

**UTILIZATION OF INFORMATION, COMMUNICATION and  
TECHNOLOGY AND ITS INFLUENCE ON FINANCIAL MANAGEMENT  
IN PUBLIC SECONDARY SCHOOL IN MACHAKOS COUNTY, KENYA**

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**E55/CE/28188/2018**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS OF  
EDUCATION (EDUCATIONAL ADMINISTRATION) IN THE SCHOOL OF  
EDUCATION AND LIFELONG LEARNING OF  
KENYATTA UNIVERSITY**

**MAY 2024**

## DECLARATION

I declare that this thesis is my original work and has not been presented in any other University/Institution for certification. This thesis has been complemented by referenced sources duly acknowledged. Where text, data, graphics, pictures, or tables have been borrowed from other sources, including the internet, the sources are specifically accredited in accordance with anti-plagiarism regulations.

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## **DEDICATION**

I dedicate this work to my loving parents for their moral and financial support.

May God bless them.

## **ACKNOWLEDGEMENT**

I am grateful to Almighty God for being my guide and provider in this research. I sincerely appreciate my supervisors Dr. Daniel Otieno and Dr. Gladys Kinyanjui for your valuable advice and guidance throughout this work, May God bless you. I also thank my parents for their endless support. Finally, I acknowledge my friend, Friday Nanjala, for your motivation and words of encouragement in the whole process of writing the research study.

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## **ABBREVIATION AND ACRONYMNS**

|         |   |   |
|---------|---|---|
| BOM     | : | Board of Management   |
| DV      | : | Dependent Variable  |
| ICT     | : | Information and Communication Technology                        |
| IV      | : | Independent Variable  |
| OECD    | : | Organizing for Economic Co-operation and Development            |
| TAM     | : | Technological Acceptance Model                                  |
| UNESCAP | : | United Nations Economic Social Commission from Asia and Pacific |

## ABSTRACT

Many organizations have adopted ICT to perform their daily activities. In educational institution, ICT is greatly used with aim that it will lead to better performance of the institution. However, this has not been the case as some of the initial problems are still experienced today. The purpose of this study was to examine utilization of ICT and its influence in financial management in public secondary schools in Machakos County. The objectives of this study were: To determine principal access to ICT infrastructure and its influence on financial management, determine principals knowledge on utilization of ICT and its influence in management of finance, determine principals perception towards utilization of ICT and its influence on financial management and also determine principals ICT competency and its influence on financial management. The study was guided by the theory of Technological Acceptance Model the study adopted descriptive research design, questionnaires and interview schedules were used to collect data. The study targeted 66 respondents which constitute 33 principals and 33 bursars. Purposive sampling technique was used to select the sample. Cronbach`s coefficient alpha was used to test reliability, coefficient of 0.7 or over was assumed to reflect internal reliability of the instruments while validity of research instruments was determined through consultation with experts. The data was analyzed using descriptive and inferential statistics. Statistical packages for social science (SPSS V22) was used for analysis. Frequencies, percentages, mean and standard deviation were used to analyze the data and tables, pie charts and bar graphs were used to present the data. Pearson`s Chi-square test was used to determine the influence of the independent variables on dependent variable. The study established that principal had access to basic ICT infrastructure, they had varying levels of knowledge and skills on ICT and these significantly influenced their use of ICT in financial management. Principals perception and competencies also influenced the way they utilised ICT in financial management. The study recommends that government through MOE to enhance wider access to ICT infrastructures in schools and principals to develop skills that will enable them utilize more of available ICT infrastructures.

## **CHAPTER ONE**

### **INTRODUCTION AND BACKGROUND**

#### **1.1 Introduction**

This chapter consists of background of study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitation of the study, theoretical framework, conceptual framework and operational definition of terms.

#### **1.2 Background of the Study**

ICT is a technological tool and resource used to transmit, store, share and exchange information (UNESCO 2020). Across the world, ICT is increasingly used in schools to carry out different tasks. Many countries regard understanding ICT and mastering its basic skills and concepts as part of core to education. The expansion of ICT to educational institution has come mainly to enhance effectiveness of management and academic performance of the schools (AI-Qahtani & Haggins, 2012). Information and Communication Technology contribute to universal access of education, deliverance of quality learning and teaching and enhanced educational management, administration and governance when right mix of policies, capacities and technologies are put in place.

ICT has become useful in storing and analyzing data in school financial management. Panday (2010) defines financial management 'as the act concerned with planning and controlling institution financial resources. All institution decisions are made in tandem with financial resources available and therefore the performance of the institution is largely depended on the way finances are managed. Adoption of ICT in management of school finance cannot be neglected because of its ability to

control frauds, enhance accountability and reduce administrative costs (Ministry of Finance, 2010). Most schools are reluctant in utilizing ICT in financial management. Mostly, they use ICT in teaching and learning yet they would benefit more if they applied it in managing their finances.

The primary responsibility of management of secondary school finances remains under the principal (Thenga 2017). ICT assists principals to prepare budgets, manage facilities, procure and expend (Asuga and Eatt, 2016). A study by Muema (2021) revealed that, ICT assists in management of finances in a number of ways. It enhances accounting and budget control, It facilitates transactions and the use of money. It also reduces chances of loss of school funds through fraud. The study further showed that, ICT is necessary and the school principal plays a key role in effective utilization of ICT in financial management. According to ministry of finance (2015), utilization of ICT in financial management promotes good governance by providing school principals with financial information to formulate budgets. It also promotes transparency and accountability.

Felton (2016) points out that, competence is the key in the utilization of ICT by principals on daily basis. Competence in operating a computer and utilizing its software may improve the efficiency of administrative performance in school. According to Betz, (2020), utilization of ICT in schools in USA has been successful due to government support and availability of infrastructure. It is crucial for principals and bursars to have the competence to utilize ICT effectively and also have adequate knowledge of financial management dimensions of ICT in schools. Afshari (2014) in Turkey, principals have ICT competence to effectively use computers to perform their management responsibilities. Principals knowledge and

competence influences successful utilization of ICT in schools. (Syomwene, 2018). A study by Felton (2013) in USA on access of computer by school principal showed that 93.7% of school principals own a home computer, 92.9 % of principals used a desktop computer at the office. Personal digital management assistants were in hands of 25% of them and laptop computer were used by 40% of the principals. Therefore, computer access was not a problem for principals in USA.

Principal should have the competency to effectively use technology as a tool. Hopkins (2014) acknowledged that principals who have ICT competency can effectively enhance their management of school finances since they will efficiently use computer to assist in budgeting and accounting. . According Atieno and Simatwa (2012), many principals have acquired the ICT competencies required to effectively manage school finances through various training programs A study by Valerie (2015) in Germany showed that some perceive ICT as godsend due to its ability to support their management duties. According to Gbenga (2013) financial software assist bursars in their work in school. They use computer softwares to key in some transactions like procurements, fee payments and payrolls. Julius, Sibanda and Mathwasa (2020) stated that school bursars are custodians of school finances. They are responsible for receipting, recording and balancing books of accounts.

A study by Quest (2014) in Namibia revealed that principals perceived ICT has very important in management of school finance and supported its implementation in school. According to Francis (2015) school principals had access to ICT infrastructure in Tanzania which they used to manage the school finances. He also observed that school principals used finance server to store finance data and recommended the Ministry of Education to provide integrated financial management

system in schools to improve financial management. A study by Gurhu, Jita and Moruf (2021) in Zimbabwe points out that principals ICT knowledge influences their ability to utilize ICT facilities. The more the principal knowledge the higher the ability to utilize ICT in management practices. In Tunisia principals belief that inadequate ICT knowledge is the main challenge affecting utilization of ICT in financial management (Pelgrum &law 2013)

In Kenya, public secondary schools are funded by the government through free secondary education funds. These funds are then controlled by school principal and Board of Management (GOK, 2013). The BOM ensures effective utilization while the school principals are given overall role to manage the finances (MOE, 2012).The school principals are charged with responsibility of using the finance and preparing school budget on how to spend the fund. The Kenyan government has tried hard to implement the use of ICT in schools by availing ICT infrastructure. Utization of ICT in financial management can help in preparing payrolls, fee payment verification and procurement. According to Ngui (2014) several schools have acquired ICT infrastructure but few are using them to manage finance effectively.

Kenya has witnessed increased growth of ICT which has led to introduction of computer in schools to assist in administration, learning and teaching. A study by Nzwili (2017) showed that teachers and principals in Kitui had positive perception towards ICT. They perceived it as important tool in enhancing school performance. According to Mue (2014), most public secondary schools have embraced ICT in financial management and its mostly used in collection of school fees and in preparation of payrolls. According to Mbae (2014) in Machakos county various training programs were devolved to enable principals acquire the required

knowledge and competency to effectively utilize ICT to improve financial management. Despite the training, it is not yet known how effectively ICT is utilized to manage finances in Machakos County. Thus, this study examined utilization of ICT and its influence on financial management in public secondary school in Machakos County.

### **1.3 Statement of the Problem**

To improve financial management, schools should utilize ICT. Successful utilization of ICT in financial management enhances efficiency, transparency and accountability. According to information of Machakos County Education office majority of public secondary school have ICT infrastructures which are utilized in financial management. Nevertheless, despite the increase of ICT infrastructure in this county. Some studies revealed that school financial management are below average in Machakos county as cases of financial mismanagement are common among schools in this county.

Recently, the county Education Report showed that various training programme have been held to equip the principals with knowledge and competencies required to effectively utilize ICT in financial management and also change their perception toward ICT. In spite of the training, it's not yet known how principals are utilizing ICT and its influence in financial management. This calls for the need to investigate utilization of ICT and its influence on financial management in public secondary school in Machakos county.

#### **1.4 Purpose of the Study**

The purpose of this study was to examine the utilization of ICT and its influence on financial management in public secondary school in Machakos County.

#### **1.5 Objectives of the Study**

1. To determine principals' access to ICT infrastructure and its influence on financial management in public secondary school in Machakos county
2. To investigate principals' knowledge of information communication technologies and its influence on financial management in public secondary school in Machakos county
3. To find out principals percent towards use of ICT and its influence on financial management in public secondary school in Machakos county
4. To determine principals' ICT competencies and its influence on financial management in public secondary schools in Machakos county

#### **1.6 Research Questions**

1. How does principals' access to ICT infrastructure influence their financial management in public secondary school in Machakos County?
2. To what extent does principals' knowledge of information communication technology influence their financial management in public secondary school in Machakos County?
3. How does principals' perception towards utilization of ICT influence their financial management in public secondary school in Machakos County?
4. How do principals' ICT competencies influence their financial management in public secondary school in Machakos County?

### **1.7 Significance of the Study**

The findings from this study may be useful to a number of stakeholders in education such as school principals, Board of Management, ICT managers, MOE and parents.

It may help the school principal to understand how they can apply ICT effectively in their financial management and this will improve their standards of management.

It may help ICT managers in schools to identify ICT facilities which are not available yet core in supporting management and recommend them to be availed. It may enable the parents to understand role of ICT in management of finance in schools and be supporting in implementing ICT infrastructure required in school. It may help the Board of Management (BOM) to know the benefit of using ICT in financial management and support principals training in order to equip them with required knowledge and skills to utilize ICT effectively. This study maybe useful to Ministry of Education (MOE) in designing suitable training program to prepare principal for utilization of ICT in financial management.

### **1.8 Limitations of the Study**

The respondents were not be willing to divulge their confidential information due to fear that the response may be used against them but the researcher mitigated this by assuring them that the information will only be used for the purpose of the study.

The main respondent in this study is school principal who had busy schedule. The researchers mitigated this by booking appointment earlier with the principal on a specific date and time when he or she was available.

## **1.9 Delimitation of the Study**

This study confined itself to public secondary schools in Machakos county leaving out private schools since most public school do not like interfering with their school activities. Issues of ICT in education are broad but this study only focused on utilization of ICT in financial management in public secondary schools because there was a need for such study in Machakos County. The study limited itself to principals and bursars as the respondents because they mainly deal with issues of finances in school and have the necessary information required in the study.

## **1.10 Assumptions of the Study**

The study assumed that school principals and bursars are well equipped with ICT knowledge and skills. The study also assumed that ICT infrastructures were available, accessible and utilized in financial management tasks in all public secondary schools in Machakos County.

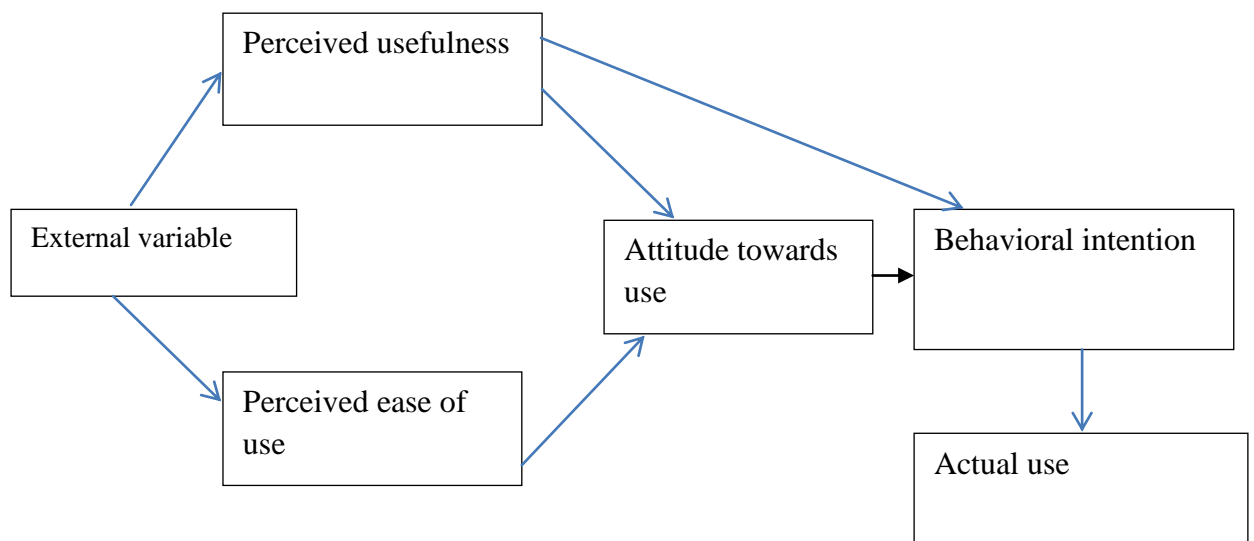
## **1.11 Theoretical Framework**

### **Technological Acceptance MODEL (TAM)**

This theory was developed by Fred Davis (1986). It explains more about prediction and acceptability of an information system and indicates modification that should be made to it so as to be accepted by the user. Davis points out that, for a system to be accepted by the user it must be;

- i Perceived usefulness. This is the extent at which one believes that utilization of information system will enhance his\her performance.
- ii Perceived ease of use: Extent at which one believes that system will be utilized with ease.

This model acknowledges that one's attitude towards use of a system influences behavioral intentions which determines how one utilizes the information system. . Davis argues that the ability of one to use a system is determined by her attitude and impact on her performance. According to Davis (1986), perceived ease of use also influences the attitude of a person through; self-efficacy and instrumentality. Perceived ease of use is directly proportional to users efficacy. It is also instrumental in sense that the users will use less effort and spare some effort to accomplish other tasks.



