p=0.000<0.05$, according to the results in Table 4.15. According to the findings, knowledge conversion predicted teacher performance. The finding implied that increasing knowledge conversion would result in a 0.3330 unit increase in teacher performance. The findings of the study did not agree with those of Muhammad, Usman, and Tehreem (2018), who discovered no positive impact of knowledge conversion and protection on firm performance and employee creativity, but they are supportive processes. On the other hand, the study finding supported Xihyu (2018) result that internalisation, externalisation, combination and socialisation of knowledge promote knowledge acquisition by all and translate to improved performance.

4.5.2.3 Hypothesis Three: Knowledge Application and Teacher Performance

The coefficient for knowledge application was $\beta=0.3300$, $p=0.000<0.05$, according to the results in Table 4.15. According to the findings, knowledge application predicted teacher performance. The finding implied that increasing knowledge application would result in a 0.3300unit increase in teacher performance. This supports Mohammed and Noufou's (2018) findings that knowledge sharing and utilization have a positive effect on organizational commitment. Similarly, the findings back up Kombo's (2015) claim that knowledge application has a positive and significant impact on firms' innovation activities.

4.5.2.4 Mediating effect of human capital influence on the relationship between knowledge management practices and teacher performance

The fourth hypothesis was estimated in four-step approach as recommended by Field (2009).

Step One: KMP Composite Predicting Teacher Performance

First model was estimated as the base model to determine the relationship between the dependent variable; teacher performance and the independent variables. Step one results show that the KMP composite had a coefficient of $\beta = 0.911$, $p=0.000$. The results show that the KMP composite predicted teacher performance, indicating that there is a significant relationship that is mediated by human capital development. The first condition for total mediation was therefore achieved in Step one.

Table 4.16 Step One: KMP Composite Predicting Teacher Performance

		Unstandardized Coefficients		Standardized Coefficients		95.0% Confidence Interval for B		
		β	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
Coefficients	(Constant)	0.375	0.123		3.035	0.003	0.132	0.617
	KMP Composite	0.911	0.032	0.854	28.905	0.000	0.849	0.973
Model Summary								
	R	.854a						
	R Square	0.729						
	Adjusted R Square	0.728						
	Std. Error of the Estimate	0.42162						
ANOVA								
	F-statistics	835.492						
	Sig.	.000b						

a Dependent Variable: Teacher Performance Score

Step Two: KMP Composite Predicting Human Capital Development

The second model was fitted to test whether Independent variable (KMP composite) predicted the mediating variable. The results show that KMP had a coefficient $\beta = 0.864$, $p=0.000$ which implied the KMP significantly predicted Human capital development. Hence the second condition for mediation was achieved.

Table 4.17 Step Two: KMP Composite Predicting Human Capital Development

Model		Unstandardized		Standardized		95.0% Confidence		
		Coefficients		Coefficients		Interval for B		
		β	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
Coefficients	(Constant)	0.431	0.22		1.962	0.051	-0.001	0.863
	KMP Composite	0.864	0.056	0.658	15.408	0.000	0.754	0.975
Model Summary		R	.658a					
	R Square		0.433					
	Adjusted R Square		0.431					
	Std. Error of the Estimate		0.75038					
ANOVA		F-Statistics	237.42					
	Sig.		.000b					

a Dependent Variable: Human Capital Development Score

Step Three: Human Capital Development Predicting Teacher Performance

The third model involved testing whether the mediating variable significantly predicted dependent variable. The results show a coefficient $\beta = 0.537$, $p=0.000$ which implied that human capital development significantly predicted teacher performance. Hence the third

criterion for total mediation was not achieved. Therefore, human capital development could only partially mediate the link between KMP and teacher performance since it was also a significant predictor variables of teacher performance.

Table 4.18 Step Three: Human Capital Development Predicting Teacher Performance

Model		Unstandardized		Standardized		95.0% Confidence Interval for B		
		Coefficients	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
Coefficients	(Constant)	1.861	0.134		13.868	0.000	1.597	2.125
	HCD Score	0.537	0.035	0.66	15.513	0.000	0.469	0.605
Model Summary		R	.660a					
		R Square	0.436					
		Adjusted R Square	0.434					
		Std. Error of the Estimate	0.60782					
ANOVAa		F-Statistics	240.659					
		Sig.	.000b					

a Dependent Variable: Teacher Performance Score

Step Four: KMP Composite and Human Capital Development Predicting Teacher Performance

The final step in the mediation test was to fit a regression model with an independent variable (KMP) and a mediating variable (human capital development) that predicted the dependent variable (teacher performance). According to the findings, the KMP composite had a coefficient of $\beta = 0.789$, $p=0.000$, which was significant at 5%. The findings implied that

KMP composite significantly predicted teacher performance in presence of the mediating variable. The results also show that development of human capital had a coefficient $\beta = 0.142$, $p=0.000$, implying that development of human capital partially mediated the link between KMP and teacher performance in Murang'a secondary schools.

Table 4.19 Step Four: KMP Composite and Human Capital Development Predicting Teacher Performance

		Unstandardized		Standardized			95.0% Confidence	
		Coefficients		Coefficients			Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
Coefficients	(Constant)	0.314	0.12		2.605	0.010	0.077	0.55
	KMP Composite	0.789	0.041	0.739	19.44	0.000	0.709	0.869
	HCD Score	0.142	0.031	0.174	4.584	0.000	0.081	0.202
Model								
Summary	R	0.864						
	R Square	0.746						
	Adjusted R Square	0.744						
	Std. Error of the Estimate	0.40868						
ANOVA	F-Statistics	455.128						
	Sig.	.000b						

a Dependent Variable: Teacher Performance Score

The study therefore rejected the null hypothesis. The study finding supports those of Venkitachalam (2013) that human capital development positively influence performance. The finding also supports Xioju, (2018) who indicated positively significant relationships human capital development and teacher performance.

4.6.2.5 Moderating effect of school culture on the relationship between knowledge management practices and teacher performance

The fifth hypothesis was tested in two models. The first model estimated school culture (SC) as an explanatory variable. The second model included fitting a regression model with independent variable, moderating variable and the interaction model as explanatory variables of teacher performance.

Step One: KMP and School Culture Predicting Teacher Performance

The results of the step one test for the moderating effect of school culture on the relationship between KMP and teacher performance are presented in Table 4.20. The results show that KMP had a coefficient $\beta = 0.709$, $p = 0.000$, indicating that it was significant, and school culture had a coefficient $\beta = 0.249$, $p = 0.000$, indicating that it was significant. The findings indicated that, in addition to being a moderating variable, school culture was a predictor variable of teacher performance.

Table 4.20 Step One: Test for moderating effect of school culture

Model		Unstandardized		Standardized		95.0% Confidence		
		Coefficients		Coefficients		Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
Coefficients	(Constant)	0.204	0.114		1.787	0.075	-0.021	0.428
	KMP Composite	0.709	0.038	0.664	18.693	0.000	0.634	0.783
	School Culture Score	0.249	0.031	0.29	8.154	0.000	0.189	0.309
Model Summary	R	.881a						
	R-Square	0.777						
	Adjusted R-Square	0.775						
	Std. Error of the Estimate	0.3832						
ANOVA	F-Statistics	538.962						
	Sig.	0.000						

a Dependent Variable: TeacherPerformanceScore

b Predictors: (Constant), School Culture Score, KMP Composite

Step Two: KMP, School Culture and KMP*SC Predicting Teacher Performance

The second model, include KMP, school culture and KMP*SC as explanatory variables. The results show that KMP ($\beta=1.400$, $p=0.000$), school culture ($\beta=0.978$, $p=0.000$), was significant in the second model. This also demonstrates that the interaction variable KMP*SC had a coefficient $\beta =0.191$, $p=0.000$, and was statistically significant at 5%. The findings concluded that school culture moderated the relationship between KMP and teacher performance significantly. The study's findings supported those of Maharuddin (2015), who found that organizational culture influenced local governance performance. As a result, the null hypothesis was rejected in the study.