**Figure 1.1: TAM model**

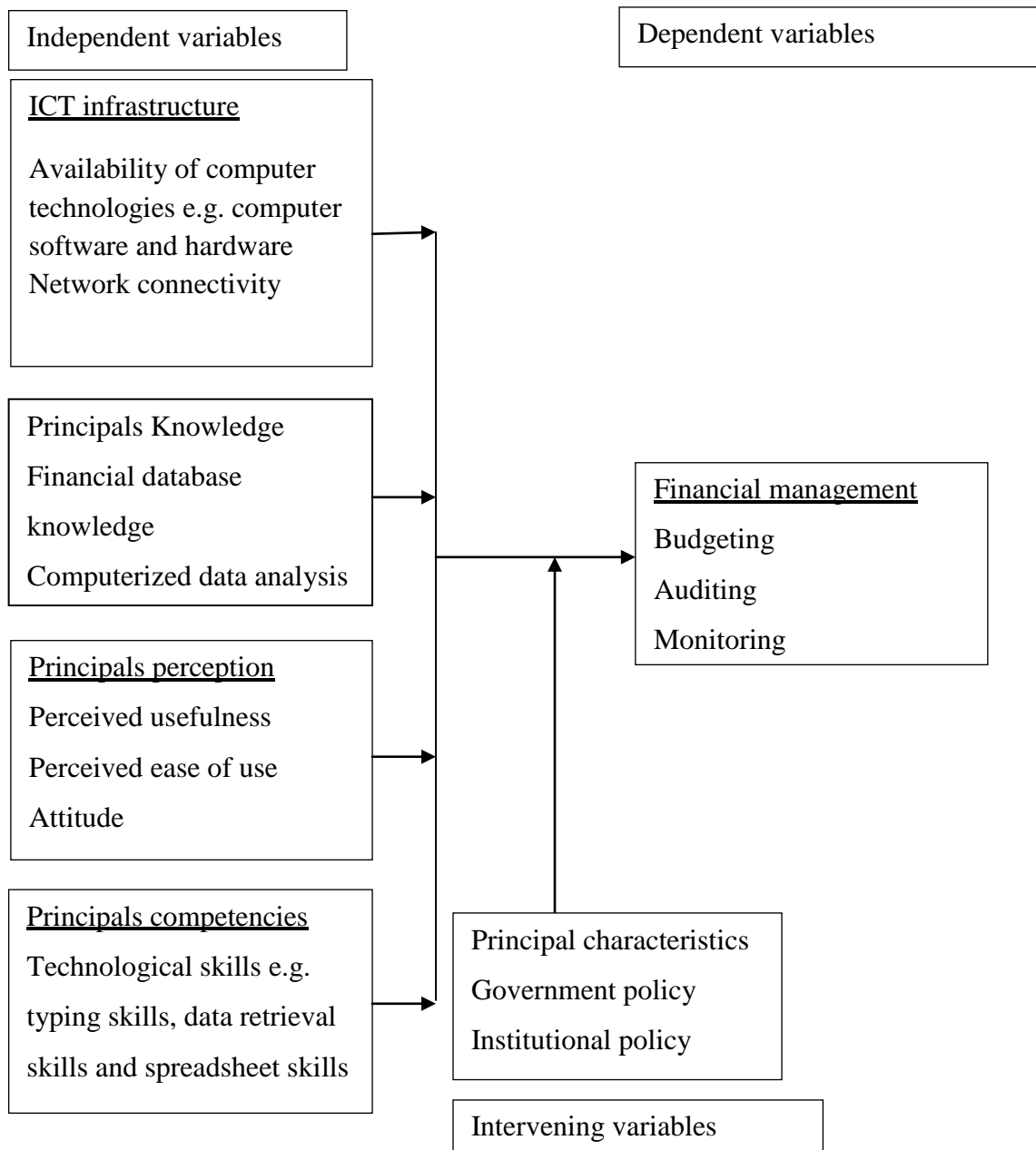
Source: Davis, Bagozz and Warshow (1989)

This theory is applicable in this study because the ability of a school to incorporate ICT in financial management mainly depends on school principals' perception about the technology. If the school principals perceive that ICT will be useful to their work and less effort will be needed, there is high chance that they are going to use ICT effectively to do their financial management tasks and this will lead to enhanced performance. On the other hand, if the principals perception about the technology is negative, they believe that it will be tiresome and cumbersome and will lead to low

standards of performance there is likelihood that they will not embrace it in their daily activities. Perhaps, this could be the reason why some of the school principals are still using manual method to manage school finance.

Davis also argues that for a system to be acceptable it must be perceived ease of use. Therefore, ease of use is a key factor in utilization of ICT. Once the principal perceive ICT to be ease of use, some may be encouraged to attend training programs in order to equip themselves with relevant knowledge and competency required to utilize ICT effectively to enhance financial management. This may also make them change their perception towards ICT.

## 1.12 Conceptual Framework



**Figure 1.2: Conceptual Framework on Utilization of ICT in Financial Management**

Source: Researcher

In this study, conceptual framework shows the relationship between the dependent variable which is influenced by the independent variables. Utilization of ICT in financial management is influenced by various independent variables. These independent variables include; Availability of ICT infrastructure which include computer hardware and software, principal knowledge, principal perception and principal competency which include technological skills such as typing skills, data retrieval skills and spread sheet skills. However, there exist some intervening variables which may hinder effective utilization of ICT in financial management such as principal characteristics, government policies and institutional policies. Availability of ICT infrastructure, Principal knowledge, competency and positive perception would have a positive influence in utilization of ICT in financial management.

### **1.13 Operational Definition of Terms**

**Access** - Opportunity to use ICT infrastructure in management of school finance

**Financial management** -This is safeguarding finances in school and ensuring that they are used properly as expected.

**Infrastructure** -These are ICT facilities available in school

**Perception-** The way principal belief about use of ICT in management of school finance.

**Principal** - a person with responsibility of managing school

**School** -An organization where teaching and learning take place

**Utilization** - Making use of Information and Communication Technology in financial management

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter consists of works of different scholars which is reviewed for the purpose of this study. It focuses on the following sections; Access to ICT infrastructure in management of school finance, principals ICT knowledge in management of school finance, perception towards use of ICT in management of school finance and principal competency on utilization of ICT in management of school finance.

#### **2.2 Concept of ICT**

ICT is technology that supports activities involving information. Such activities include gathering, processing, storing and presenting data. Increasingly these activities also involve collaboration and communication (Aladesusi et al., 2021). According to Unwin and Unwin (2017), information and communication refers to technologies that provide access to information through Telecommunication. It is similar to information technology but focuses primarily on communication technologies. Communication technology was also defined by Borgia (2014) as the physical devices and software that link various computer hardware components and transfer data from one physical location to another. ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters (Ratheeswari, 2018). This includes the internet, wireless network, Cell phone, and other communication medium. Aceto, Persicos and Pescapé (2018) defined ICT to

refer to a wide range of computerized technologies that enables communication and the electronic capturing, processing, and transmission of information.

ICT merges computing with high-speed communication link carrying data, sound and video (Aceto, Persico & Pescapé, 2019). It deals with the collection, storage, manipulation and transfer of information using electronic means. Businesses are able to interact and network more efficiently due to utilization of ICT (Antikainen, Uusitalo & Kivikytö-Reponen, 2018). Utilization of ICT in an organization saves time and allows efficient communication hence improving coordination of activities (Binuyo & Aregbeshola, 2014).

The tools utilized in ICT analysis are; databases, artificial intelligence, computer programs, programming languages, analysis and design methods. (Tarus, Niu & Mustafa, 2018). The ICT infrastructures comprise of internet, computer hardwares and softwares, laptops, data storage and security. These infrastructures ensures that information is stored, retrieved, manipulated and transmitted electronically (Abdullahi, Shehu & Usman, 2019).

ICT has long-standing influence in almost all areas of human activity. ICT is a critical tool in modern organization. Education can therefore not be left behind in the new development. Schools started using ICT in 1980's. Research shows that development and innovation in ICT will continue to be key in curriculum deliverance. According to Davies (2017) new technology will continue to affect delivery of curriculum in enhancing efficient and effective student teacher communication. ICT is transforming teaching and learning in the education sector.

ICT is influencing pedagogical approaches in classrooms. Its contribution to changes in teaching practice, research and school management is considerable. Kozma (2005) notes that ICT enhances students' performance in school and improves access to education. Teachers also get new pedagogical approaches and technical skills. Research conducted in United Kingdom show that utilization of ICT in education improves its quality and the rate of employability. ICT encourages innovation in education. By using technology, learners discover new information and ideas. Student use e-learning materials to meet diverse learning needs.

### **2.3 Access to ICT infrastructure in management of school finance**

In the 21<sup>st</sup> century, principals need to utilize ICT in management of school finance. Principals' access to ICT infrastructure is very crucial in schools. Successful implementation of ICT depends mainly on principals ability to utilise the available ICT Infrastructures. Makhanu and Kampers (2012) in their study investigated the relationship between principals' access to ICT and school performance. The study focused on the accessibility and usage of ICT among principals and its finding sact on school performance. A quantitative research design was adopted. The revealed that 42% of school principals had access to basic ICT infrastructure and principals access to ICT had a positive impact on school performance. This suggests that teachers and principals' access to ICT infrastructure determines how they utilize it in their school activities. Those with more access are likely to utilize it more than those with poor access.

Jacobsey (2013) conducted a study on students and teachers access and utilization of ICT in classroom and its effect on their motivation in urban and rural schools. The study revealed that both teachers and students had inadequate access to ICT. ICT

was accessed differently in both type of schools. Those in urban schools accessed ICT better than those in rural schools. ICT infrastructures had positive effect on motivating students and teachers among schools. However, though the study is quite informative, it only focused on application of ICT in teaching and learning yet it can be applied to carry out administrative task like management of school finance. This current study will focus on principal`s access to ICT infrastructure and influence in financial management.

Another study by Uyouko, Wang and Fauzi (2014) on ICT access among Nigerian teachers revealed that ICT infrastructures were inadequate though teachers believed that access to ICT infrastructure would facilitate effective teaching and learning. Most studies have revealed the influence of ICT infrastructure in teaching and learning. There is a need for a study to determine the influence of ICT infrastructure in management of school finance. The study was made in Nigeria among teachers but current study will be done in different locale that is Machakos County and the target population will be mainly the school principal.

Miranji (2017) carried out a study in Nairobi to find out how ICT was being utilized in management of school finances, the challenges faced during utilization and the effect it had on financial management performance of schools. Descriptive survey design was adopted and questionnaires were used to collect data among principals and bursars. The study established that the schools were utilizing ICT .Inadequate ICT infrastructure and poor internet connection were the challenges facing schools. The study also pointed out that utilization of ICT had a positive effect on financial management performance of schools.

Nyangau (2017) conducted a study in Kisii County to establish the influence of infrastructure on utilization of ICT in management of school finances. The study established that some challenges such as unavailability of ICT infrastructure, power outage and poor internet connectivity led to ineffective utilization of ICT. It was therefore, important to find out the Correlation of ICT infrastructure and management of finances among schools in Machakos County.

#### **2.4 Principal knowledge of ICT in management of school finances**

Knowledge is what someone is aware of, learns and understood. ICT knowledge is what one learned, aware of and understood about ICT infrastructure. ICT knowledge enables principals to apply ICT effectively in management task. Mailizar and lianghuo (2019) carried out research to establish mathematics teachers' knowledge of ICT and its use in teaching in Indonesia. The study adopted quantitative method and cross-sectional survey. The study showed that mathematics teachers did not use ICT in teaching and most had low level of ICT knowledge. However, this study is done among mathematics teachers who are few and cannot give an overview of all teachers' knowledge in ICT. ICT training differs in countries and ICT knowledge acquired could vary depending on training. The study was also done in Indonesia which is a different locale from Machakos County. Therefore, there is a need to investigate the level of principals' ICT knowledge in management of school finance in Machakos County.

A study by Kazoka and William (2016) examined secondary school teacher knowledge and practice towards the utilization of ICT. Objectives of the study were to determine the teacher knowledge on utilization of ICT in teaching and learning and find out their practices on use of ICT in classroom. Data was collected using

questionnaire, discussion and interview. Results indicated that ICT facilities were inadequate and most secondary school teachers lacked proper ICT knowledge of using ICT infrastructures in teaching and learning. There is possibility that, one can possess ICT knowledge but apply it differently in aspects of education. For instance, teachers can possess ICT knowledge and utilize it better in management tasks than in teaching and learning. Therefore, the current study will be different from this study because it will investigate utilization of ICT knowledge in management of school finance other than in teaching and learning.

Eremie and Agi (2020) investigated information and communication technology (ICT) skills and efficient management of educational resources in public secondary schools in Rivers State, Nigeria. The study adopted descriptive survey design. The 268 secondary school principals in Rivers State constituted the population. A sample of 255 principals, which was 95% of the population, was drawn through the stratified random sampling technique. A self-structured questionnaire titled: ICT Skills and Efficient Management of Educational Resources Questionnaire (ICTSEMERQ) was used for data collection. The study highlighted that storage, retrieval and ICT operating knowledge were the key skills required by principals. The study further established that these ICT skills enhanced efficient management of school resources through proper record keeping ,accounting and effective communication. However, the study was conducted in Nigeria while current study was conducted in Kenya as the educational policies and systems differ between the two countries.

Kimani, Njati and Omae (2022) examined how public day schools are managed through utilization of ICT in Kiambu County. The aims of the study was to establish

how each department in school was utilizing ICT and benefits derived from ICT integration. The study had 270 respondents. The findings were; the principals were not aware of the needs of utilizing ICT in management. However, the study only showed the extent of principals awareness which is connected with knowledge but did not assess how it influences financial management.

## **2.5 Perception towards utilization of ICT in financial management**

Perception is way something is regarded, interpreted and understood (Oxford University Press, 2017). Adoption of ICT in schools will depend on principal perception towards ICT. School principal perception is influenced by attitude, beliefs and opinions about ICT adoption in schools. If they perceive ICT as useful, then they implement it in their schools. A study by Quest (2014) on the principals' perception in secondary schools in Khomas education, Namibia. The aim of the survey was to investigate principals perception about ICT implementation in schools and assessing the type of ICT infrastructure available in schools. Qualitative study method was adopted. Study showed that principal's perception towards ICT was positive. The study further indicated that principals were ICT illiterate.

A survey by Eyelet and Mewcha (2015) on teachers' perception on utilizing ICT in classroom instruction in public secondary school used questionnaires to collect data among teachers. The results indicated that teachers perceived ICT as useful in classroom instruction and further pointed out that ICT hardware and software were not adequate and so many teachers were unable to use it. This study confined itself on utilization of ICT in teaching and learning and used questionnaires only to collect data, but the current study will focus on principals perception information utilization of ICT in management of school finance. The study will use more research

instruments which will assist in revealing more. Wahab (2018) conducted a study to determine teachers' perception of ICT integration as a pedagogic tool in classroom instructions in primary schools. A survey design was adopted. The research showed that teachers' perception of integrating ICT in instructions was positive as it enhanced teaching and learning making it more interesting and enjoyable. The study was carried out in primary schools which is different from secondary schools. Though use of ICT is perceived to have a positive effect in curriculum instruction, it is also crucial to establish influence it has on management of school finance. That is why the current study is conceived to be carried out in Machakos County.

Ngungat and Lyimo (2019) investigated the auditors perception on the usage of information system in Meru District, Arusha, Tanzania. The target population of the study was employees of from Meru District Council. The study employed purposive sampling technique in coming up with a sample size of 45 respondents. The primary data collection method was used in collecting information through use of a questionnaire and interview. The collected data was analyzed using descriptive statistics with aid of SPSS version 25 and presented through percentages, means, mode and frequencies. The study findings portrayed that to a large extent majority of the respondents' perceived information Systems audit ensured organizations adhere to controls and comply with policies. The context of the study was however, government offices while current study was conducted in schools.