Table 4.21 Step Two: Test for moderating effect of school culture

Model		Unstandardized		Standardized			95.0% Confidence	
		Coefficients		Coefficients			Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
Coefficients	(Constant)	2.349	0.529		4.437	0.000	-3.39	3.307
	KMP Composite	1.400	0.145	1.311	9.662	0.000	1.115	1.685
	School Culture	0.978	0.151	1.139	6.484	0.000	0.681	1.275
	KMP*SC	0.191	0.039	1.37	4.93	0.000	-0.267	0.215
Model Summary								
	R	.890a						
	R Square	0.793						
	Adjusted R Square	0.791						
	Std. Error of the Estimate	0.36956						
ANOVA								
	F-Statistics	394.416						
	Sig.	.000b						

Dependent Variable: Teacher Performance Score

Table 4.22: Overall Summary of Test of Hypotheses

Hypothesis	Analysis Results	Decision
H₀₁ : There is no significant effect of knowledge acquisition on teacher performance in public secondary schools in Murang'a County, Kenya	$\beta=0.2550, p=0.000<0.05$	Reject H ₀₁
H₀₂ : There is no significant effect of knowledge conversion on teacher performance in public secondary schools in Murang'a County, Kenya	$\beta=0.3330, p=0.000<0.05$	Reject H ₀₂
H₀₃ : There is no significant effect of knowledge application on teacher performance in public secondary schools in Murang'a County, Kenya	$\beta=0.3330, p=0.000<0.05$	Reject H ₀₃
H₀₄ There is no significant mediating effect of human capital development on the link between knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya	Partial Mediation Achieved	Reject H ₀₄

Hypothesis	Analysis Results	Decision
H ₀₅ : There is no significant moderating effect of school culture on the link between knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya	$\beta=0.191, p=0.000 <0.05$	Reject H ₀₅

Source: Researcher (2020)

Table 4.22 shows that knowledge acquisition, knowledge conversion and knowledge application had a significant effect on teacher performance with $\beta=0.2550, p=0.000 <0.05$, $\beta=0.3330, p=0.000 <0.05$ and $\beta=0.3330, p=0.000 <0.05$ at 0.05 significant level respectively. Human capital development had a partial mediation effect while school culture moderated the relationship that existed between practices of knowledge management and that of teacher performance. . As a result, the null hypothesis was rejected because $\beta=0.191, p=0.000 <0.05$.

4.7: Analysis of Qualitative Data.

In order to gather additional information about the study variables, open-ended questions were used in the study. Content analysis was used to examine these questions. The qualitative data was categorized into five themes based on the study objectives.

4.7.1 Theme One: Knowledge Acquisition

Respondents were asked to describe how they learned in the schools they attended. The result showed that teachers were using the methodology of teaching they acquired during training. Newly recruited science teachers were attending SMASSE to polish their skills. Respondents were asked of what needs to be done to improve knowledge acquisition. Their recommendation was for allocation of more resources to facilitate teachers' training.

4.7.2.Theme Two: Knowledge Conversion

Respondents were asked to state the efforts that were taken by their schools to convert the acquired knowledge. The results showed that most of the schools never converted individual knowledge to institutional knowledge.

4.7.3.Theme Three: Knowledge Application

Respondents were asked to mention how knowledge application was important in their school. The result showed that biometric clocking –in and –out system discouraged absenteeism of teachers and other support staff. Majority of the schools had installed CCTV systems to monitor service delivery in the school.

4.7.4. Theme Four: Human Capital Development

Respondents were asked on what should be done to improve teachers knowledge. The result showed that given a chance, they would attend seminars, workshops and in-service training in order to improve their skills as well as integrating emerging issues in teaching.

4.7.5.Theme Five: School Culture

Respondents were asked to state how the school culture facilitated teacher performance. The results showed that school cultures should be all inclusive and should be learner centered in order to enhance performance. In addition, schools had a suggestion box as recommended by the Ministry of Education to facilitate information sharing by the learners. Respondents recommended both intrinsic and extrinsic motivation in a bid to improve their performance

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section includes a summary of the findings, a conclusion, and recommendations based on the study findings. Based on specific research findings, the study presented a summary of the findings. According to the research findings, the study reached conclusions and made recommendations. The chapter goes on to present policy recommendations, the contribution of the findings to the body of knowledge, and finally areas for future research.

5.2 Summary

Regression analysis revealed that knowledge acquisition predicted teacher performance. Knowledge conversion significantly predicted teacher performance in Murang'a County secondary schools. According to the findings, knowledge application resulted in improved teacher performance.

The descriptive findings also revealed that human capital development mediated the relationship between KMP and teacher performance in part. According to the findings of the study, school culture significantly moderated the relationship between KMP and teacher performance. As a result, the null hypotheses were rejected in the study.