About Sood, Kot and Allam (2015) provided evidence on the extent to which auditors perceive the usage and importance of audit technology. Using interviews

and questionnaires from auditors at Big 4 and international non-Big 4 audit firms, the findings reflect the highly perceived importance of using audit technology in technical and administrative procedures. The study found that the perceived use and importance of audit technology is relatively higher for those in Big 4 firms, with less years of auditor experience and higher auditor technology expertise, and those in management positions. The context of the study was however audit firms.

## **2.6 ICT Competencies and Financial Management of School Finance**

ICT competencies can be defined as the group of skills, knowledge and attitude that are applied to the use of information and communication technology. Principals skills, knowledge and attitude towards ICT determine their level of ICT competency. The ability to use ICT effectively depends on principals ICT competency not ICT technologies available in school. Omwega, Nyabero and Okioma (2015) carried out a study to assess the influence of principals` competency in ICT on utilization of ICT by science teachers. The results showed that principal competency in ICT encouraged utilization of ICT among science teacher. This study limited itself on influence of principal`s ICT competency on utilization of ICT among science teachers but, the current study will be different because it will focus on influence of principals ICT competency on financial management other than utilization of ICT by science teachers.

Badau and Sakiyo (2013) assessed the ICT teacher competency to implement the new ICT curriculum. The surveyor majored on finding out the competency of ICT tutors in applying Information and communication technology in administrative, professional development, curriculum and pedagogy. The findings revealed that teachers had low ICT competencies and breakdown to ICT competency were

inadequate funds, lack of ICT infrastructure and lack of electricity in most schools. This study had only one respondent, the ICT teacher, who could not reveal all the required information. The current study will have more respondent who will reveal more information and make research more informative. The study recommended that ICT to be introduced in teacher training institutions in order to enhance teacher performance in school. A similar study was conducted by Mwanaszumbah and Munyendo (2016) to investigate the physics teacher competence in ICT integration in classroom instruction in Nairobi County. The study focused on establishing physics teacher`s competency on utilization of ICT in classroom instruction and find out the frequency in which ICT was used in classroom instruction. The results showed that most physics teachers were moderate in terms of ICT competency and ICT was not used frequently in physics instruction. Teachers can use ICT to manage students, staff, finances and timetabling among others and not only teaching. The study only confined itself on physics teacher competence in teaching physics and did not bother on influence it had on teaching physics. The current study investigated how principals ICT competency influenced their financial management.

A study by Azubuike, Nkiru and Adaora (2021) ascertained the level of Principals` ICT competencies for management of information system in public and private secondary schools Anambra state. Descriptive survey design was used. The respondents of the study were 417. The study established that private school principals were more competent on basic computer operations and technical competency than public school principals. The study however did not show the influence of principals` competencies on financial management. The current study hence went further to determine the link between the two concepts.

Karanović, Nikolić and Karanović (2019) examined the financial management practices among Croatian entrepreneurs in relation to budgeting, raising capital, cash flow management, and the use of ICT tools for enhanced efficiency of their businesses. The survey was conducted on a sample of 58 entrepreneurs whose answers provide valuable insight into their grasp of financial concepts in the context of smart ICT use. The ensuing analysis of the level of proficiency in combining smart tools with financial management reveals increased adoption of ICT practices for budgeting and purchasing among Croatian entrepreneurs. Additionally, the findings indicated that the entrepreneurs acquisition of skills and competencies for smart financial management presents a sound basis for increased overall financial sustainability of the startups. The context of the study was however entrepreneurs but not schools as in the current study.

Thottoli and Thomas (2022) investigated the relationship between characteristics of information communication technology (ICT, adoption, confidence, competency and training) and auditing practices. The study adopted a quantitative approach, where a set of questionnaires was developed by making necessary adaptations to available scales/items. Data were collected from practicing chartered accountants in Kerala targeting 89 respondents from various professional auditing firms. The results were analyzed using Statistical Package for the Social Sciences and structural equation modelling-partial least squares statistical tools. The findings confirmed that there is a positive relationship between ICT competency and audit practice. Thus, the availability of ICT-competent staff, their practical ICT knowledge, sufficient and adequate ICT training assist audit firms from doing audit by implementing

customized audit software for audit practice. The study however was conducted in the context of auditing firms while current study focused on schools.

## **2.8 Summary and Knowledge Gap**

The reviewed literature shows that ICT has been implemented in schools and it is utilized more teaching and learning than in administration task. Several scholars have investigated utilization of ICT in instruction but there is need to examine utilization of Information and Communication Technology in financial management.

The current study examined utilization of ICT in management of school finance specifically in Machakos County. Since, it is not clear on how ICT is utilized in management of school finances in this county and there are few studies that have been done to examine this area. Current study addressed the following research gaps. In the first objective, there is a dearth of information regarding principal access to ICT infrastructure in management of school finance. There is also a gap on study locale since other studies were done in a different locale from current study. In the second objective, there is a knowledge gap on the type of population which was mathematics teachers but the current study will focus on principals and bursars. There is also a research gap on study locale, which will be different from those previous studies. Lastly, there's a dearth of information on principals' ICT knowledge in management of school finance and this study will address that. In the third objective, the study will fill the gap on research design. It will adopt a descriptive research design and use more data collection tools unlike the previous studies. Finally, in the fourth objective, there's scarcity of information on level of principals' competency on utilization of ICT in financial management and this study filled that gap. It also used a larger sample population compared to previous study.

Based on the reviewed literature, majority of the researchers majored on the relationship of ICT concepts and financial management. The studies however did not assess the extent of access to ICT infrastructure, principals knowledge, perception towards utilization and ICT competencies. Understanding this is helpful in order to understand the reason behind the negative or positive influence on financial management. Inaccessibility of infrastructure, lack of knowledge on ICT, poor perception and lack of competencies may mean a negative influence. Therefore, failure to investigate this extent makes the topic inconclusive as other factors related to these concepts may affect the relationship. It was therefore needful to first assess the extent of utilization of ICT and then link it with financial management.

## **CHAPTER THREE**

### **RESEACRH METHODOLOGY**

#### **3.1 Introduction**

This chapter covers research design, variables and location of the study, population and sampling procedures of the study. It also outlines validity and reliability on research instruments and data collection and analysis procedures.

#### **3.2 Research Design**

The study adopted descriptive survey design. Descriptive research design is commonly used when examining social issues that are in communities like education, gender and culture. The research design is therefore fits with socio-cultural influences, financial and technological issues. Descriptive research uses questionnaire, interviews and observations. It is also used to collect both quantitative and qualitative data (Glass and Hopkins 2004). This design was suitable in this study because it enabled the researcher to collect data by administering questionnaires and interview guide to respondents.

#### **3.3 Variables of the Study**

The independent variables of the study are access to ICT infrastructure, principals' knowledge of ICT, perception of principals towards use of ICT and ICT competencies. The dependent variable is the financial management. The confluence on the IV and DV is the utilization of ICT in management. The intervening variables are the principal characteristics, government and institutional policies which may alter the interaction between the IVs and the DVs.

### **3.4 Locale of the Study**

The study was conducted in Machakos County, Kenya. Machakos County is a county in Kenya. Its capital is Machakos town, which is the largest town and historically the county's first administrative headquarters. The county has a population of 1,098,584 as of 2019 National Census. The county borders Nairobi and Kiambu counties to the West, Embu to the North, Kitui to the East, Makueni to the South, Kajiado to the South West and Muranga and Kirinyaga to the North West (Machakos County Education Office Report, 2018). The main economic activities in this county include livestock, farming, sand harvesting, mining and trade. The choice of research site was guided by the utility principle. This county was suitable for this study because it has experienced low performance in school financial management and there is inadequate knowledge on how Principals are applying ICT in management of finance (County Education Report, 2018). Recently, schools within the County benefitted from supply of ICT equipment and training programs organized by the County government to equip the principals with the required ICT knowledge and competency to utilize ICT effectively in financial management (County Education Reports, 2019). This sub county was chosen because it has more and various categories of schools hence principals are more likely to utilize ICT in financial management.

### **3.5 Target Population**

The study was carried out in Machakos County; Kalama sub-county. Kalama sub-county has 36 schools. The target population constituted 36 principals and 36 bursars.

### **3.6 Sampling Procedures**

A sample size is a representative population which is derived from the target population. It is a group drawn from a larger population and used to estimate the characteristics of the whole population (Zohrabi, 2013). The researcher purposively selected Kalama sub-county as the study site. A sample size of 33 schools was selected using Yamane's sample size formula from the list of 36 schools within the sub-county. Simple random sampling was used to select the 33 participating schools. According to Ghauri (2011) simple random sampling is used when every member of the population has equal chance of being included in the sample. Purposive sampling was used to select 33 principals and 33 bursars from the sampled schools. According to Chen (2016), sampling procedure is a way of choosing a sub- group to participate in the study; it is the process of selecting several objects or individuals for a study to represent the large group. Purposive sampling allows a researcher to use cases that have necessary information required in the study (Mugenda and Mugenda 2009). The principals and bursars were selected purposively because they deal with financial management in the institutions on a daily basis and therefore possessed knowledge that was relevant to the researcher.

### **3.7 Research Instruments**

The study used questionnaires and interview schedules. Questionnaires were administered to the principals while the interview schedule were used to interview bursars in order to collaborate the data obtained from school principals. Interview provides vital information about issue being investigated. It enables the researcher to get a lot of information from the respondent (Gay 2006). Interview schedule were used in this study because it enabled the researcher to observe body language from

the respondents which gave a better understanding of what he or she is saying. Heale and Twycross (2015) aver that the questionnaire provides researcher with means of gathering data from a large sample. The questionnaire is given to respondents who are expected to read and answer the questions in the spaces provided (Zohrabi, 2013). According to Brace (2018), questionnaire is the best tool because it enables the researcher to collect a lot of information within a short time at a low cost in terms of time, money and input. The questionnaires create uniformity in the way in which questions are asked and this makes it possible for comparative analysis across different responses. Questionnaires are also used in this study since the target population is literate and thus limits chances of difficulties in responding to questionnaire items. The advantage of this tool (in this study) is that the respondent (principals for this case) can set aside their convenient time, is in full control of the questionnaire and thus complete and return it at agreed convenient time (Zohrabi, 2013). The questionnaires were divided into several sections. Section A comprised of demographic information from the respondents. Section B had response items that collected data on access to ICT infrastructure used in school financial management. Section C collected data on principals' knowledge of ICTs used in school financial management. Section D collected data on principals' perception towards use of ICT in management of finances. The last Section E obtained data related to ICT competencies used in school financial management.

### **3.8 Pilot Study**

Pilot testing was conducted in 2 schools in the Sub-County. The two schools were selected randomly from those schools discarded after sampling. The respondents selected for pilot study represented 10% of sample size. The pilot study enabled the

researcher to identify any probable weaknesses in the research instrument by way of assessing both its validity and reliability. This enabled the researcher to identify some ambiguous questions which were framed correctly and ensured that the tools were complete and clear to respondents the piloting of the instruments enabled the researcher to know how well the respondents were able to comprehend the questions therein.

### **3.8.1 Validity of Research Instruments**

Zohrabi (2013) says validity is extent at which a test measures what the research actually wishes to measure. Validity should be confirmed by expert judgment. In this case, validity was confirmed by experts from education management, Kenyatta University. Expert opinion that came from my supervisors was used to check the content validity. Apart from experts, the content validity of the instrument was also determined through pilot study to establish areas in questionnaires that present elements of ambiguity and overlaps which were corrected to the final fashion of the instruments used in this study.

### **3.8.2 Reliability of Research Instruments**

Gibbs and Jenkins (2014) hold that reliability is concerned with the extent to which a research instrument measures what it is supposed to measure. Haele and Twycross (2015) states that reliability of research instruments is the degree to which a research instrument measures and gives consisted results after repeated trials. To determine reliability of research instrument, the researcher used test-retest method. The research instruments were administered to the pilot schools to ascertain the reliability and after one week it was administered again in the same schools. To determine reliability of research instruments Cronbach's Coefficient Alpha was

computed for each item and reliability coefficient of 0.815 was obtained. Bengtsson, (2016) notes that a reliability coefficient of 0.7 or over was assumed to reflect internal reliability of the instruments.

### **3.9 Data Collection Procedures**

The researcher sought research authorization letter from Graduate School to facilitate acquisition of research permit. The researcher obtained research permit from the National Commission of Science, Technology and Innovation (NACOSTI). The permit obtained was used to seek permission from the Sub-County Education Officer to carry out the study in the area. The Principals and Bursars who were to be involved in research were informed in advance.

Prior to data collection exercise the researcher conducted a survey to Schools in Kalama Sub- County to familiarize with the study area. During the survey visit in the study area the researcher made appointment with the persons identified to participate in the study. On appointment day, the questionnaires were distributed by the researcher in the morning and collected after four working days. The researcher availed herself during this period for any question and clarification. Personal interviews were conducted to bursars only.

### **3.10 Data Analysis**

After the process of data collection was completed, the researcher edited to identify incomplete or inaccurate responses in the tools to obtain clean data. Editing was done to be sure that the data are accurate and consistent with other facts gathered. The clean data was coded and keyed into the computer for analysis using Statistical Package for Social Sciences (SPSS V22). Data was analysed using descriptive and

inferential statistics. Quantitative data was analysed using percentages, frequency, means and standard deviation and presented in form of tables, pie chart and bar graphs. Pearson Chi-square test was used to determine the influence of the independent variables on the dependent variable. Qualitative data was coded and analysed iteratively along emerging themes and presented in narrative form to give clear picture of the findings.

### **3.11 Logistical and Ethical Considerations**

Centre for Innovation in Research and Teaching (CIRT) (2010) defines ethical considerations as the norms or standards for conduct that distinguish between that which is considered as right from those perceived as wrong. They help to determine the difference between acceptable and unacceptable behavior, they are important for any research to be meaningfully accomplished. Regarding this, the researcher sought for a permit from NACOSTI authorizing the collection of data.

The participants were informed of the purpose of conducting the research and their role as respondents. The researcher explained the purpose of the study to the participants, whose consent was sought before interviewing them. The participation of respondents was voluntary without coercion or enticed with a promised benefit. The researcher assured the respondents of feedback in case they request for it. The researcher ensured that questionnaire sets and interviews were carried out in an environment that allowed privacy of the information and the respondents' confidentiality. The researcher ensured that the identity of the respondents remained anonymous.

## **CHAPTER FOUR**

### **PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the findings, interpretation and discussion according to the objectives of the study. In the first stage, return rates for research tools and respondent details are dealt with as such information is of great importance in interpreting and understanding the data. This research study sought to achieve the following research objectives:

- i To determine principals' access to ICT infrastructure and its influence on financial management in public secondary school in Machakos county
- ii To establish principals' knowledge of information communication technologies and its influence on financial management in public secondary school in Machakos county
- iii To find out principals perception towards use of ICT and its influence on financial management in public secondary school in Machakos county
- iv To determine principals' ICT competencies and its influence on financial management in public secondary schools in Machakos county

##### **4.1.1 Instrument Return Rate**

After data collection, the completeness and preciseness of the instruments were assessed. The return rate is presented in Table 4.1.

**Table 4.1: Principals Instrument Return Rate**

| <b>Response category</b> | <b>Sample Size</b> | <b>Response frequency</b> | <b>Percentage (%)</b> |
|--------------------------|--------------------|---------------------------|-----------------------|
| Male                     |                    | 21                        | 63.6                  |
| Female                   |                    | 12                        | 36.4                  |
| <b>Total</b>             | <b>33</b>          | <b>33</b>                 | <b>100</b>            |

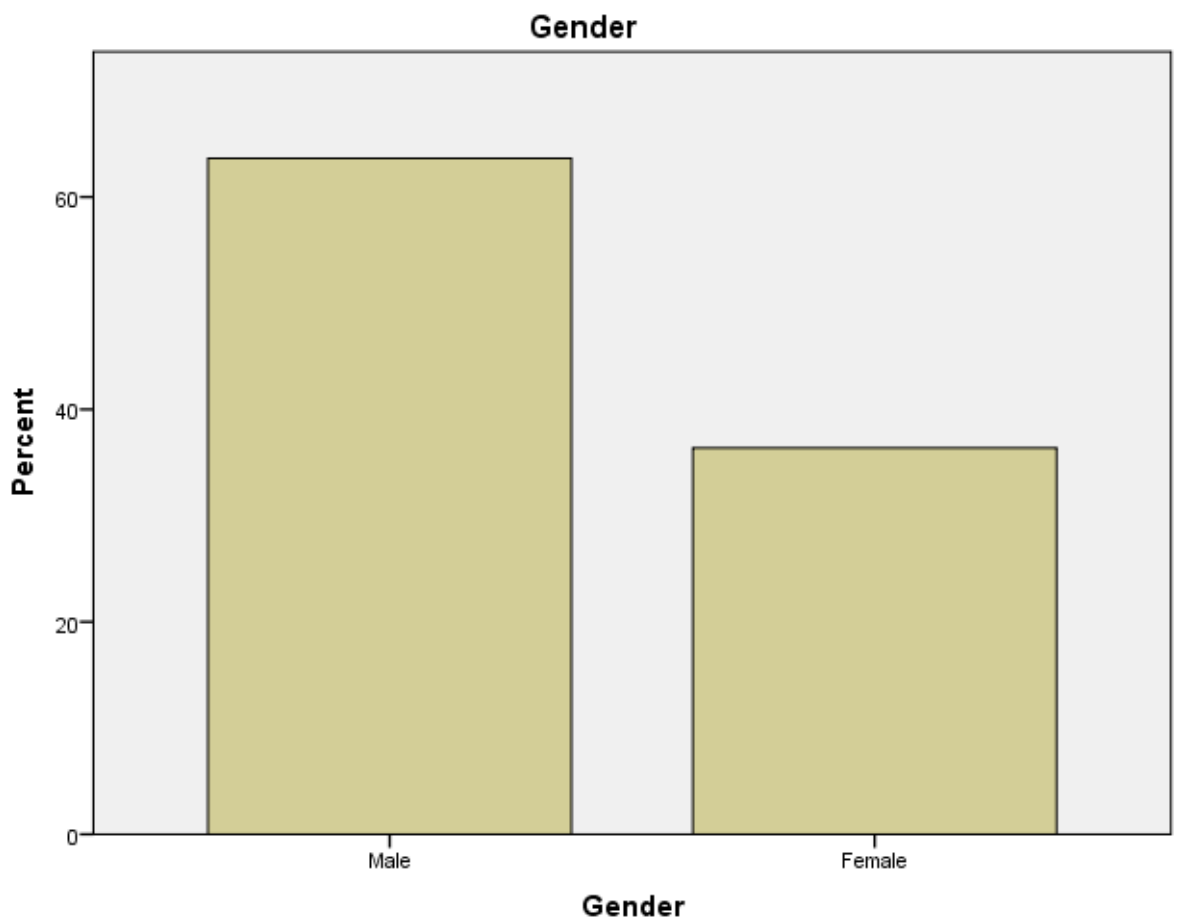
The researcher administered a total of 33 questionnaires and conducted 33 interviews. A total of 33(100%) of the questionnaires were filled and 33 interviews conducted using interview schedule and recording respectively. The response rate was satisfactory and is consistent with Mugenda and Mugenda's (2008) sentiments that the response rates which is more than 70% is acceptable in any social science study and therefore appropriate for generalization of the findings. In addition, Peytchev (2013) and Massey and Tourangeau (2013) argue that lower response rates provide more biased results.

#### **4.2 Demographic Characteristics of Sampled Respondents**

This section describes the respondents' attributes in terms of gender, age, level of education and teaching experience. The purpose of this section is to describe the demographic characteristics of Principals that may mediate on the influence utilization of ICT and on financial management in public secondary school in Machakos County.

#### 4.2.1 Gender Distribution of Sampled Respondents

Consideration of the gender distribution of the principals was crucial in examining the demographic characteristics of Principals that may mediate on how they utilise ICT and how that relates to financial management, The gender of the respondents was categorized into as male or female and summarized by the figure below.

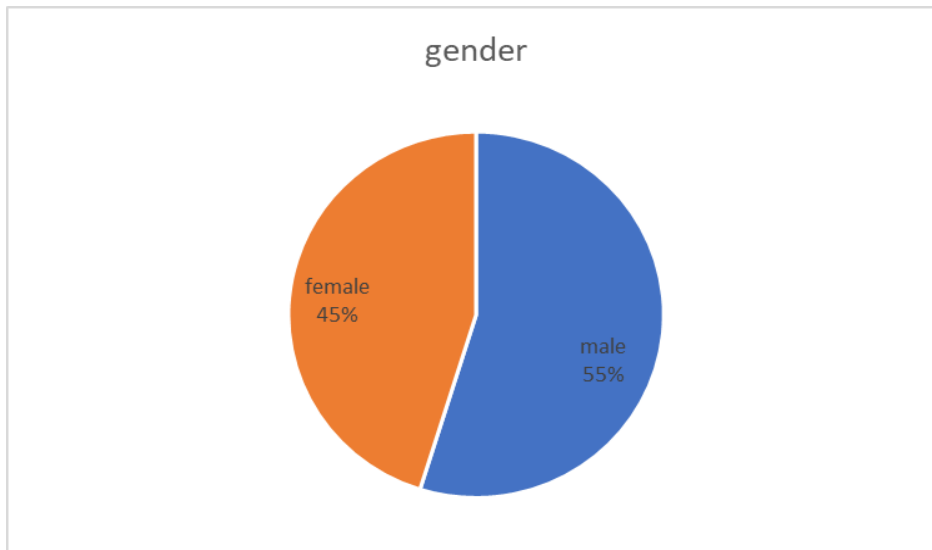


**Figure 4.1: Gender Distribution**

Table 4.1 indicates most of the principals 21 (63.4) were Male while only 12 (36.4%) were female. Although this study did not consider the mediating role of gender in ICT utilization, the digital divide between male and female user is recognized in the literature. The access to, content and use of ICT are connected to

gender norms and inequalities, as well as to efforts questioning and changing these. Women all over the world are increasingly turning to the internet exercise their political and social rights. Access to ICT is crucial for women and girls to be able to participate in society on equal terms with men and boys (Sida, 2015).

From the interview guide, the respondents were asked to indicate their gender.



**Figure 4.2: Gender of the Respondents (bursars)**

The results shows that most of the respondents who were 55% were male while 45% were female which infers most of bursars were male.

#### **4.2.2 Age Distribution of Sampled Respondents**

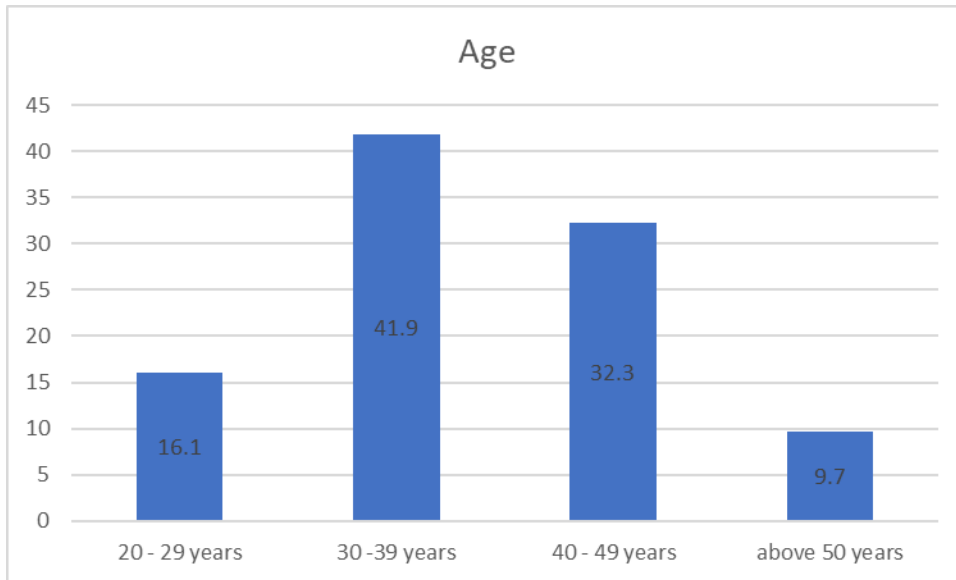
Age of principals is a key factor that may determine how they exercise their professional work because it is tied with their years of professional experience. The principals' age directly corresponds to their level of experience in teaching. The study sought to establish the principals' age and the findings are presented as in Table 4.2.

**Table 4.2: Principals Age Bracket**

| <b>Age Bracket</b> | <b>Frequency</b> | <b>Percent</b> |
|--------------------|------------------|----------------|
| 25 and below       | 0                | 0.0            |
| 26 -35 years       | 0                | 0.0            |
| 36 - 44 years      | 2                | 6.1            |
| 45 and above       | 31               | 93.9           |
| <b>Total</b>       | <b>33</b>        | <b>100</b>     |

Table 4.2 shows that the majority of the principals 31 (93.9%) fall between the ages of 45 and above followed by 2(6.1%) of them who lie between the ages 36 – 44 years. This shows that the principals who participated in this study have been in the profession long enough to be aware of the principles of practice within the profession. No Principals fell within the age of those who may have been recently inducted into the profession. For this reason, it is critical to note that age and experience are directly proportional, when wrapped up in practical and theoretical knowledge that is required for successful management of school finances. This finding is similar to Kamaus (2017) finding that age and experience enables the principals to give put into practice the principles of good practice when it comes to financial management. Further, a study by Kadenyi (2014) carried out in Vihiga, Kenya, found out that majority of the principals were between the ages of 41 and 60 indicating that age is a vital factor be considered before appointment to the management positions.

From the interview guide, the bursars indicated their age and the results are presented in the figure below.



**Figure 4.3: Age of the Respondents (bursars)**

The results showed that majority of the respondents who were 41.9% indicated that they lie between age 30- 39 years, 32.3% fall between 40 – 49 years and 16.1% lie between 20 - 29 years while 9.7% indicated that they were above 50 years. This infers that most bursars were between 30 – 39 years.

### **4.3 Principals Teaching Experience**

The study sought to establish the principals' years of teaching experience. The findings are presented in Table 4.3.

**Table 4.3: Principals Teaching Experience**

| <b>Year</b>  | <b>Frequency</b> | <b>Percent</b> |
|--------------|------------------|----------------|
| 26 - 35 yrs  | 29               | 87.9           |
| 36 - 44 yrs  | 4                | 12.1           |
| 45 and above | 0                | 0,0            |
| Total        | 33               | 100            |

From Table 4.3 it is evident that most of the principals 29 (87.9%) had over 25 years of teaching experience. This meant that they were well versed in the matters related to education and probably related to financial management matters within educational institutions in Kenya. Only 4(12.1%) had teaching experience of more than 35 years. Although teaching experience is not directly related to good financial management practice, one can make an educated guess that the years of exposure to educational matters provides an opportunity for Principals to understand or be familiar with sound management practices within educational institutions. Darling-Hammond et al. (2017) posits that teachers who are just beginning to pursue their profession require professional mentorship and in-service training to be able to grow in their professional development and instructional delivery for better teaching and learning outcome.

The respondents were further asked to indicate the duration they had served in the bursar position in the school. The results were presented in Table 4.4.

**Table 4.4: Duration Served in Bursar Position**

| <b>Duration served</b> | <b>Frequency</b> | <b>Percent</b> |
|------------------------|------------------|----------------|
| Less than 1 year       | 2                | 6.5            |
| 2 - 5 years            | 10               | 32.3           |
| 6-10 years             | 7                | 22.6           |
| 11 - 15 years          | 4                | 12.9           |
| 16- 20 years           | 5                | 16.1           |
| above 20 years         | 3                | 9.7            |

From the results above, most of the respondents representing 32.3 had worked in the bursar position for 2 - 5 years, 22.6% had worked in the bursar position for 6 - 10 years, 16.1% had worked for 16 - 20 years, 12.9% indicated that they had worked for 11- 15 years, 9.7% had worked for 20 years and above while only 6.5% worked for less than 1 year. This infers that most bursars had worked in the institution for more than 2 years.

#### **4.4 Principals Professional Qualifications**

The study sought to obtain professional qualification of the respondents. Qualifications in education are considered to determine the effectiveness, thus leading to improved teaching and learning outcomes. The level of education indicates the level of training that influences the instructional delivery by teachers and the requisite skills for financial management by the principals. The respondents were questioned about their education qualifications and the findings are summarized in Table 4.5.

**Table 4.5: Principals' Professional Qualifications**

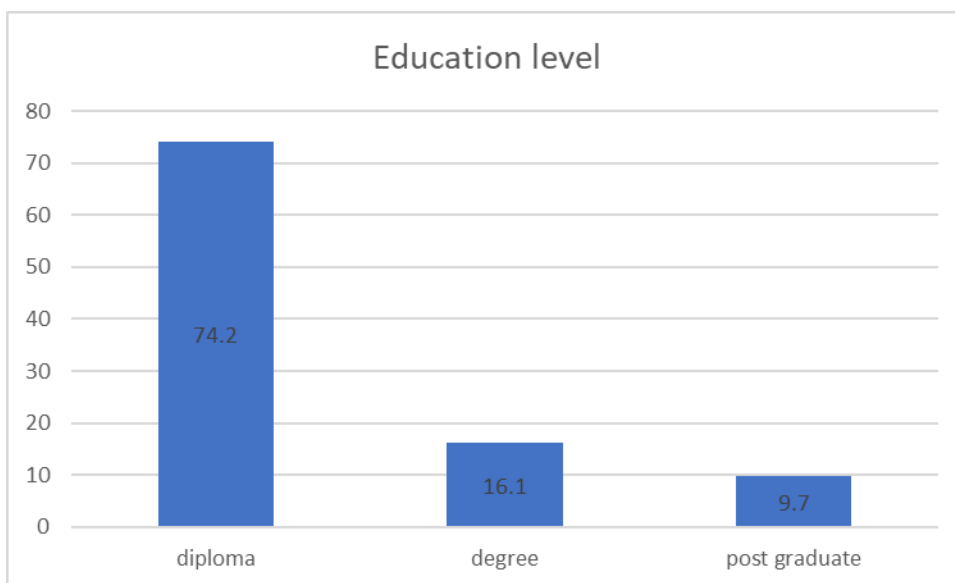
| <b>Qualification</b> | <b>Frequency</b> | <b>Percent</b> |
|----------------------|------------------|----------------|
| <b>Certificate</b>   | 0                | 0.0            |
| <b>Diploma</b>       | 0                | 0.0            |
| <b>Bachelors</b>     | 17               | 51.5           |
| <b>Masters</b>       | 16               | 48.5           |
| <b>Total</b>         | 33               | 100            |

The study sought to obtain academic qualification of the respondents. Qualifications in education are considered to determine the effectiveness, thus leading to improved teaching and learning outcomes. The level of education indicates the level of training that influences the instructional delivery by teachers and the requisite skills for financial management practices by the principals. The respondents were also questioned about their education qualifications and the findings are summarized in Table 4.5.