5.3 Conclusion

The study concluded that knowledge acquisition through knowledge audit, bench marking, discussion forums and social network for teachers increase their knowledge which translates to improved performance. Secondly, knowledge conversions through combination, socialisation, externalisation and internalisation have a positive effect on teacher performance. This is because, it presents knowledge in understandable form that make it accessible by all stakeholders.

Thirdly, human resource management systems, decision making and E- learning had a positive influence on teacher performance in secondary schools. The study further concluded that lack of knowledge management practices among secondary schools in Kenya significantly contributed to low teacher performance.

The study also concluded that human capital development significantly enhanced teacher's performance in secondary schools in Murang'a. Teachers that are frequently trained update their knowledge which increases their chances of adopting knowledge management practices hence improving their performance. The study finally concluded that school culture plays a critical role in providing a favourable environment for teachers to adopt knowledge management practices which significantly improve their performance.

5.4 Policy Implications and Recommendations

This study recommended that secondary school stakeholders such as school management, TSC, and the ministry of education at both the county and national levels adopt strategies to improve the extent of knowledge management practices (knowledge acquisition, conversion, and application) in Kenyan secondary schools. The study also suggests that secondary school teachers be educated on the importance of implementing knowledge management practices in order to improve the performance of their respective schools. The ministry of education and the TSC should develop policies to ensure that teachers in secondary schools use knowledge management practices that significantly improve school performance.

5.5 The Study's contribution to Knowledge

The study empirically tested the relationship between knowledge management practices and secondary school teacher performance in Murang'a County. The study also demonstrated empirically that human capital development mediates the relationship between knowledge management practices and teacher performance in secondary schools. Finally, the study provided empirical evidence that school culture played a role in the relationship between knowledge management practices and secondary school teacher performance.

5.6 Areas for Further Research

According to this study, knowledge management practices accounted for 73.1% of teacher performance in Kenyan secondary schools. To bridge the conceptual gaps, future research should focus on factors that account for the remaining variation in secondary teacher performance. Similarly, while this study was conducted in Murang'a County, future research should focus on other areas to fill contextual gaps.

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APPENDICES

Appendix I: Introduction letter

ROSEMARY NDUTA GAKURU,

Kenyatta University,

School of Business,

P.O Box 43844 – 00100,

Nairobi –Kenya.

Email: gakuru925@gmail.com

28thOctober, 2020

Dear Sir/Madam,

Re: Data collecting questionnaire for research.

I am a Kenyatta University Business School student pursuing a DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION degree (HUMAN RESOURCE MANAGEMENT OPTION). I'm working on a thesis titled "Knowledge Management Practices and Teacher Performance in Murang'a County, Kenya."

In order to accomplish this goal, I respectfully request that you complete the enclosed study questionnaire for data collection. The information provided will be used solely for academic purposes and will be kept strictly confidential.

Yours sincerely,

Rosemary Nduta Gakuru (Adm. No. D86/CTY/30727/2015)

Mobile Number: 0720262947

Appendix II: Questionnaire

(To be filled by the respondents)

Email id: **gakuru925@gmail.com**

Mobile No: 0720262947

The goal of this questionnaire is to gather information about "knowledge management practices and teacher performance in public secondary schools in Murang'a County, Kenya."

Please answer all of the questions on this questionnaire.

Instructions: Give only one response per item

SECTION A: Background Information

1. Kindly indicate your gender.

Male

Female

2. Age bracket (**Tick as appropriate**)

Below 21

21 – 30

31 – 40

41 – 50

Above 50

3. For how long have you worked in this school? (**Tick as appropriate**)

5 years and below

6-10 years

11-15 years

16 years and above

4. What is your position in this school? (**Tick as appropriate**)

Principal

Deputy principal

Head of Department

Assistant teacher []

5. Indicate your level of education? (**Tick as appropriate**)

Diploma []

Degree []

Postgraduate []

Others (Specify)

6. Sub-county.....

Section B: Knowledge Management Practices

Kindly respond to the following statements as appropriate. Tick only one response

Knowledge Acquisition

Statement	Strongly Disagree	Disagree	Neutra l	Agree	Strong ly agree
1. I conduct lesson observation on termly basis.					
2. My strengths and weaknesses in teaching are discussed and marks awarded.					
3. There are set benchmarking days in the school programme every year.					
4. All teachers are involved in bench marking					
5. I attend open discussion forums in school.					
6. Open discussion forums are regularly held in school.					
7. I am a member of all social network in my subject where we exchange ideas					