Table 4.5 indicate that majority of the principals 17(51.5%) had Bachelors' degree while 16(48.5%) had Masters degree. Based on these qualifications, most of the principals had relevant and basic information to perform basic financial management practices. These findings are in tandem with the World Bank's (2010) study of Finnish teachers with the highest pre-service qualifications worldwide: school heads must have a masters' degree as a requirement for employment. These findings also agree with the TSC's (2017) education reform policy in the shortlisting, recruitment and deployment of school administrators. The policy requires that a primary school principal should have at least a Bachelor's degree.

This finding agrees with the findings by Babayemi (2006) who posit that good academic qualifications are vital in implementing sound educational policy. Further, Fernandez, et al. (2007) and Baker and Cooper (2005) posit that the educational qualification of principals and teachers, to a greater extent, impact on the quality of teaching and learning and general performance of their educational institutions.

The respondents indicated their levels of education in the interview guide and the results are represented in the figure below.



**Figure 4.4: Education level (bursars)**

The results showed that majority of the respondents who were 74.2% indicated that they had a diploma, 16.1% indicated that they had a degree while 9.7% indicated that they had a postgraduate. This infers that most bursars had a diploma.

#### **4.5 Access to ICT infrastructure and financial management in schools**

The first objective of the study sought to determine Principals' access to ICT infrastructure and its influence on management of finances in public secondary

schools in Machakos County. Access to Information Communication and Technology is a major factor in determining whether Principals can effectively use the technology in the management of finances within their institutions. In order to realize this objective, the principals were asked to identify the type of ICT technologies available in their schools. Their response to this statement are presented in Table 4.6.

**Table 4.6: ICT technologies available in Schools**

| ICT Technology    | Frequency |    | Percent |      |
|-------------------|-----------|----|---------|------|
|                   | Yes       | No | Yes     | No   |
| Computer          | 31        | 2  | 93.9    | 6.1  |
| Printer           | 32        | 1  | 97      | 3.0  |
| Spreadsheets      | 28        | 5  | 84.8    | 15.2 |
| Scanners          | 31        | 2  | 93.9    | 6.1  |
| Word Processing   | 31        | 2  | 93.9    | 6.1  |
| Photocopiers      | 28        | 5  | 84.8    | 15.2 |
| School Telephones | 33        | 0  | 100     | 0    |

From the Table 4.5, it is apparent that most of the Principals within the Machakos County have access to basic ICT technologies. Each Principal has access to a school telephone. The second most highly accessed technologies are the printers 97% followed by access to computers, scanners and word processing equipment at 93.9%. The least accessible technology are the photocopiers, which are only accessible to the 84.8% of the principals who participated in the study. A similar study by Makhunu (2010) indicated that majority of principal had access to school telephone the second most accessed infrastructure was computer followed by word processer and least accessed was photocopier which was accessed by only (38.3%) of principals

To obtain additional information about the issue of accessibility, the principals were asked to comment on the available ICT technologies in the school. The comments were varied and have been summarized as follows based on the recurrent themes.

Respondent P1 reported that:

*ICT technologies are shared resources that are shared by the teachers, students and whoever else wants to use them*

This is a common situation in most schools in Kenya where ICT technologies are pooled in a central place and shared among the members of the school community. This makes them easily available to all in the same manner as was reported by the respondents. In some cases, they are kept in specific department where they are frequently used. For example, in the computer department of accounting department. These findings are similar to Baldauf (2010) who pointed out that principals who have access to computer tend to perform better than those without access.

In some instances, the use of these technologies is hampered by power outages.

Respondent P2 reported that:

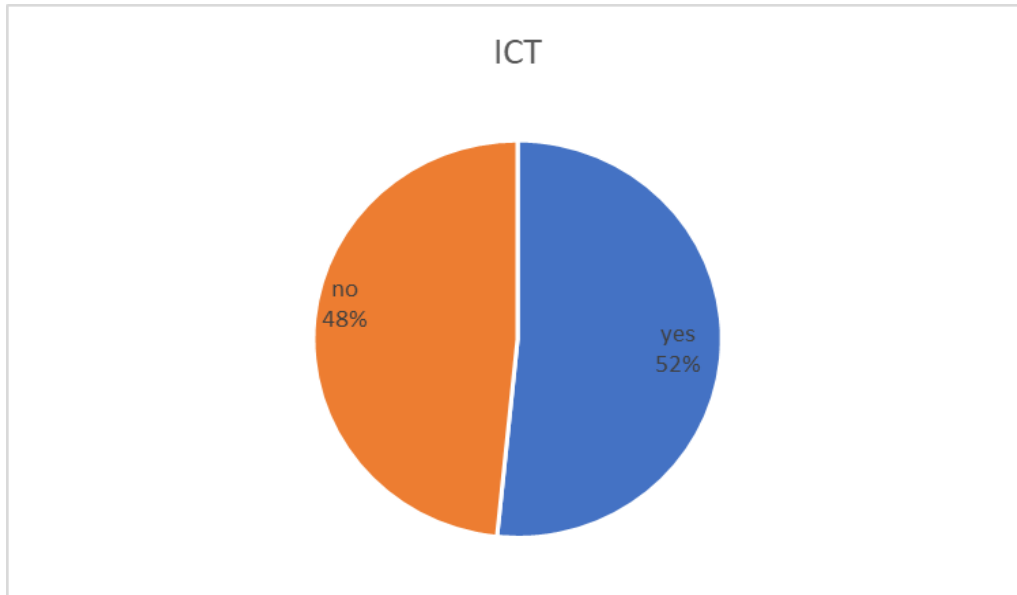
*Sometimes ICT resources are not easily available due to power shortages.*

Power outages in Kenya is generally a widespread problem affecting mainly the rural parts of the country. similar study by Muriko, Njuguna and Njihia (2015) showed that (85.7%) of the principal revealed that though electricity was adequate in schools there was no back up incase of power outage and this prevented their utilization of ICT infrastructure. An interesting response was in relation to the usage. Respondent P5 reported that:

*The ICT equipment ate not commonly used.*

This is an interesting response that would be worth pursuing further. However, the probable reason for non-utilization could be the issue related to power connection. In some rural schools there is no electricity and so ICT equipment cannot be used as required. The findings are in tandem with Lindasay (2006) who conducted a survey to determine extent at which teachers of Australia access ICT infrastructure. The result indicated that access to ICT infrastructure was not even among teachers. It varied depending on age and type of school. Teachers in private schools had more access than those in public schools. The study further revealed that teachers lacked adequate technical support hence they did not utilize ICT effectively. Most public schools in Kenya are found in rural areas where connection to electricity grid is a problem that the government has continued to tackle through the rural electrification program. Jacobsey (2013) conducted a study on students and teachers access and application of ICT in classroom instruction and its effects in their motivation in urban and rural schools. The study revealed that teachers and students did not accessed have adequate access to ICT infrastructure. Those in urban schools ICT better than those in rural schools. Information and communication technology (ICT) infrastructures had positive impact on motivating students and teachers among schools.

From the interview guide, the respondents indicated their access to ICT infrastructure utilized in management of finances and their response was represented in figure 4.5



**Figure 4.5: ICT infrastructure**

Findings revealed that majority of the respondents who were 52% indicated that they had access to ICT infrastructure used in financial management while 48% indicated that they did not have had access to ICT infrastructure used in financial management. This infers that most bursars had access to ICT infrastructure used in financial management. The results agrees with Oluoch, Ajowi and Bosire (2015) which revealed that principals and bursars had access to ICT infrastructure but further cited that lack of electricity was key factor affecting its utilization in public secondary school and this was linked to inadequate finances to facilitate its installation

In order to determine the principals' access to ICT infrastructure and its influence on financial management in public secondary schools in Machakos County, descriptive and inferential statistical analyses were conducted. A composite variable of Access to ICT infrastructure was computed by transforming ordinal data into nominal data

to meet the assumptions of Pearson's chi-square test. A mean evaluation rating of Access to ICT technologies and Management of finances was performed to compute composite variables which were correlated using Pearson's Chi-square test of independence. The ETA value was computed to establish the effect size of the correlations. The results are presented in the Table 4.7 and Table 4.8

**Table 4.7: Pearson's Chi-Square Tests**

|                              | Value               | Df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square           | 90.600 <sup>a</sup> | 56 | .002                  |
| Likelihood Ratio             | 38.257              | 56 | .966                  |
| Linear-by-Linear Association | 11.731              | 1  | .001                  |
| N of Valid Cases             | 32                  |    |                       |

The findings from Chi-Square Test reveals a statistically significant correlation between Access to ICT technologies and Management of finances ( $x = 0.002 < 0.005$ ). To further establish the effect size of the statistically significant correlation, the ETA and ETA squared was calculated using SPSS. The ETA value is presented in Table 4.8.

**Table 4.8: Directional Measures**

|                     |                      | Value |
|---------------------|----------------------|-------|
| Nominal by Interval | Eta                  |       |
|                     | ACCESS Dependent     | .891  |
|                     | MANAGEMENT Dependent | .638  |

From the Table 4.8 the ETA value is greater than 0.6. This is established by using the value .638 since the dependent variable is management (of finances). To establish the effect size, the ETA squared was computed.  $ETA^2 = 0.407044$  or 40% which reveals a strong effect size. A general rule in the interpretation of  $ETA^2$  is 0.02 (2%) = small effect size, 0.13 (13%) = medium effect size, 0.26 (26%) = large effect size. This value reveals how much variation in the dependent variable is explained by the variation in independent variable. Thus 40% of the variation in management of finances is explained by the variation in access to ICT technologies. Makhanu and Kampers (2012) in their study investigated the relationship between principals' access to ICT and school performance. The findings revealed that 42% of school principals had access to basic ICT infrastructure and principal's access to ICT had a positive impact on school performance. This suggests that teachers and principals' access to ICT infrastructure determines how they utilize it in their school activities. In a related study conducted by Uyouko, Wang and Fauzi (2014) on ICT access among Nigerian teachers it was established that ICT infrastructures were inadequate though teachers believed that access to ICT infrastructure would facilitate effective performance of duties. This concurs with the findings of this study.

#### **4.6 Knowledge of information communication technologies and financial management in schools**

The second objective of the study sought to investigate Principals' knowledge of information and communication technologies and its influence on financial management in public secondary schools in Machakos County. To establish the levels of Principal's knowledge of ICT in financial management, a descriptive

analysis of various aspects of knowledge of ICT was conducted. The responses are presented in Table 4.9.

**Table 4.9: Knowledge of ICT in management of School financial resources**

| Statement   | Strongly disagree | Disagree     | Neutral       | Agree         | Strongly agree |
|---|-------------------|--------------|---------------|---------------|----------------|
| I possess the basic knowledge and skills to use ICT             | -                 | 3%<br>(1)    | -             | 57.6%<br>(19) | 39.4%<br>(13)  |
| I have trained on the use of ICT in financial management        | 3%<br>(1)         | 12.1%<br>(4) | 27.3%<br>(9)  | 45.5%<br>(15) | 12.1%<br>(4)   |
| I am able to use various software in financial management       | 3.0%<br>(1)       | 18.2%<br>(6) | 21.2%<br>(7)  | 45.5%<br>(15) | 12.1%<br>(4)   |
| I am knowledgeable in using computerized data analysis software | 3.0%<br>(1)       | 21.2%<br>(7) | 39.4%<br>(13) | 33.3%<br>(11) | 3.0%<br>(1)    |
| I have knowledge of various financial database                  | 3.0%<br>(1)       | 18.2%<br>(6) | 45.5%<br>(15) | 30.3%<br>(10) | 3.0%<br>(1)    |
| I am able to retrieve relevant data from financial databases    | 9.1%<br>(3)       | 24.2%<br>(8) | 21.2%<br>(7)  | 42.4%<br>(14) | 3.0%<br>(1)    |

The findings reveal that 19 (57.6%) of the respondents had a possess to basic knowledge and skills to use ICT in management of financial resources. 13(39.4%) of the principals strongly agreed that they possess these skills. In terms of whether they are trained to use various software, 15(45.5%) agreed while 4(12.1%) strongly

agreed. This indicates that there is a general agreement amongst the principals that they were trained to use various software in financial management. A paltry 15.1% disagreed that they were trained to use ICT in resource management. It is worth noting that 9(27.3%) did not respond to this and preferred to remain neutral. The findings are in conformity with Kaganda & Busagala (2020) whose study in Tanzania established that performance expectancy and facilitating conditions predicted the behavioral intention to use the ICT systems ( $p < 0.05$ ) while effort expectancy and social influence were statistically insignificant ( $p > 0.05$ ). The logical conclusion would be that they preferred not to say something that may implicate themselves and the authorities as far as training of Principals is concerned. On the contrary, a study conducted in Nigeria by Obielodan, Omojola, Tijani & Samuel (2020) established the educators were not fully conversant with ICT. The study recommended that a conducive environment should be provided by school principals which allow frequent use of ICT for instruction. Eze & Aja, (2014) explained that although there are numerous benefits from the utilization of ICT in classroom instruction, the uptake of ICTs in secondary schools is at a low level because teaching staff and educational managers have not fully implemented the use in their regular work.

The principals were asked if they were able to use various software in financial management. In response, 15(45.5%) agreed to they could use various software while 4(12.1%) strongly agreed. These reveals that because of the training, most of the principals can use ICT software in management of resources. The commonly used software were excel spreadsheets and word processors such as Microsoft word and excel. Only 7 (21.2%) disagreed that they could use the software in resource

management. This agrees with the findings of Gow & Jaythilake (2020) who conducted their study amongst Sri Lankan practitioners and established a positive response to technology stewardship training among practitioners.

Principals were asked about their knowledgeable in using computerized data analysis software. Interesting to note that 13(39.4%) of the respondents preferred to remain neutral to this question. Could be they were afraid of revealing facts about their knowledgeable for fear of reprisal from their superiors' despite being assured of confidentiality by the researcher. Another 11 (33.3%) agreed that they were knowledgeable while 1(3.0%) strongly agreed. A small percentage of 24.2 % (8) disagreed about their knowledgeable. This means that in general, principals were knowledgeable about the use of ICT in financial resource management. Data analysis software are mainly for generating information for use in making decisions.

A follow-up statement sought to know whether the principals were knowledgeable about financial databases. Findings revealed that 15(45.5%) were neutral in their response to this statement while 10 (30.3%) agreed. Furthermore 1 (3.0%) strongly agreed that they were knowledgeable about financial databases. This was followed by whether they can retrieve data from financial databases. The responses were: those who chose to be neutral, 7(21.2%) while 14(42.4%) agreed that they could retrieve data from databases. A further 1(3.0%) strongly agreed about being able to retrieve data. By granting access to technological systems for purpose of generating student data, instructional management systems, assessment systems, and diagnostic tools, teachers can obtain meaningfully data. This can be collected, analyzed, and communicated effectively for purposes of decision-making (Mandinach, Honey, Light, Brunner, 2008).

Data retrieval is a key function in financial management as it guides the decision-making processes. A study by Wilcox, Fernandez Conde, & Kowbel (2021) established that decisions about student placement and progress should be based on data related to their work progress towards their academic goals rather than assuming that the same placement and programming will meet all student's needs. This study revealed the important role that data driven decision making plays in the management of organizations. Such decisions regarding placement have implications of financial management because they affect students' enrolment in different levels or classrooms which affects decisions related to finances and resource provision.

To establish the influence of principal's knowledge of ICT in management of school financial resources, a comparison of percentages was conducted using Pearsons chi-square. The results are depicted in the Table 4.10.

**Table 4.10: Cross- Tabulation**

|                  |                      | Value | Asymp. Error <sup>a</sup> | Std. Approx. T <sup>b</sup> | Approx. Sig. |
|------------------|----------------------|-------|---------------------------|-----------------------------|--------------|
| Interval by      | Pearson's R          | .628  | .001                      | 4.418                       | .000*        |
| Interval         |                      |       |                           |                             |              |
| Ordinal by       | Spearman Correlation | .611  | .003                      | 4.232                       | .000*        |
| Ordinal          |                      |       |                           |                             |              |
| N of Valid Cases |                      | 32    |                           |                             |              |

The pearsons chi-square test revealed that ( $p=0.001$ ,  $0.003 < 0.005$ ) thus there was a significant relationship between the principal's knowledge of ICT and their use of

ICT in financial management. Since there was a relationship between the two variables, it was necessary to conduct further test to establish the effect size. Thus, the ETA test was conducted which revealed that the principals use of ICT is influenced by their level of knowledge. This information is depicted in the Table 4.11.

**Table 4.11: Effect Size of Knowledge of ICT on Financial Management**

| Directional Measures |     | Value             |
|----------------------|-----|-------------------|
| Nominal by Interval  | Eta | MEANKNOWLDEGE     |
|                      |     | Dependent         |
|                      |     | .801              |
|                      |     | MEANMGT Dependent |
|                      |     | .809              |

The effect size measured in terms of the ETA coefficient is above 0.8. This indicates that the influence on knowledge of ICT among principals has a positive influence on the use of ICT in financial management. Unfortunately, as Wilcox, Fernandez Conde, & Kowbel (2021) contend, data literacy tends to be low among school personnel, contributing to this limited use of data in decision-making. There is need to bolster knowledge of ICT use in data driven decision-making. Data literacy concerns the ability to analyze and interpret data so that it can be used to inform practice. There are several software programs available for analyzing financial data. However, many schools in Kenya do not possess this software, despite the high level of awareness.

From the interview guide the bursars were asked to indicate the various ICT technologies that they use in financial management. From the responses most of the institutions used Microsoft sage, Microsoft excel and Quickbooks. Only few

institutions used microsoft dynamics, zoho, finance plus sage, computing and Office equipment

The following were some of the responses:

Respondent P6: Microsoft *excel*, *Microsoft dynamics*

Respondent P11 :*Sage*, *excel*

This was therefore clear that most public secondary school in Machakos County used ICT technologies in financial management. The study findings agreed with Miranji (2017) who conducted a study to establish how ICT was being applied in management of school finances among schools in Nairobi and revealed that only few schools had managed to adopt ICT in their day to day activities

#### **4.7 Perception towards use of ICT and financial management in schools**

The third objective of the study sought to find out Principals' perception towards use of information communication technologies and its influence on financial management in public secondary schools in Machakos County. In order to achieve this objective, the principals were first asked about their perception towards use of ICT in management of school finances. The findings revealed the following information.

**Table 4.12: Perceptions towards use of ICT in financial management**

| <b>Statement</b>   | <b>1</b>      | <b>2</b>      | <b>3</b>     | <b>4</b>      | <b>5</b>      |
|--|---------------|---------------|--------------|---------------|---------------|
| Use of ICT is useful in financial management in schools                                |               |               | 1<br>(3.0%)  | 10<br>(30.3%) | 22<br>(66.7%) |
| ICT use in financial management can be done with ease                                  | 1<br>(3.0%)   | 4<br>(12.1%)  | 5<br>(15.2%) | 14<br>(42.4%) | 9<br>(27.3%)  |
| I can do my duties perfectly well without using ICT                                    | 2<br>(6.1%)   | 5<br>(15.2%)  | 5<br>(15.2%) | 17<br>(51.5%) | 4<br>(12.1%)  |
| Use of ICT saves time and simplifies work  |               | 1<br>(3.0%)   | 8<br>(24.2%) | 12<br>(36.4%) | 12<br>(36.4%) |
| I use ICT often to manage school finance   |               | 9<br>(27.3%)  | 7<br>(21.2%) | 10<br>(30.3%) | 7<br>(21.2%)  |
| I do not think undertaking training on use of ICT in financial management is necessary | 17<br>(51.5%) | 10<br>(30.3%) | 3<br>(9.1%)  | 3<br>(9.1%)   |               |
| Funds invested in ICT should be channeled to other useful activities in school         | 12<br>(36.4%) | 8<br>(24.2%)  | 7<br>(21.2%) | 5<br>(15.2%)  | 1<br>(3.0%)   |
| I find it challenging to use ICT in financial management                               | 6<br>(18.2%)  | 11<br>(33.3%) | 7<br>(21.2%) | 8<br>(24.2%)  | 1<br>(3.0%)   |
| I am ready to implement ICT in financial management                                    |               |               | 4<br>(12.1%) | 14<br>(42.4%) | 15<br>(45.5%) |

In terms of whether the use of ICT is useful in financial management in schools, the respondents were generally in agreement that it does. Of all the respondents 10(30.3%) agreed that ICT is useful in improving financial management. 22(66.7%) strongly agree that it does improve financial management. Only 1 respondent decided to be neutral in response. This agrees with earlier research studies. The researcher sought to know whether ICT use in financial management can be done with ease. The respondents indicated that this can be done. A total of 14 (42.4%) agree that this is possible. There were 9 respondents, representing (27.3%) who strongly agreed that ICT can be used with ease in the management of financial resources. Five (5) respondents representing 15% disagreed while a similar number were neutral to this statement. This reveals that despite many respondents finding it easy to use, ICT in financial management, there is still a significant number who are unable to use ICT with ease. The reasons for these were later established. This study was in line with Oluoch (2016) who pointed out that principals were able to use ICT infrastructures with ease in their administrative tasks.

The respondents were asked whether they can do their duties perfectly well without using ICT. In response, 17 participants, representing (51.5%) agreed that they are able to do this. 4 participants (12.1%) strongly agreed, while 5 respondents were neutral (15.2%). A significant number of 7 respondents representing 21.3% of the total respondents said they were unable to conduct their duties well. This is attributed to lack of adequate competencies and training in the relevant skill areas. Furthermore, the respondents were asked whether ICT saves time and simplifies work. In response 12 (36.4%) participants agreed while an equal number 12 (36.4%) strongly agreed that ICT use saves time. Only 1 respondent (3.0%)

disagreed while 8 (24.2%) were neutral to this question. The use of ICT saves time because some of the mundane tasks such as documentation can easily be done using a computer instead of the tiresome paperwork associated with recording keeping and manual documentation. The findings were similar to Kibor (2018) findings which argued that use of ICT in schools simplifies work, enhances output and saves on time. The researcher sought to know whether the respondents use ICT often to manage school finance. In response, 10 participants (30.3%) agreed to this statement while 7 (21.2%) strongly agreed. Those who disagreed were 9 (27.3%) while 7 (21.2%) participants were neutral. It is important to note that most of the respondents said that they use ICT in managing finances. Findings were inconsistent with Ngaruiya (2018) who reported that principals barely used ICT in financial management. Regarding whether undertaking the training on the use of ICT in financial management was necessary, the respondents largely disagreed. The participants who strongly disagreed were 17 (51.5%) while those who disagreed were 10 (30.3%). A similar number of 3 (9.1%) disagreed while 3 (9.1%) were neutral to this statement. This agrees with Juma (2018) study which pointed out that principals perceived ICT training as unnecessary hence they did not support their teacher training on use of ICT in teaching and learning. Regarding whether Funds invested in ICT should be channeled to other useful activities in school, 12 (36.4%) participants strongly disagreed to this and 8 (24.2%) disagreed. This means there is general disagreement that funds set aside for ICT should be used for other school activities. 7 (21.2%) participants were neutral to this statement. 5 (15.2%) participants were in agreement while only 1 (3.0%) participant strongly agreed that funds should be spent in other useful activities apart from ICT. The findings were

consistent with Adeyemi (2010) who noted that ICT was very crucial in schools and funds allocated by government to support its implementation were mainly used to purchase ICT infrastructures. The participants were asked whether they found it challenging to use ICT in financial management. A total of 8 (24.2%) participants said they found it challenging while only 1 (3.0%) strongly agreed that it was challenging. Those who remained neutral to this statement were 8 (24.2%) while 6 (18.2%) and 11 (33.3%) were generally in disagreement that they did not find the use of ICT in financial management challenging. This contracts Njathi &Maithya (2018) who reported that it was a challenge for principals to utilize ICT in management of school finances since they did not have adequate competency and training. Finally, the respondents were asked whether they were ready to implement ICT in financial management. In response, nearly all the respondents 14 (42.4%) and 15 (45.5%) respectively agreed and strongly agreed that they were ready to implement ICT in financial management. Only 4 (12.1%) participants were neutral in their response to this statement. The results were in agreement with Carmen (2013) and Muema (2015) who stated that ICT enhances management of finances hence should be adopted in schools.

**Table 4.13: Perceptions towards use of ICT in financial management**

| Statistics     |         |   |   |   |   |  |  |   |  |   |
|----------------|---------|---|---|---|---|--|--|---|--|---|
|                |         | Use of ICT is useful in financial management in schools | ICT use in financial management can be done with ease | I can do my duties perfectly well without using ICT | Use of ICT saves time and simplifies work | I use ICT often to manage school finance | I do not think undertaking training on use of ICT in financial management is necessary | Funds invested in ICT should be channelled to other useful activities in school | I find it challenging to use ICT in financial management | I am ready to implement ICT in financial management |
| N              | Valid   | 33  | 33  | 33  | 33  | 33                                       | 33   | 33  | 33   | 33  |
|                | Missing | 0   | 0   | 0   | 0   | 0  | 0  | 0   | 0  | 0   |
| Mean           |         | 4.6061  | 3.7879  | 3.4848  | 4.0606                                    | 3.4545                                   | 1.7576   | 2.2424  | 2.6061   | 4.3333  |
| Std. Deviation |         | .65857  | 1.08275   | 1.09320   | .86384                                    | 1.12057                                  | .96922   | 1.19975   | 1.14399  | .69222  |

In terms of variance in responses to the items on Principals perception on ICT use in financial management, the participants were generally in agreement. There was general disagreement that: undertaking training on use of ICT in financial management is necessary, funds invested in ICT should be channeled to other useful activities in school, the use of ICT in financial management is challenging. There was wide disparity in perceptions on whether the principals found the use of ICT challenging ( $M = 2.6061$ ,  $SD = 1.14399$ ) and whether funds invested in ICT should be channeled to other useful activities in school ( $M = 2.2424$ ,  $SD = 1.19975$ ).

From the interview guide, the bursars were asked to indicate how financial training and development needs were addressed. Majority of the bursars indicated that they attended attend workshops for financial management training while others indicated that they attended seminars online and In-service training. The following were some of the responses:

Respondent P11: *I attend workshops for financial management training*

Respondent P15: *I attend seminars online and in-service training*

It was therefore clear than majority of the bursars attended seminars online, workshops and in-service training to gain financial management training. The study findings agreed with Mailizar and lianghuo (2019) who indicated that it was important to gain knowledge of ICT.

From the interview guide, the respondents were further asked to indicate how the ICTs available in the institution used to manage finances. From the responses it was clear that majority of the bursars were using ICTs in recording financial transactions as well as to manage financial data. Other responses were assisting in accounting,

preparation of payrolls and monitoring usage of the finances, as well as to manage school ledger account.

The following were some of the responses

Respondent P7: *Record keeping, financial reporting*'

Respondent P25. *All financial transactions are computerized*

This infers that ICTs in schools was used by the bursars to record and manage their financial transactions. The study findings agreed with Eremie and Agi (2020) whose findings revealed that ICT skills enhanced communication, proper record keeping and accountability of school resources through efficient management.

From the interview guide, the bursars were asked to indicate their thoughts on the use of ICT in financial management. From their responses majority of the bursars indicated that ICT enhanced transparency in financial management as well as improves service delivery and timely financial reporting.

Respondent P10: *It can improve efficiency of financial managements*'

Respondent P18: *It can improve the level of financial management and enhance transparency*'

This infers that ICT in schools helps to improve the transparency and efficiency of the financial management. The study findings agreed with Eremie and Agi (2020) whose findings established that principals with ICT skills utilised ICT efficiently hence enhanced communication proper record keeping and accountability of school resources through efficient management.

In order to determine if the perception of Principals towards the use of ICT determined their financial management practices, a chi-square test was performed to establish if there was any correlation between Principals' perceptions and the use of ICT in financial management in secondary schools. The correlation coefficient  $r = 0.785$  revealed a strong positive correlation between Principals perceptions and the use of ICT in financial management.

**Table 4.14: Pearson's Chi-Square Tests**

|                              | Value               | Df  | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|-----|-----------------------|
| Pearson Chi-Square           | 99.976 <sup>a</sup> | 112 | .785                  |
| Likelihood Ratio             | 74.162              | 112 | .998                  |
| Linear-by-Linear Association | 2.163               | 1   | .141                  |
| N of Valid Cases             | 32                  |     |                       |

a. 135 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

To establish the effect size of the correlation between the two variables, an ETA test was performed which revealed the results in the Table 4.15. In the Table 4.15, the effect size is (0.66, 0.461) which shows a strong effect of Principal's perception on the use of ICT in the management of school finances.

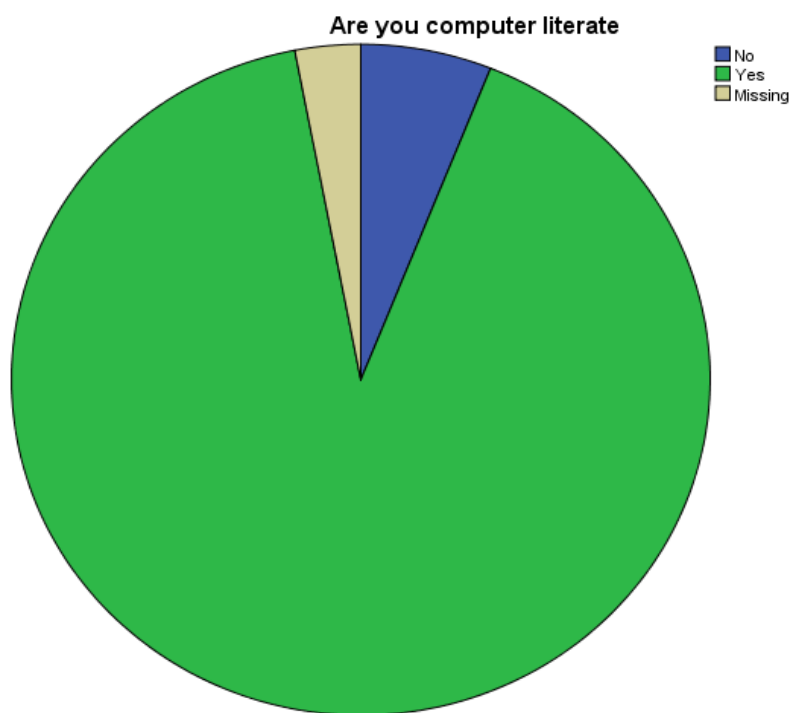
**Table 4.15: Directional Measures**

|                     |     | Value                |      |
|---------------------|-----|----------------------|------|
| Nominal by Interval | Eta | MEANPERCEP Dependent | .661 |
|                     |     | MEANMGT Dependent    | .460 |

#### 4.8 ICT competencies and financial management in schools

The fourth objective of the study sought to determine Principals' information communication technological competencies and its influence on financial management in public secondary schools in Machakos County.