8. I receive all official communications through a social network in my school					
--	--	--	--	--	--

9. How is knowledge acquired in this school?

10. What do you think needs to be done so that teachers can acquire knowledge?

Knowledge Conversion

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. I attend all school meetings because knowledge is disseminated through briefs.					
12. I have a record of all meetings held in school.					
14. My school converts expert knowledge in simple form.					
15. My school allows interaction of teachers with the students.					
16. I apply concepts and methods that I have learned through doing.					
17. I copy the teaching methodology used by other teachers in my department.					
18. My school invest in teaching manuals to get updates.					
19. I read all the publications in my school in search of knowledge					

20. What efforts are made to convert individual teacher’s knowledge to school’s knowledge in your school?

Knowledge application

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. My school has adopted systems of managing teachers.					
22. Problems are solved in my school without biasness					
23. I am involved whenever there is a problem to be solved in my school					
24. I integrate ICT in teaching					
25. There are enough IT resources in my school to support teaching and learning					
26. Softwares are available in all subjects					
27. IT helps me to become creative in my subject areas					

28. How is knowledge application important in your school?

29. Is there continuous improvement in service delivery as a result of application of knowledge management practices in your school?

SECTION C: HUMAN CAPITAL DEVELOPMENT

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
30. My employer conduct training need assessment regularly					
31. My school conduct induction training to orient new teachers to the system					
32. The training forums I attend adds new knowledge					
33. My teaching experience has enhanced my performance					
34. Experience helps me to meet deadlines.					

35. What do you think needs to be done to develop human capital in your school

SECTION D: SCHOOL CULTURE

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
36. Communication channels are open to all teachers in my school.					
37. Students air their views without fear of being					

reprimanded.					
38. Teachers work as a team					
39. We conduct team teaching in the school					
40. Teachers are engaged in decision making in my school.					
41. Teachers are recognised and highly valued in my school					

42. How is your school culture in terms of improving teacher performance?

43. What do you think should be done as far as your school culture is concerned?

SECTION E: TEACHER PERFORMANCE

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
44. I am happy with my salary.					
45. Rate of teacher absenteeism is low in my school.					
46. My school experiences high rate of teacher turnover					
47. I am concerned about the academic performance of all students.					
48. I perform my duties on time					
49. There is a channel for receiving student response about services delivery in my school.					
50. I am comfortable with the working conditions in my school					
51. I follow the laid down school program in performance of duties					
52. Teacher's knowledge in my					

school leads to improved academic performance of learners					
53. Teacher's knowledge in co-curriculum activities in my school leads to improved co-curriculum performance					

54. Do students in your school complain about quality of teaching to the administrators?

55. According to you, what should be done to improve performance of teachers?

I appreciate your support

Appendix V: Research Approval from Graduate School



KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 30th November, 2020

TO: Rosemary N. Gakuru
C/o Department of Business Administration
KENYATTA UNIVERSITY

REF: D86/CTY/30727/15

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that the Graduate School Board at its meeting 18th November, 2020 approved your Ph.D. Research Proposal entitled "Knowledge Management Practices and Teacher Performance in Public Secondary Schools in Murang'a County, Kenya".

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking and Progress Report Forms. The Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you,

A handwritten signature in black ink, appearing to read 'RUBEN MURIUKI'.

RUBEN MURIUKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Department of Business Administration
Registrar (Academic) Att; Mr. Richard Chweya

Supervisors:

1. Dr. Jedidah Muli
C/o Department of Business Administration
KENYATTA UNIVERSITY
2. Dr. Rosemarie Wanyoike
C/o Department of Business Administration
KENYATTA UNIVERSITY

RM/cao

Appendix VI: Research Authorization from Graduate School



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: D86/CTY/30727/15

Date: 30th November, 2020

The Director General,
National Commission for Science, Technology & Innovation,
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR ROSEMARY N. GAKURU-REG. NO. D86/CTY/30727/15

I write to introduce Gakuru who is a Postgraduate Student of this University. The student is registered for a Ph.D. degree programme in the Department of Environmental Science & Education in the School of Environmental Studies.

Gakuru intends to conduct research for Ph.D. thesis entitled, "Knowledge Management Practices and Teacher Performance in Public Secondary Schools in Murang'a County, Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'E. Kimani', written over a printed name.

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

RM/cao

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
5. The License does not give authority to transfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one year of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

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