The researcher commenced by establishing the literacy of the Principals towards ICT. The findings are presented in the Figure 4.2



**Figure 4.6: Principals' Computer Literacy**

The Figure 4.2 reveals that 91% of the principals are computer literate. Only 6% reported that they are not computer literate. 3% of the respondents chose not to respond to this question, possibly for fear of incrimination by their superiors. These findings were inconsistent with Afshari (2010) who posited that its only few principals who considered themselves to be computer literate.

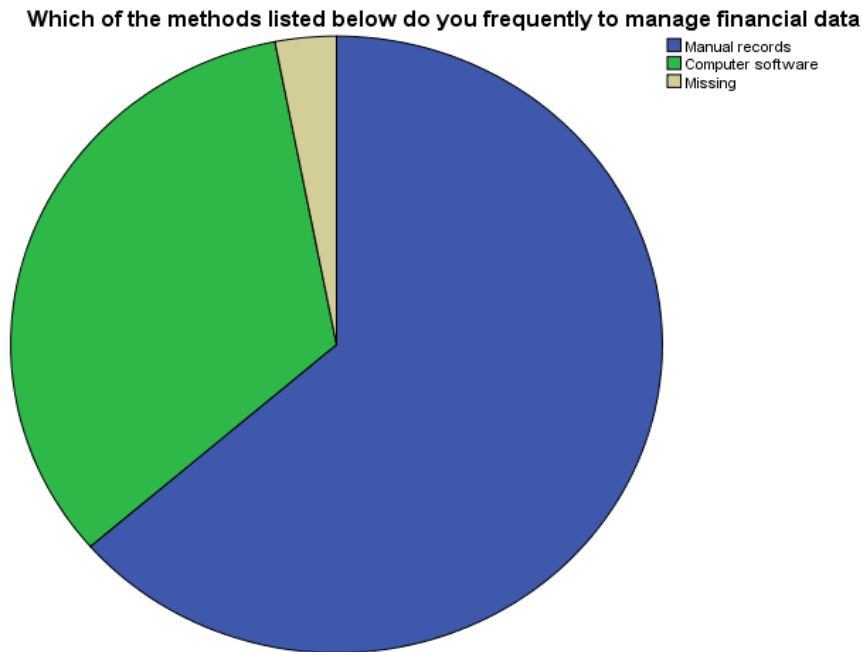
Participants were asked to indicate the other skills which they and they revealed the following as depicted in Table 4.16.

**Table 4.16: ICT Competency**

| <b>ICT Competency</b>    | <b>Yes</b> | <b>No</b> |
|--------------------------|------------|-----------|
| Financial Report Writing | 66.6 %     | 33.3%     |
| Data Management          | 60.6%      | 36.4%     |

In Table 4.16, the principals indicated that 63.6% possess financial report writing skills while 33.3% do not possess this skill. In terms of data management, 60.6% indicated that they possess data management skills while 36.4% do not have these skills.

The participants were further asked the methods that they frequently use to manage financial data. The findings are presented in the Figure 4.3 which reveals that 63.6% of the respondents use manual records for financial management, while 33.3% use computer software for financial management. This is an interesting finding given that the principals possess ICT skills and do not utilize them significantly in financial management practices. Findings are in agreement with MOE (2012) report that most schools are using manual methods in financial management.



**Figure 4.7: Financial Data Management**

To establish the influence of ICT competencies on management of school finances, a Pearson's Chi-square test was conducted to establish whether there was any association between the two variables. After confirming there was a relationship between the two, this was followed by an ETA test to establish the effect size of ICT competencies and the management of financial resources in schools. The results are presented in the Table 4.17 and Table 4.18.

**Table 4.17: Correlation**

| <b>Pearson's Chi-square Tests</b> |                      |           |                              |
|-----------------------------------|----------------------|-----------|------------------------------|
|                                   | <b>Value</b>         | <b>Df</b> | <b>Asymp. Sig. (2-sided)</b> |
| Pearson Chi-Square                | 128.869 <sup>a</sup> | 98        | .002                         |
| Likelihood Ratio                  | 77.691               | 98        | .935                         |
| Linear-by-Linear Association      | 8.488                | 1         | .004                         |
| N of Valid Cases                  | 31                   |           |                              |

a. 120 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

The p-value = .002<.005 reveals significant relationship between the principals' competency in ICT and the use of ICT in management of finances. To establish whether there was influence, the ETC coefficient was computed and is revealed in the Table 4.18.

**Table 4.18: ETA Coefficient of Effect Size**

| <b>Directional Measures</b> |                          | <b>Value</b> |
|-----------------------------|--------------------------|--------------|
| Nominal by Interval         | MEANCOMPETENCY Dependent | .716         |
|                             | MEANMGT Dependent        | .793         |

The ETA coefficient (0.716, 0.793) reveals a strong effect size. Therefore, there is a strong influence of Principals' competency in ICT on the use of ICT in management of finances.

Having established that Principals' competency strongly influences the use of ICT in management of finances, the researcher sought to establish the types of activities that Principals perform during management of finances. The findings are presented in Table 4.19

**Table 4.19: ICT Related Finance Management Activities**

| ICT related activity                          | FREQUENCY |    | PERCENT |      |
|---|-----------|----|---------|------|
|   | YES       | NO | YES     | NO   |
| Typing words                                  | 30        | 2  | 90.9    | 6.1  |
| Use data analysis software                    | 17        | 14 | 53.1    | 43.8 |
| Key in data into a computerized database      | 23        | 9  | 71.9    | 28.1 |
| Use spread sheets in financial management     | 20        | 12 | 62.5    | 37.5 |
| Apply variety of databases                    | 18        | 14 | 54.5    | 42.4 |
| Retrieve data from computer databases         | 18        | 14 | 54.5    | 42.4 |
| Use computer to generate financial statements | 18        | 14 | 54.5    | 42.4 |
| Use ICT to prepare support staff payrolls     | 28        | 4  | 84.8    | 12.1 |
| Use ICT to key in students' data in EMIS      | 26        | 6  | 78.8    | 18.2 |

#### **4.8.1 Word processing**

The respondents were asked to indicate if they can type words using a computer keyboard. In response to this, 30 (90.9%) participants replied in the affirmative while only 2 (6.1%) said they were not able to perform this task. Typing is the basic skill that enables a person to use a computer, so that fact that nearly all the respondents could perform this task was a positive indicator.

#### **4.8.2 Use of software**

All computer-aided financial management functions depend on digital software. The respondents were asked whether they use software to analyze financial data. 17 (53.1%) replied to the affirmative while 14 (43.8%) said they do not use software for this purpose. This is a very low uptake of software in the analysis of financial data, and it would be interesting to find out why they do not use them. The results were in

tandem with Quest (2014) where one of the principal pointed out that ‘I know how to use ICT but some of financial management soft wares I find them challenging to use and I need to learn more about them’

#### **4.8.3 Computerized database**

The respondents were asked whether they can key in data into a computerized database. In response 23 (71.9%) said they can perform this task while 9 (28.1%) said they cannot perform this task. Data entry is a key skill that is required for the maintenance of financial records. Computer databases are useful tools for schools to keep enrolment data that assist the Ministry of Education to make decisions regarding capitation funds.

#### **4.8.4 Spreadsheets**

Spreadsheets are the mainstay of computer assisted financial accounting. The use of spreadsheets assist the financial managers to keep records of transactions, and payments. There are digital inventories that are kept keeping control of school assets and goods in stock. The respondents who confirmed that they can use spreadsheets in financial management were 20 (62.5%) while those who cannot do this function were 12 (37.5%). The spreadsheets that are use for financial management include Excel, SPSS, etc. Findings were similar to Shah (2007) who reported that principal had ICT skills and knowledge on spreadsheet which enabled them to use ICT effectively in managing finances by offering potential of increasing transparency and accountability.

#### **4.8.5 Applying variety of databases**

The respondents were asked to confirm whether they use a variety of databases in financial management, in response, 18 (54.5% indicated that they do while 14 (42.4%) indicated that they do not. Databases are a vital resource for processing of important information related to the financial details and status of school. Principals utilize these databases to make informed decisions and forecasting of school resource requirements and effective utilization. Findings were inconsistent with Makhanu (2010) who asked principal whether they had databases in school and how they use them and one of principal argued that “I have databases in my school and I ensure that they are updated but not interested in learning them because such skills are for computer technicians and secretaries” This implies that principals did not have knowledge on how to utilize various databases

#### **4.8.6 Retrieval of data**

Being able to retrieve data is important skills in making decisions how to use the data. Principals should be able to retrieve and utilize data for purposes of data-driven decision making. The findings revealed that 18 (54.5% indicated that they do while 14 (42.4%) indicated that they cannot retrieve data. This is consistent with the responses related to use of databases. It is also consistent with Koki(2020) who pointed out that principal in Kitui use ICT to retrieve students data and keep records on school fee payment.

#### **4.8.7 Generating Financial Statements**

Generation of financial statements is similarly important in informing the key stakeholders about the financial standing of the institution. The Ministry of education requires Principals to keep up to date information of the financial

operations and standing of their schools. Regular reporting is a key function and Principals must keep updated records to be able to make these monthly reports. In responding to this item, 18 (54.5% indicated that they do while 14 (42.4%) indicated that they cannot generate financial reports. This finding agrees with Muema (2015) who pointed that adoption of ICT has facilitated schools to get their financial statements from the bank which enables the bursars to authenticate and confirm the receipts issued with bank slips submitted. A similar study by Rozner (2008) reported that ICT enables schools to access their financial statements and information anytime they need. It also provides accurate, consistent and timely information concerning the financial status of the school.

#### **4.8.8 Staff payrolls**

Maintenance of staff payrolls for the non-teaching staff is a key function of Principals in secondary schools in Kenya. Financial records must be well kept. Payroll management software are available which principals can use. Although this is a role assigned to the principal, it is usually performed by the school bursars and other finance management officers. The findings of the study revealed that 18 (54.5%) indicated that they do while 14 (42.4%) indicated that they cannot.

#### **4.8.9 EMIS**

The management of student enrolment is a key function that Principals perform to assist the Ministry of Education in planning for resource allocation and financial disbursement based on capitation formulae. In response to this question, 26 (78.8%) indicated that they perform this function. On the other hand, 6 (18.2%) indicted that they do not do this. This disagrees with MOE (2013) report that record management in most schools is low which has contributed to poor response of EMIS data

submission. The findings are also consistent with Miranji (2017) who noted that keeping students record has been very simple and more secure with ICT than manual method.

From the interview guide, the bursars were asked to indicate which knowledge, skills, and abilities were necessary in using ICT in finances. From their responses, majority of the respondents indicate that the most important skills were accounting and basic ICT skills. Other skills that were mentioned to be important were spreadsheet skills. The following were some of the responses;

Respondent P6: *ICT skills, accounting knowledge*

Respondent P26: *basics ICT and accounting skills*

The results therefore implied that accounting and basic ICT skills were the most important skills in financial management. The study findings agreed with Eremie and Agi (2020) whose findings revealed that the ICT skills needed by principals include among others: knowledge of operating ICT devices, good knowledge of using ICT devices in teaching, ability to use ICT devices to store and retrieve information. The study also revealed that ICT skills enhance efficient management of educational resources through enhancing proper keeping of records, effective communication and proper accountability of educational resources.

From the interview guide the bursars were asked to indicate the main challenges they faced while using ICT in financial management. Majority of the bursars indicated lack of enough ICT skills, power outage as well as lack of adequate ICT infrastructure due to the high cost. The following were some of the responses.

Respondent P2: *power outage, high cost of running ICT infrastructure including licensing the accounting solution'*

Respondent P20: *lack of ICT knowledge*

This infers that lack of enough ICT skills, power outage as well as lack of adequate ICT infrastructure due to the high cost were the major challenge of financial management in schools. This was in agreement with Nyangau (2017) who indicated that several factors were found to affect integration of ICTs in managing school finances. This included unavailability and inappropriate ICT infrastructure in the secondary schools; poor power supply and limited number of computers in most schools in the region. Internet connectivity was rated poorly in all the schools with some of them not having even a school email address.

From the interview guide, the bursars were asked to indicate whether the principal provided support for using ICT in financial management. From their responses majority of the bursars indicated that their principals provided support for using ICT in financial management. Only a few of the bursars who indicated that their principals did not provide support for using ICT in financial management. The major support that the principals offered to the bursars was by encouraging the bursars to attend the seminars and workshops that are ICT related. The following were some of the responses.

Respondent P11: *"yes, he supports me to attend workshops for financial management training, he has provided some softwares required"*

Respondent P15: *"yes, he encourages me to attend online Inservice and also seminars"*

This infers that principals were supporting their bursars in ICT management. The study findings agreed with Miranji (2017) who conducted a study to establish how ICT was utilised to manage finances in Nairobi and found that principals supported the bursars in financial management.

From the interview guide the bursars were further asked to indicate whether the principal encourage them to attend in service training in ICT programs related to financial management. Majority of the bursars indicated that they're the principals encouraged them to attend in service training in ICT programs related to financial management. Only a few of the respondents who indicated that their principals did not encourage them to attend in service training in ICT programs related to financial management. The study findings agreed with Miranji (2017) who conducted a study to find out how ICT was being utilised in schools to manage finances in Nairobi and found that principals supported the bursars in financial management

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a summary of the findings, conclusions and recommendations based on the findings of the study. Further, the chapter provides suggestions for other areas of research based on the objectives of the study.

#### **5.2 Objectives of the Study**

1. To determine principals' access to ICT infrastructure and its influence on financial management in public secondary school in Machakos county
2. To investigate principals' knowledge of information communication technologies and its influence on financial management in public secondary school in Machakos county
3. To find out principals' perception towards use of ICT and its influence on financial management in public secondary school in Machakos county
4. To determine principals' ICT competencies and its influence on financial management in public secondary schools in Machakos county

#### **5.3 Summary of the Study**

The purpose of this study was to examine the utilization of ICT and its influence on financial management in public secondary school in Machakos County. The researcher administered a total of 33 questionnaires and conducted 33 interviews. A total of 33(100%) of the questionnaires were filled and 33 interviews conducted using interview schedule and recording respectively. The response rate was satisfactory and is consistent with Mugenda and Mugenda's (2008) sentiments that

the response rates which is more than 70% is acceptable in any social science study and therefore appropriate for generalization of the findings.

### **5.3.1 Access to ICT infrastructure and its influence on financial management**

The study established that principals within Machakos County have access to basic ICT technology which the use for various financial management functions. The technologies include telephones, printers, scanners and word processors. The least accessible technology were photocopiers. Most of these technological tools were shared and thus placed in a central location for easy access. Despite the ease of access, the utilization was not optimal as many principals reported they experience frequent power outages which disrupt the use of the available technologies. Power interruptions are a frequent occurrence in Kenya. Although the government has put in place measures to combat this. The study established that access to ICT technologies had a significant influence on the management of finances in Machakos County as was demonstrated by the large effect size of the correlation analysis.

### **5.3.2 Knowledge of information communication technologies and its influence on financial management**

The second objective of the study sought to investigate Principals' knowledge of information and communication technologies and its influence on financial management in public secondary schools in Machakos County. The study established that principles possess basic knowledge and skills to use ICT in management of finances. Nearly half of the principles who participated reported that they are trained to use various software to manage finances. Some of the software used in financial management include spreadsheets, EMIS, IFMIS, QuickBooks.

The software assists the educational institutions to automate their financial management processes. They keep track of crucial information and streamline processes of budgeting and procurement. The principals use the se software in the analysis of data such as enrolment trends, tuition fees and grants in aid expenditure. Principals use databases to store and retrieve data. Data retrieval is a key function when it comes to financial management. The study established that knowledge of ICT had strong influence of financial management practices.

### **5.3.3 Perception towards use of ICT and its influence on financial management**

The third objective of the study sought to find out Principals' perception towards use of information communication technologies and its influence on financial management in public secondary schools in Machakos County. The study established a complete support for the ICT in financial management. The use of ICT is critical in improving financial management as was established by similar studies. The use of ICT was found to be done with ease, however a significant number of principals reported that they found it difficult to use ICT. The study did not establish the reasons why these principals found it difficult to use of ICT. This is one of the areas in which further research needs to be conducted. In adequate or lack of ICT competencies was established as one of the reasons why principals were not able to fully utilize the full functionalities of ICT. Generally, principals use ICT in the management of finances. However, it would be useful to conduct further inquiry to establish the manner in which ICT was applied in financial management. Training in use of ICT is a requirement to further enhance the skills and knowledge of principals. It was reported that funds invested in ICT should be channeled to other

useful activities. However, the study did not establish which activity areas would be supported with these funds. This is an area that requires further investigation. In terms of readiness to implement ICT, it was established that principals were in support of this. There was disagreement whether undertaking training on the use of ICT in financial management was necessary. In this regard, there was a slightly significant level of variance in principals' perceptions. In general, it was established that the principals' perceptions and use of ICT were correlated. The influence of Principals perceptions towards use of ICT on the financial management practices was strong as demonstrated by the large effect size of 66%.

#### **5.3.4 ICT competencies and its influence on financial management**

The fourth objective of the study sought to determine Principals' information communication technological competencies and its influence on financial management in public secondary schools in Machakos County. The study established that the principals were ICT literate, they were found to be competent in financial report writing and data management. However, a significant proportion were found not to be competent in these areas. Although principals possess ICT skills, a significant percentage (63.6%) indicated that they still use manual records for financial management while the remaining use computer software. The study established that there was a strong influence of principals' competency in ICT and the use of ICT in management of finances. The activities that principals perform during financial management include typing, data analysis, data entry and retrieval, generating financial reports and managing staff payroll. EMIS was used mainly for students' data entry.

## **5.4 Conclusions**

Based on the findings of the study as summarized above, the following conclusions were made:

- i Majority of the principals had access to ICT technologies in Machakos County. The access to ICT had a strong influence on financial management.
- ii Principals in Machakos had varying levels of knowledge and skills of ICT use in financial management. The level of ICT knowledge and skills had a significant influence on the use of ICT in financial management.
- iii The perceptions of principals towards use of ICT influenced the usage of ICT in financial management in Machakos County.
- iv Principals had various ICT competencies. The principals' competencies influenced the way they used ICT in management of finances in Machakos County.

## **5.5 Recommendations of the Study**

Based on the findings of the study, the following recommendations were made:

- i The government, through the Ministry of Education, may place more emphasis on enhancing wider access to ICT technologies.
- ii The knowledge of principals in relation to ICT should be enhanced through capacity building activities.
- iii Principles should develop skills that can enable utilize more functionalities of the available ICT technologies.

## **5.6 Suggestions for Further Studies**

The study revealed areas where that could be investigated further by conducting research. In this regard, the following recommendations are made for further research.

- i Further research be conducted to establish the reasons why principals found it difficult to use of ICT despite possessing relevant knowledge and skills.
- ii Further inquiry could be conducted to establish the way different ICTs were applied in financial management in schools.

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**APPENDICES**

**APPENDIX I: COVER LETTER**

**Dear participant.**

The survey study is being conducted by Miss Gloria Mutisya a Master’s Degree student at Kenyatta University. The purpose of this survey is to find out your opinion on the use of ICT in financial management in Kalama Sub-county. This is not an examination and therefore there are no wrong or correct answers. This survey questionnaire will not take long to complete. Participation in this study is voluntary so please feel confident when answering the questions because you are not required to write your name in the papers. Please sign these forms and retain a copy if you choose to participate. You may then proceed to respond to the question as truthfully and completely as you can.

**Yours Faithfully,**

**Gloria Mutisya**

I have read and am well informed about this study and my participation. I therefore willingly consent to respond to the survey

Yours.....

Signature.....

## APPENDIX II: QUESTIONNAIRE FOR PRINCIPALS

### Preamble

The purpose of this questionnaire is to gather information about the UTILIZATION OF INFORMATION and COMMUNICATION TECHNOLOGY AND ITS INFLUENCE ON FINANCIAL MANAGEMENT IN PUBLIC SECONDARY SCHOOL IN MACHAKOS COUNTY. All the information you provide will be treated with great confidentiality. Please do not write your name anywhere in this questionnaire.

### SECTION A: General information

1. Gender    Male            [   ]                      Female                      [   ]
  
2. Type of school Public    [   ]                      Private                      [   ]
  
3. What is your age bracket?
  - 25 years and below    [   ]
  - 25 -35 years            [   ]
  - 36-44years             [   ]
  - 45 years and above    [   ]
  
4. Please indicate your teaching experience:
  - 5 years and below    [   ]
  - 6-10 years             [   ]
  - 11-15 years            [   ]
  - 15 years and above    [   ]
  
5. What is your professional qualification?
  - Certificate            [   ]
  - Diploma                [   ]
  - Bachelors             [   ]
  - Masters                [   ]
  - Others, specify .....

**SECTION B: ACCESS TO ICT INFRASTRUCTURE IN MANAGEMENT OF SCHOOL FINANCE**

1. Are the following ICT technologies available in your school

| ICT TECHNOLOGIES | YES | NO |
|------------------|-----|----|
| Computer         |     |    |
| Printer          |     |    |
| Spread sheet     |     |    |
| Scanners         |     |    |
| Word processing  |     |    |
| Photocopiers     |     |    |
| Database         |     |    |
| School telephone |     |    |

2. Comment on the accessibility of the available ICT technologies in your school.

.....  
 .....  
 .....

3. Do you need support to use the available ICT technologies?

YES [ ] NO [ ]

4. How do you receive money from the government?.....

.....  
 .....

5. Do you use Mpesa services for fee payment?

YES [ ] NO [ ]

If NO, what hinders you?.....

.....

6. Do you have electronic funds transfer? YES [ ] NO [ ]

7. If yes, what are some of the challenges you experience while using it? .....

.....

8. Which method do you use to connect to the internet

WIFI [ ] Data bundles [ ]

Cables [ ] Fiber [ ]

Others. Please specify.....

9. How do you use the internet? (Tick where appropriate)

| ACTIVITY                         | OFTEN | RARELY | NEVER |
|----------------------------------|-------|--------|-------|
| To prepare payroll               |       |        |       |
| To keep track of school expenses |       |        |       |
| To prepare school budget         |       |        |       |

**SECTION C: PRINCIPAL KNOWLEDGE OF ICT IN MANAGEMENT OF SCHOOL FINANCIAL RESOURCES**

Using the key below, please indicate the extent to which you agree with each of the statements. 1= Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5= Strongly Agree

| Statement   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| I possess the basic knowledge and skills to use ICT             |   |   |   |   |   |
| I have trained on the use of ICT in financial management        |   |   |   |   |   |
| I am able to use various software in financial management       |   |   |   |   |   |
| I am knowledgeable in using computerized data analysis software |   |   |   |   |   |
| I have knowledge of various financial database                  |   |   |   |   |   |
| I am able to retrieve relevant data from financial databases    |   |   |   |   |   |

**SECTION D: PERCEPTION TOWARDS USE OF ICT IN MANAGEMENT OF SCHOOL FINANCES**

Using the key below, please indicate the extent to which you agree with each of the statements. 1= Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5= Strongly Agree

| <b>Statement</b>   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
| Use of ICT is useful in financial management in schools                        |          |          |          |          |          |
| ICT use in financial management can be done with ease                          |          |          |          |          |          |
| I can do my duties perfectly well without using ICT                            |          |          |          |          |          |
| Use of ICT saves time and simplifies work                                      |          |          |          |          |          |
| I use ICT often to manage school finance                                       |          |          |          |          |          |
| I do not think undertaking training on use of ICT in financial management      |          |          |          |          |          |
| Funds invested in ICT should be channeled to other useful activities in school |          |          |          |          |          |
| I find it challenging to use ICT in financial management                       |          |          |          |          |          |
| I am ready to implement ICT in financial management                            |          |          |          |          |          |

**SECTION E: ICT COMPETENCIES AND MANAGEMENT OF SCHOOL FINANCES**

**Tick as appropriate in the boxes provided**

1. Are you computer literate? Yes  No
  
2. If YES, which of the following activities can you perform?
  - Typing words
  - Use data analysis software
  - Key in data into a computerized database
  - Use spread sheets in financial management
  - Apply variety of databases
  - Retrieve data from computer databases
  - Use computer to generate financial statements
  - Use ICT to prepare support staff payrolls
  - Use ICT to key in students' data in EMIS

3. Do you possess skills in:  
 Data management? .....
- Financial report writing?.....
4. Which of the methods listed below do you frequently use to manage financial data?  
 Manual records [ ]  
 Computer software [ ]  
 Others.....  
 Please specify.....

**SECTION F: MANAGEMENT OF SCHOOL FINANCE**

Using the key below, please indicate the extent to which you agree with each of the statements. 1= strongly disagree 2= disagree 3=Neutral 4 =agree 5= strongly agree.

| STATEMENT  | 1 | 2 | 3 | 4 |
|--|---|---|---|---|
| I do budgeting in my school  |   |   |   |   |
| I use ICT software in budgeting  |   |   |   |   |
| The school involves all the relevant stakeholders in budgeting process |   |   |   |   |
| ICT has proved to be an important tool in budgeting                    |   |   |   |   |
| The school sticks to its budgetary allocation                          |   |   |   |   |
| Both internal and external audits are done in my school                |   |   |   |   |
| I use audit software in my school                                      |   |   |   |   |
| I find use of ICT in auditing time consuming                           |   |   |   |   |
| I monitor how finances are utilized in my school through use of ICT    |   |   |   |   |
| I monitor the expenditure of my school more efficiently because of ICT |   |   |   |   |

### APPENDIX III: INTERVIEW GUIDE FOR BURSARS


My name is Gloria Mutisya, a Masters student in Kenyatta University carrying out a research on the *utilisation of ICT in financial management in secondary schools in Machakos County*. This interview guide is designed to gather information on this topic. Please respond to all questions. Your responses will be used for the purpose of this study only hence do not identify yourself or school. Please answer correctly and honestly.

#### Part A: Demographic information

1. Indicate your gender?                      Male                      [   ]                      Female                      [   ]
  
2. What is your age bracket?  
  
    Below 20 years                      [   ]                      20– 29                      [   ]  
  
    30 – 39                      [   ]                      40 – 49                      [   ]  
  
    50 and above                      [   ]
  
3. For how long have you served as a bursar in his school?  
  
    Less than 1 year                      [   ]                      2 – 5 years                      [   ]  
  
    6– 10 years                      [   ]                      11 – 15 years                      [   ]  
  
    16– 20 years                      [   ]                      above 20 years                      [   ]
  
4. What`s your education level?  
  
    Diploma                      [   ]                      Degree                      [   ]                      Post-graduate [   ]
  
5. Do you have access to ICT infrastructure used in financial management?  
    Explain .....
  
6. Please list the various ICT technologies that you use in financial management.....
  
7. How are your financial training and development needs addressed?.....

8. How are the ICTs available in your institution used to manage finances? ..  
.....  
.....
9. What are your thoughts on the use of ICT in financial management? ..  
.....  
.....
10. Which knowledge, skills, and abilities are necessary in using ICT in finances?  
.....  
.....
11. Which are the main challenges faced in using ICT in financial management? ..  
.....  
.....
12. Does the principal provide support for using ICT in financial management?  
Explain. ....  
.....
13. Does the principal encourage you to attend in service training in ICT programs related to financial management? ..  
.....  
.....

## APPENDIX IV: RESEARCH APPROVAL FROM GRADUATE SCHOOL

  
**KENYATTA UNIVERSITY**  
**GRADUATE SCHOOL**

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke) P.O. Box 43844, 00100  
Website: [www.ku.ac.ke](http://www.ku.ac.ke) NAIROBI, KENYA  
Tel. 020-8704150

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**Internal Memo**

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**FROM:** Dean, Graduate School **DATE:** 16<sup>th</sup> May, 2022

**TO:** Ms. Mutisya Gloria Mwikali **REF:** E55/CE/28188/2018  
C/o Department of Educ. Management,  
Policy & Curriculum Studies

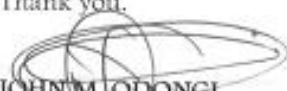
**SUBJECT: APPROVAL OF RESEARCH PROPOSAL**  
=====

This is to inform you that Graduate School Board, at its meeting on 4<sup>th</sup> May, 2022, approved your Research Proposal for the M.Ed. Degree entitled, "Utilization of Information and Communication Technology and its Influence on Financial Management in Public Secondary School in Machakos County."

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 per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

  
**JOHN M. ODONGI**  
**FOR: DEAN, GRADUATE SCHOOL**

CC. Chairman, Educational Management, Policy & Curriculum Studies Department

**Supervisors:**

1. Dr. Daniel Otieno  
C/o Educ. Management, Policy & Curriculum Studies Dept.  
**Kenyatta University**
2. Dr. Gladys Kinyanjui  
C/o Educ. Management, Policy & Curriculum Studies Dept.  
**Kenyatta University**

**APPENDIX V: RESEARCH AUTHORIZATION FOR KENYATTA  
UNIVERSITY**



**KENYATTA UNIVERSITY  
GRADUATE SCHOOL**

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 020-8704150

Our Ref: E55/CE/28188/2018

DATE: 16<sup>th</sup> May, 2022

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

Dear Sir/Madam,

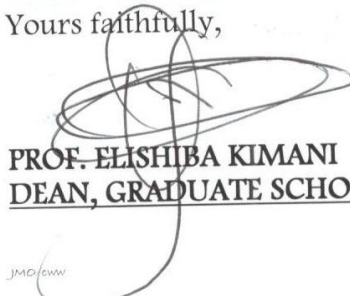
**RE: RESEARCH AUTHORIZATION FOR MS. MUTISYA CLORIA MWIKALI –  
REG. NO. E55/CE/28188/15**

I write to introduce Ms. Mutisya Gloria Mwikali who is a Postgraduate Student of this University. She is registered for M.Ed. degree programme in the **Department of Educational Management, Policy & Curriculum Studies**.

Ms. Mutisya intends to conduct research for a M.Ed. thesis Proposal entitled, **“Utilization of Information and Communication Technology and its Influence on Financial Management in Public Secondary School in Machakos County.”**

Any assistance given will be highly appreciated.


Yours faithfully,

  
**PROF. ELISHIBA KIMANI**  
**DEAN, GRADUATE SCHOOL**

JMD/eww

# APPENDIX VI: RESEARCH PERMIT


NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION



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

Ref No: **776864** Date of Issue: **06/June/2022**

**RESEARCH LICENSE**




This is to Certify that Ms. **GLORIA MWIKALI MUTISYA** of **Kenyatta University**, has been licensed to conduct research in **Machakos** on the topic: **UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY AND ITS INFLUENCE ON FINANCIAL MANAGEMENT IN PUBLIC SECONDARY SCHOOL IN MACHAKOS COUNTY** for the period ending : **06/June/2023**.

License No: **NACOSTI/P/22/17990**

Applicant Identification Number: **776864**

*Walter Mwangi*  
Director General  
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

Verification QR Code



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